



Community Development - Building Division
2200 Civic Center Place
Miramar, Florida 33025
Tel: (954) 602-3200 Fax: (954) 602-3635
<http://www.ci.miramar.fl.us>

ROOF PACKAGE

Quick service is available on Tuesdays from 8am to 10am if all requirements are met

Required inspections:

- 163 Tin Cap
- 165 Roof in Progress
- 999 Final Inspection

Optional Inspections:

- 161 Hot mop
- 164 Metal Flashing

Application reviewed by

- Zoning (for commercial projects)
- Structural

Application Checklist

- Owner/Builder Affidavit (if permit is by homeowner)
- Affidavit of Awareness - HOA Regulations (signed by homeowner and notarized)
- Permit Application
- Job contract - completed and signed by all parties
- Notice of Commencement (**Original or Certified**), if the job value is \$2,500 or more
- Broward County tax record showing the value of the building
- Roofing Instruction Package – 6 pages (**2 copies**) – 1 office set and 1 permit set

*The application must indicate; total square footage of the job; the contract value (labor and material).

* The job description must detail the complete scope of work.

*Two copies of Product approval / Notice of Acceptance (supplied by retailer) required for all roofing materials and systems.

*Notice of commencement, if applicable, must be filed at the Broward County Government Center / Records Division 115 S. Andrews Ave (954) 357-7283.
Or the Recording Office located at 1800 NW 66 Ave. – Suite # 101
Plantation FL 33313 (954)831-4000

*If the roof application is for a new addition, other requirements will apply.

ATTENTION HOMEOWNERS

- Permit application and owner/builder affidavit must be notarized by Building Division Clerks. Outside notaries will not be accepted.
- Proof of ownership is required (recorded warranty deed, property tax statement).
- The homeowner must appear in person with a valid picture ID (Florida driver's license, Florida ID card). The address on ID must be the same as proof of ownership.
- If a contractor is hired, the contractor must pull the permit.



CITY OF MIRAMAR • COMMUNITY DEVELOPEMT • BUILDING DIVISION
OWNER-BUILDER DISCLOSURE STATEMENT

YOU HAVE MADE APPLICATION FOR A BUILDING PERMIT AS AN OWNER-BUILDER. STATE LAW REQUIRES CONSTRUCTION TO BE DONE BY LICENSED CONTRACTORS. YOU HAVE APPLIED FOR A PERMIT UNDER AN EXEMPTION TO THAT LAW. PLEASE BE ADVISED OF THE FOLLOWING PROVISIONS AS PER FLORIDA STATUTES F.S. 489 .103(7).

1. I understand that state law requires construction to be done by a licensed contractor and have applied for an owner-builder permit under an exemption from the law. The exemption specifies that I, as the owner of the property listed, may act as my own contractor with certain restrictions even though I do not have a license.
2. I understand that building permits are not required to be signed by a property owner unless he or she is responsible for the construction and is not hiring a licensed contractor to assume responsibility.
3. I understand that, as an owner-builder, I am the responsible party of record on a permit. I understand that I may protect myself from potential financial risk by hiring a licensed contractor and having the permit filed in his or her name instead of my own name. I also understand that a contractor is required by law to be licensed in Florida and to list his or her license numbers on permits and contracts.
4. I understand that I may build or improve a one-family or two-family residence or a farm outbuilding. I may also build or improve a commercial building if the costs do not exceed \$75,000. The building or residence must be for my own use or occupancy. It may not be built or substantially improved for sale or lease. If a building or residence that I have built or substantially improved myself is sold or leased within 1 year after the construction is complete, the law will presume that I built or substantially improved it for sale or lease, which violates the exemption.
5. I understand that, as the owner-builder, I must provide direct, onsite supervision of the construction.
6. I understand that I may not hire an unlicensed person to act as my contractor or to supervise persons working on my building or residence. It is my responsibility to ensure that the persons whom I employ have the licenses required by law and by county or municipal ordinance.
7. I understand that it is a frequent practice of unlicensed persons to have the property owner obtains an owner-builder permit that erroneously implies that the property owner is providing his or her own labor and materials. I, as an owner-builder, may be held liable and subjected to serious financial risk for any injuries sustained by an unlicensed person or his or her employees while working on my property. My homeowner's insurance may not provide coverage for those injuries. I am willfully acting as an owner-builder and am aware of the limits of my insurance coverage for injuries to workers on my property.
8. I understand that I may not delegate the responsibility for supervising work to a licensed contractor who is not licensed to perform the work being done. Any person working on my building who is not licensed must work under my direct supervision and must be employed by me, which means that I must comply with laws requiring the withholding of federal income tax and social security contributions under the Federal Insurance Contributions Act (FICA) and must provide workers' compensation for the employee. I understand that my failure to follow these laws may subject me to serious financial risk.
9. I agree that, as the party legally and financially responsible for this proposed construction activity, I will abide by all applicable laws and requirements that govern owner-builders as well as employers. I also understand that the construction must comply with all applicable laws, ordinances, building codes, and zoning regulations.
10. I understand that I may obtain more information regarding my obligations as an employer from the Internal Revenue Service, the United States Small Business Administration, the Florida Department of Financial Services, and the Florida Department of Revenue. I also understand that I may contact the Florida Construction Industry Licensing Board at **(850)487-1395** or <http://www.myfloridalicense.com/dbpr/pro/cilb/index.html> for more information about licensed contractors.
11. I am aware of, and consent to, an owner-builder building permit applied for in my name and understand that I am the party legally and financially responsible for the proposed construction activity at my property address .
12. I agree to notify immediately of any additions, deletions, or changes to any of the information that I have provided on this disclosure.

Licensed contractors are regulated by laws designed to protect the public. If you contract with a person who does not have a license, the Construction Industry Licensing Board and Department of Business and Professional Regulation may be unable to assist you with any financial loss that you sustain as a result of a complaint. Your only remedy against an unlicensed contractor may be in civil court. It is also important for you to understand that, if an unlicensed contractor or employee of an individual or firm is injured while working on your property, you may be held liable for damages. If you obtain an owner-builder permit and wish to hire a licensed contractor, you will be responsible for verifying whether the contractor is properly licensed and the status of the contractor's workers' compensation coverage. Before a building permit can be issued, this disclosure statement must be completed and signed by the property owner and returned to the local permitting agency responsible for issuing the permit. **A copy of the property owner's driver license, the notarized signature of the property owner, or other type of verification acceptable to the local permitting agency is required when the permit is issued.**

ACKNOWLEDGMENT: I HAVE READ THE FOREGOING INSTRUCTIONS AND I AM AWARE OF MY RESPONSIBILITIES. I HEREBY SWEAR AND AFFIRM THAT I AM THE OWNER OF THE PROPERTY DESCRIBED AS:

LOT : _____ BLOCK: _____ SUBDIVISION: _____

ADDRESS: _____ CITY : **MIRAMAR** STATE : **FLORIDA** ZIP CODE _____

Signature

Date Signed

STATE OF FLORIDA , COUNTY OF BROWARD Sworn to and subscribed before me this _____ day of _____, 20_____.

Notary Public



Community Development - Building Division
 2200 Civic Center Place
 Miramar, Florida 33025
 Tel: (954) 602-3200 Fax: (954) 602-3635
<http://www.ci.miramar.fl.us>

Affidavit of Awareness of Homeowners' Association Regulations

Miramar - City Code Sec. 22-29.(c)(1) Homeowner or Condominium Association affidavit requirement.

As part of the application process for a building permit in accordance with this chapter and with Section 713.20 of the Land Development Code, each applicant shall sign an affidavit (the "affidavit of awareness") indicating that the applicant is aware that, if the subject property is located in a Homeowners' Association or Condominium Association, as defined in this section, the applicant's property may be subject to additional regulations despite the issuance of a building permit by the city.

This serves to notify such homeowners that the issuance of a Building, Landscaping, or other permit by the City of Miramar, Florida does not exempt them from any and all other regulations imposed by the HOA in which they reside.

(Please Check One)

I acknowledge that ***I am*** an owner of property in the _____ Homeowners' Association.

I am not a property owner in a Homeowners' Association.

Applicant Name (Print Name): _____

Address: _____

Miramar Florida Zip Code : _____

Applicant Signature: _____

STATE OF FLORIDA. COUNTY OF BROWARD

Sworn to and subscribed before me this _____ day of _____, 20_____.

 Notary Public



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PERMIT APPLICATION

Permit Type (Check one): STRUCTURAL ELECTRICAL MECHANICAL PLUMBING LANDSCAPING

Date _____ Tax Folio # _____ Master # _____
 Owner Name _____ Permit # _____
 Owner Address _____ City, State, Zip _____
 E-Mail _____ Phone # _____

Contractor Company Name _____
 Contractor Address _____ City, State, Zip _____
 State Certificate or Registration _____ Phone # _____
 Certificate of Competency _____ Fax # _____
 E-Mail _____
 Architect / Engineer _____ Phone # _____

Job Name _____ Community Gate Code _____
 Job Address _____ Miramar, FL Zip _____
 Subdivision _____ Lot _____ Blk _____
 Type of Work New Existing Commercial Residential Addition Alteration Repair
 Use/Occupancy _____ No. of Stories _____ Bed _____ Bath _____
 Job Description _____

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

Linear / Sq. Ft. _____
 Contract Value _____
 Estimated Cost _____

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work will be performed to meet the standards of all laws regulating construction in the City of Miramar, Florida. I understand that a separate permit must be secured for ELECTRICAL, PLUMBING, SIGNS, WELLS, POOLS, HEATERS, AIR CONDITIONERS, ROOF etc.

PERMIT APPLICANT AFFIDAVIT: I certify that all the foregoing information is accurate and that all work will be done in compliance with applicable laws regulating construction and zoning.

Signature _____
 Contractor (Qualifier) * If Permit is by Owner, the owner must sign

Print Name _____

State of Florida, Broward County

On this _____ day of _____ 20 _____ the person whose name is subscribed to within this instrument, personally appeared before / personally known to me, the undersigned Notary Public of the State of Florida, and he / she acknowledges that he / she executed it.

Notary Public, State of Florida

O	Permit Fee	_____
F	Plan Review	_____
F	Training	_____
I	Radon	_____
C	Constr. Fund	_____
E	Brow. Surv.	_____
U	7% Surcharge	_____
S		
E	Total →	_____

NOTICE: In addition to the requirements of this permit, there may additional restrictions applicable to this property that may be found in the public records of this county.

This permit does not become valid until signed by the Building Official (or designated employee) of the City of Miramar and all fees are paid.

Authorized Signature

Plans & permit must be on job before inspection will be made. For new constructions (Commercial & Residential) and Commercial Interior Build-out, a Certificate of Occupancy shall be obtained from Building Division before using completed Building.

NOTICE OF COMMENCEMENT

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:

this space reserved for recorder

1. Legal Description of Property: Lot _____ Block _____ Unit # _____ Bldg # _____ Lengthy legal attached
Subdivision/Condominium: _____

Street Address if available: _____

2. General Description of Improvement: _____

3.a. Owner name and address: _____

b. Interest in property: _____

c. Name/mailling address of fee simple title holder (if other than Owner): _____

4. a. Contractor name and address: _____

b. Contractor's phone number: _____

5. a. Surety name and address: _____

b. Surety's phone number: _____

c. Amount of bond: \$ _____

6. a. Lender name and address: _____

b. Lender's phone number: _____

7. a. Persons within the State of Florida designated by Owner upon whom Notices or other documents may be served as provided by Section 713.13(1)(A)7., Florida Statutes:

Name: _____

Address: _____

b. Phone Number: _____

8. a. In addition to himself or herself, the Owner designates _____ to receive a copy of the Lienor's Notice per section 713.13(1)(B), Florida Statutes:

b. Phone number of person or entity designated by owner _____

9. Expiration date of notice of commencement: _____
(the expiration date is 1 year from date of recording unless a different date is specified).

WARNING OT OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART 1, SECTION 713.13 FLORIDA STATUTES, AND CAN RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

Signature(s) of Owner(s) or Owner(s)' Authorized Officer/Director/Partner/ Manager

By _____ By _____
Print Name _____ Print Name _____
Title/Office _____ Title/Office _____

STATE OF FLORIDA
COUNTY OF BROWARD

The forgoing instrument was acknowledged before me this _____ day of _____,
by _____

Individually, or as _____ for _____

personally known or produced the following type of identification: _____

Signature of Notary Public: _____
Printed name: _____
(SEAL)

VERIFICATION PURSUANT TO SECTION 92.525, FLORIDA STATUTES

Under penalties of perjury, I declare that I have read the foregoing and that the facts stated in it are true, to the best of my knowledge and belief.

Signature(s) of Owner(s) or Owner(s)' Authorized Officer/Director/Partner/ Manager who signed above:

By _____ By _____

SECTION 1524
HIGH VELOCITY HURRICANE ZONES – REQUIRED OWNERS NOTIFICATIONS
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 has been explained.

1. **Aesthetics-workmanship:** The workmanship provisions of Chapter 15 (High-Velocity Hurricane Zone) are for the purpose of providing that the roofing system meets the wind resistance and water intrusion performance standards. Aesthetics (appearance) are not a consideration with respect to workmanship provisions. Aesthetic issues such as color or architectural appearance, that are not part of a zoning code, should be addressed as part of the agreement between the owner and the contractor.
2. **Renailing wood decks:** When replacing roofing, the existing wood roof deck may have to be renailed in accordance with the current provisions of Chapter 16 (high-Velocity Hurricane Zones) of the. (The roof deck is usually concealed prior to removing the existing roof system.)
3. **Common roofs:** Common roofs are those which have no visible delineation between neighboring units (i.e., townhouses, condominiums, etc.) In buildings with common roofs, the roofing contractor and/or owner should notify the occupants of adjacent units of roofing work to be performed.
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:** The current roof system and/or deck of the building may not drain well and may cause water to pond (accumulate) in low-lying areas of the roof. Ponding can be an indication of structural distress and may require the review of a professional structural engineer. Ponding may shorten the life expectancy and performance of the new roofing system. Ponding conditions may not be evident until the original roofing system is removed. Ponding conditions should be corrected.
6. **Overflow scuppers (wall outlets):** It is required that rainwater flows 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*.
7. **Ventilation:** Most roof structures should have some ability to vent natural airflow through the interior of the structural assembly (the building itself). The existing amount of attic ventilation shall not be reduced. It may be beneficial to consider additional venting which can result in extending the service life of the roof.

Owner’s/Agent’s Signature

Date

Contractor’s Signature

**SECTION 1525
HIGH-VELOCITY HURRICANE ZONES UNIFORM PERMIT APPLICATION
Florida Building Code Edition 2007**

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

Florida Building Code Edition 2007

High-Velocity Hurricane Zone Uniform Permit Application Form.

Section A (General Information)

Master Permit No. _____ Process No. _____

Contractor's Name _____

Job Address _____

ROOF CATEGORY

- | | | |
|---|---|---|
| <input type="checkbox"/> Low Slope | <input type="checkbox"/> Mechanically Fastened Tile | <input type="checkbox"/> Mortar/Adhesive Set Tile |
| <input type="checkbox"/> Asphaltic Shingles | <input type="checkbox"/> Metal Panel/Shingles | <input type="checkbox"/> Wood Shingles/Shakes |
| <input type="checkbox"/> Prescriptive BUR-RAS 150 | | |

ROOF TYPE

- | | | | | |
|-----------------------------------|------------------------------------|-------------------------------------|---------------------------------|--------------------------------------|
| <input type="checkbox"/> New Roof | <input type="checkbox"/> Reroofing | <input type="checkbox"/> Recovering | <input type="checkbox"/> Repair | <input type="checkbox"/> Maintenance |
|-----------------------------------|------------------------------------|-------------------------------------|---------------------------------|--------------------------------------|

ROOF SYSTEM INFORMATION

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

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.

Florida Building Code Edition 2007

High-Velocity Hurricane Zone Uniform Permit Application Form.

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:

Pmax1: _____ Pmax2: _____ Pmax3: _____

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) & No. of Ply(s): _____

Ply Sheet Fastener/Bonding Material: _____

Top Ply: _____

Top Ply Fastener/Bonding Material: _____

Surfacing: _____

Fastener Spacing for Anchor/Base Sheet Attachment:

Field: _____" oc @ Lap, # Rows _____ @ _____" oc

Perimeter: _____" oc @ Lap, # Rows _____ @ _____" oc

Corner: _____" oc @ Lap, # Rows _____ @ _____" oc

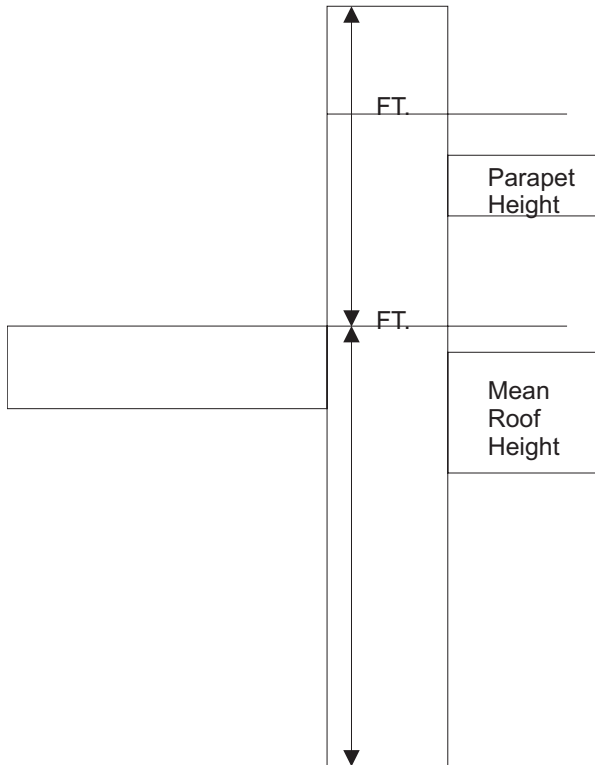
Number of Fasteners Per Insulation Board:

Field _____ Perimeter _____ Corner _____

Illustrate Components Noted and Details as Applicable:

Woodblocking, 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



Florida Building Code Edition 2007
 High-Velocity Hurricane Zone Uniform Permit Application Form.

Section D (Steep Sloped Roof System)

Roof System Manufacturer: _____
Notice of Acceptance Number: _____
Minimum Design Wind Pressures, If Applicable (From RAS 127 or Calculations): P1: _____ P2: _____ P3: _____
Maximum Design Pressure (From the Product Approval Specific System): _____

Steep Sloped Roof System Description

The diagram shows a cross-section of a steep sloped roof system. A diagonal line represents the roof slope. To the left of the slope, there are input boxes for 'Roof Slope: _____ : 12', 'Ridge Ventilation?' (with a checkbox), and 'Mean Roof Height: _____'. To the right of the slope, there are input boxes for 'Deck Type:', 'Type Underlayment:', 'Insulation:', 'Fire Barrier:', 'Fastener Type & Spacing:', 'Adhesive Type:', 'Type Cap Sheet:', 'Roof Covering:', and 'Type & Size Drip Edge:'. Each of these labels is followed by a rectangular input field.

Florida Building Code Edition 2007
High-Velocity Hurricane Zone Uniform Permit Application Form.
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"

$(P_1: \text{_____} \times \lambda \text{_____} = \text{_____}) - Mg: \text{_____} = M_{r1} \text{_____}$ Product Approval M_f _____

$(P_2: \text{_____} \times \lambda \text{_____} = \text{_____}) - Mg: \text{_____} = M_{r2} \text{_____}$ Product Approval M_f _____

$(P_3: \text{_____} \times \lambda \text{_____} = \text{_____}) - Mg: \text{_____} = M_{r3} \text{_____}$ 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. Compared 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.

Method 3 "Moment Based Tile Calculations Per RAS 127"

$(P_1: \text{_____} \times L \text{_____} = \text{_____} \times w: \text{_____}) - W: \text{_____} \times \cos \theta \text{_____} = F_{r1} \text{_____}$ Product Approval F' _____

$(P_2: \text{_____} \times L \text{_____} = \text{_____} \times w: \text{_____}) - W: \text{_____} \times \cos \theta \text{_____} = F_{r2} \text{_____}$ Product Approval F' _____

$(P_3: \text{_____} \times L \text{_____} = \text{_____} \times w: \text{_____}) - W: \text{_____} \times \cos \theta \text{_____} = F_{r3} \text{_____}$ Product Approval F' _____

Where to Obtain Information		
Description	Symbol	Where to find
Design Pressure	P1 or P2 or P3	RAS 127 Table 1 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.

