



**PALM BEACH COUNTY
PLANNING, ZONING AND BUILDING DEPARTMENT
BUILDING DIVISION
POLICY AND PROCEDURE**

Rebecca D. Caldwell, Director

**PPM#: PBO-094
Issued: 04/18/12
Effective: 04/18/12**

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- SUBJECT:** **ROOF COVERING SYSTEMS, RE-ROOFING & HURRICANE MITIGATION RETROFITS DURING SITE-BUILT, SINGLE-FAMILY RE-ROOFS**
- AUTHORITY:** Chapter 15 - Florida Building Code-Building, Chapter 9 - Florida Building Code-Residential, Section 611 - Florida Building Code-Existing Building, Section 105 - Palm Beach County Amendments to the Florida Building Code Chapter 1 Administration, Rule 61G20-3 Product Approval - Florida Administrative Code
- PURPOSE:** The purpose of this Policy and Procedure Memorandum (PPM) is to provide technical and procedural guidelines for the permitting and installation of replacement roof covering systems and hurricane mitigation retrofits, on existing site built single-family dwellings. The forms provided herein may be used for new construction roofing, if the necessary information required in this PPM, is not included in the construction documents submitted for permit.
- POLICY:** Permitting and installation of re-roofs and hurricane mitigation retrofits shall comply with the Florida Building Code, Florida Administrative Rules and Local Administrative Amendment provisions referenced above.
- PROCEDURE:** The following procedures shall be adhered to for the submittal, review, approval of permits for:
- (1) re-roofing, and
 - (2) Hurricane mitigation retrofits on existing site-built, single-family dwellings whose market or appraised "improvement" value is \$300,000 or more.

A) **PERMITTING** - Re-Roofing Permit Submittal Requirements

The following shall be provided for all permit application for re-roofing:

▶ ***Two completed copies:***

› **Roofing Form 100 (PBO-094 - Form 100)** - Permit Application Summary of Supplemental Information (attached and made a part hereof) for all re-roofs (roof replacements, and roof recovering).

› **Roofing Form 200 (PBO-094 - Form 200)** - Hurricane Mitigation Supplement (attached and made a part hereof) for site-built, single family re-roofs (in addition to Roofing Form 100).

▶ ***Two copies*** - State of Florida or Miami-Dade County product approval for proposed roof covering system. For product approvals containing numerous system descriptions, the specific covering or system description in the approval must be identified. All of the required system component approvals must be based on similar, harmonious standards. Examples: All approvals are Miami-Dade NOA's (Notices of Acceptance) based on the HVHZ (High Velocity Hurricane Zone); or all approvals (State or Miami-Dade), are based on the non-HVHZ part of the Florida Building Code.

▶ ***Two copies*** - Engineered specification for enhanced fastening of base sheets or roof covering, when needed, in order to meet the required design pressures for perimeter roof zones, if allowed in the product approval. This applies to flat roofs with mechanically fastened base sheets or for certain metal roof coverings where the design pressure rating in the product approval does not meet the elevated pressures at perimeter roof areas and the approval allows enhanced fastening. Note: On detached single-family dwellings and their accessory structures, flat roofs not over 400 sq ft, a maximum 4" on center each way fastening of tin-tagged base sheets within 4 ft of roof edges may be specified by the contractor or owner-builder on Section D of the Permit Application Supplemental Information form.

▶ ***Replacement cost or market value*** of work (including value of owner builder labor) on permit application.

▶ ***One copy*** - **Roofing Form 300 (PBO-094 - Form 300)** - Owners Notification for Roofing Considerations (attached and made a part hereof).

The following additional information shall be provided for re-roofs when applicable:

▶ ***Two copies*** - "Sheath-over" specification from a registered architect or engineer, specifying sheathing type and attachment; when installing plywood or other approved solid sheathing over existing spaced sheathing.

▶ ***Two copies*** - Engineering evaluation and certification, or documentation from previously approved and permitted plans, verifying the adequacy of existing roof trusses/rafters when replacing wood shake, asphalt shingle, or similar roof coverings, with concrete or clay tile.

▶ On individual townhouse unit re-roofs without parapet walls separating the unit whose roof is being replaced, from adjacent unit(s):

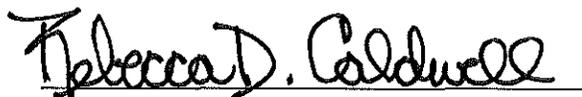
1. A letter from the owner's homeowners association acknowledging the partial building re-roof is being performed.

2. Two copies of a "mating" or "tie-in" detail from a design professional, registered roof consultant (with no financial interest with company installing the roof), or a manufacturer's detail for the tie-in.

B) Inspection Procedures and Affidavits - Refer to PBO-086

Supersession History:

1. PPM# PBO-094, issued 05/19/94
2. PPM# PBO-094, effective 05/19/94
3. PPM# PBO-094, issued 07/94
4. PPM# PBO-094, issued 09/94
5. PPM# PBO-094, issued 02/95
6. PPM# PBO-094, issued 07/99
7. PPM# PBO-094, issued 12/00
8. PPM# PBO-094, issued 09/10
9. PPM# PBO-094, issued 04/18/12


Director



ROOFING FORM 100 - PERMIT APPLICATION SUMMARY of SUPPLEMENTAL INFORMATION INSTRUCTION PAGE

COMPLETE THE NEEDED SECTIONS OF THIS FORM FOR A PALM BEACH COUNTY PERMIT. THIS FORM and FORM 300 IS TO BE COMPLETED FOR ALL RE-ROOFS AND ROOF RECOVERINGS. FORM 200 IS ALSO REQUIRED FOR SITE-BUILT, SINGLE FAMILY DWELLING RE-ROOFS.

TWO COPIES OF THIS FORM WITH ORIGINAL SIGNATURES MUST BE ATTACHED TO THE PERMIT APPLICATION WITH ALL THE REQUIRED DOCUMENTS AS NOTED BELOW, TWO COPIES OF FORM 200 MUST BE PROVIDED AS NOTED ABOVE, AND ONE COPY OF EXECUTED FORM 300 – "REQUIRED OWNER'S NOTIFICATION FOR ROOFING CONSIDERATION".

Roof System	Required Sections of the Permit Application Form	Attachments Required See List Below
Built-up or Modified	A,B,D	1,2,3,4,5,6,7
Asphalt Shingles	A,B,C	1,2,4,5,7
Concrete or Clay Tile	A,B,C,	1,2,3,4,5,7
Metal Roofs	A,B,C	1,2,3,4,5,7
Wood Shingles or Shakes	A,B,C	1,2,3,4,5,7
Other	As Applicable	As Applies : 1,2,3,4,5,6,7

ADDITIONAL DOCUMENTS REQUIRED

1. Building Permit Application
2. Product Approval Information
 - Product Approval, Cover Sheet
 - Product Approval, **Specific** System Description
 - Product Approval, **Specific** System Limitations
 - Product Approval, General Limitations of Use
3. Roof uplift pressures and attachment per R301FBC-Res, 1609 FBC-Bldg, ASCE 7-10, RAS 127, RAS 128 or FRSA/TRI 07320/08-05
4. Roofing accessory product approvals (Ridge vents, Turbines, Mechanical Stands, etc.)
5. Mating detail (tie-in) for partial re-roof installations (if applicable)
6. Enhanced nailing details for flat roofs engineered. Exception: On Single-Family Dwelling and Accessory Structure flat roofs 400 square feet or less, contractor may propose 4" o.c. worst case fastening on Section D form for perimeter and corner zones.
7. **Any other additional data required for the integrity of the roofing system to be determined.**



ROOFING FORM 100 - PERMIT APPLICATION SUMMARY of SUPPLEMENTAL INFORMATION

Section A

(General Information)

PR # (Re-roofing): _____ B # (New Construction): _____

Contractor's Name: _____ License #: _____

Owner's Name: _____ Job Address: _____

Use Of Building:

- 1 or 2 Family
 Multi-Family (3 or More Units)
 Non-Residential

Exposure Category: _____ Existing Roofing Type (Mat'l): _____

Roof Type:

- New Roof Re-Roofing Recovering Repair _____ % of Roof/Section

Roof Slope: ___/12 Deck Type: _____ Roof Height: _____

Proposed Roof Covering (Check all that are applicable to this permit application):

- Flat Roof Mechanically Fastened Tile Mortar/Foam Set Tile
 Asphalt Shingles Metal Panel/Shingle Roll Roofing
 Wood Shingles/Shakes
 Other _____

Slope of Roofing Work by Area (Complete all that apply):

Flat Roof Area ($\leq 2''/12''$): _____ sf Steep Slope Roof Area ($\geq 4''/12''$): _____ sf

Low Slope Roof Area ($> 2'' - 4''/12''$): _____ sf Total Roof Area, This Permit: _____ sf

CERTIFICATION:

All information supplied on any or all of the five pages of this form, or supplied by any other means, is true and correct.

(Qualifier Name Printed)

(Qualifier's Signature)

(Date)



ROOFING FORM 100 - PERMIT APPLICATION SUMMARY of SUPPLEMENTAL INFORMATION

(Cont.)

Section B (Roof Plan)

- Re-roofing - Sketch Roof Plan:** Illustrate all levels and sections. Include dimensions of sections and levels; clearly identify dimensions of elevated pressure zones and location of parapets, expansion joints and skylights. If applicable, identify locations of hurricane mitigation and provide attachment details on the following page.
- New Construction - Sketch not required.** See building plans.

For Flat Roof, Perimeter Width (a'): Corner Size (a' x a'):



ROOFING FORM 100 - PERMIT APPLICATION SUMMARY of SUPPLEMENTAL INFORMATION (Cont.)

Section C

(Low & Steep Sloped Roof System)
(L.S. = >2" to 4" in 12") (S.S. = >4" in 12")

ROOF COVERING MANUFACTURER: _____

Product Approval # (System or Roof Covering): _____

Specify System # (if applicable): _____

UNDERLAYMENTS:

Base sheet: _____ Product Approval # (except felt): _____

Head lap in inches: _____

Cap sheet: _____ Product Approval # (except 90 lb): _____

Other: _____ Product Approval #: _____

ROOF COVERING ATTACHMENT METHOD:

Mechanically Fastened Tile:
(Type & Number of Fasteners per Tile)

Asphalt Shingles:
(Number of Fasteners per Shingle)

If tile is proposed, specify if clips are being used and their location _____

Mortar/Foam Set Tile:

Metal Panel/Shingle:

Mortar/Foam Manufacturer: _____ Clip or Fastener Spacing for Metal Roof Panels:

Tile Profile: _____ Field: _____ Perimeter: _____ Corners: _____

Patty size: _____ Hook Strip/Cleat Ga. or Weight: _____

Tile Hip and Ridge Attachment Method (metal or wood ridge board req'd when installing per RAS-120):

Valleys (Mat'l, Size, Ga. & Fastener Type and Spacing): _____

Drip Edge (Mat'l, Size, Ga. & Fastener Type and Spacing): _____

Ridge Vents (Mat'l & Fastener Type and Spacing): _____

Product Approval #: _____



ROOFING FORM 100 - PERMIT APPLICATION SUMMARY of SUPPLEMENTAL INFORMATION

(Cont.)

Section D

Flat Roof Information (Built-up or Modified ≤ 2:12)

Fill in the specific roof assembly components below as applicable.

Roof System Manufacturer: _____ System Type: _____
System # (if applicable): _____ Product Approval #: _____

Minimum Wind Uplift Pressures: (use worst-case default values below or specify other from R301.2.1FBC-Res , ASCE 7-10, RAS-128, or by design professional as applies)

Exposure B, 30' Ht or less: (P1) Field: **-31 psf** (P2) Perimeters: **-53 psf** (P3) Corners: **-79 psf**
 Exposure C, 30' Ht or less: (P1) Field: **-44 psf** (P2) Perimeters: **-74 psf** (P3) Corners: **-111 psf**
 Exposure D, 30' Ht or less: (P1) Field: **-52 psf** (P2) Perimeters: **-87 psf** (P3) Corners: **-131 psf**

Other: Exposure: _____ Ht: _____ (P1) Field: _____ psf (P2) Perimeters: _____ psf (P3) Corners: _____ psf

Max. Design Pressure Rating Listed in Approval for Specific System Description: _____ psf
 (If less than Min. Wind Uplift Pressures above, provide enhanced fastening as allowed in product approval limitation notes)

Deck Type : _____ & Support Spacing: _____

If adding lightweight concrete to deck, provide Product Approval #: _____

Fire or Vapor Barrier (if applicable): _____ Product Approval #: _____

Anchor/Base Sheet & # of Ply(s): _____ & Fastener/Bond'g Mat'l: _____

Fastener Spacing for Base Sheet Attachment : (1) Field: _____ " o/c @ laps & _____ rows @ _____ "o/c
 (2) Perim: _____ "o/c @ laps & _____ rows @ _____ "o/c (3) Corners: _____ "o/c @ laps & _____ rows @ _____ "o/c

Insulation Base Layer : Size & Thickness: _____ Fastener/Bonding Mat'l: _____

Insulation Top Layer : Size & Thickness: _____ Fastener/Bonding Mat'l: _____

Number Of Fasteners Per Insulation Board: Field: _____ Perimeter: _____ Corner: _____

Fastener Type: _____ Alternate Fastener: _____

Ply Sheet(s) & # of Ply(s): _____ & Fastener/Bond'g Mat'l: _____

Top Ply: _____ & Fastener/Bond'g Mat'l: _____

Surfacing (if applicable): _____

Single Ply Membrane: _____ & Fastener/Bond'g Mat'l: _____

Single Ply Sheet Width: _____ ½ Sheet Width: _____ No. of Single Ply ½ Sheets: _____

Wood Edge Nailer (if applicable): _____ & Nailer Fastener Type and Spacing: _____

Drip Edge Metal : Material Type, Size, & Ga. or Weight: _____

Drip Hook Strip/Cleat Metal Ga. or Weight (If applicable): _____



ROOFING FORM 200

Hurricane Mitigation Supplement - THIS FORM MUST BE FILLED OUT AND INCLUDED WITH ALL RE-ROOFING APPLICATIONS FOR SITE-BUILT, SINGLE FAMILY DWELLINGS.

Address: _____

For the purpose of this document, "Sections" as cited below are from the Florida Building Code-Existing Building, 2010 edition, Section 611.7, unless otherwise noted. This document requires existing site built single family residential structures to be retrofitted for Hurricane Mitigation.

Secondary Water Barrier, Section 611.7.2 FBC, Existing Building

Choose one of the following secondary water barrier methods:

NOTE: All installations shall be in strict accordance with specific product approval requirements.

- All joints in structural panel roof sheathing or decking shall be covered with a minimum 4 in. wide strip of self-adhering polymer modified bitumen tape applied directly to the sheathing or decking. The deck and self-adhering polymer modified bitumen tape shall be covered with one of the underlayment systems approved for the particular roof covering to be applied to the roof.
- The entire roof deck shall be covered with an approved asphalt impregnated 30# felt underlayment or approved synthetic underlayment installed with nails and tin-tabs in accordance with sections R4402.7.2, R4402.7.3, or R4402.7.4 of the Florida Building Code, Residential. The synthetic underlayment shall be fastened in accordance with the manufacturer's recommendations.
- The entire roof deck shall be covered with an approved self-adhering polymer modified bitumen sheet meeting ASTM D 1970 or an approved self-adhering synthetic underlayment installed in accordance with the manufacturer's installation instructions, and product approval.
- An underlayment system approved for the particular roof covering shall be applied with the following modification:
 - For roof slopes that require one layer of underlayment, a layer of approved asphalt impregnated ASTM D 226 Type I or Type II underlayment or approved synthetic underlayment shall be installed. The felt is to be fastened with 1" round plastic cap or metal cap nails, attached to a nailable deck in a grid pattern of 12 inches (305 mm) staggered between the overlaps, with 6-inch (152 mm) spacing at the overlaps. The synthetic underlayment shall be fastened in accordance with the manufacturer's installation recommendations.
 - For slopes that require two layers of underlayment, an approved asphalt impregnated ASTM D 226 Type I or Type II underlayment shall be installed in a shingle-fashion and lapped 19" and fastened as described above. An approved synthetic underlayment shall be installed in accordance with the manufacturer's installation instruction.

Exceptions:

- 1. Roof slopes < 2:12 having a continuous roof system shall be deemed to comply with section 611.7.2 requirements for a secondary water barrier.
- 2. Clay and Concrete tile roof systems installed as required by the Florida Building Code are deemed to comply with the requirements of section 611.7.2 for Secondary Water Barriers.

Specify secondary water barrier: _____ / _____
Manufacturer and Product Approval Number (if applicable)



ROOFING FORM 200

Hurricane Mitigation Supplement (Cont.)

Roof to Wall Connections, Section 611.8 FBC, Existing Building

1. Was the building permit for the home construction applied for on or after January 1, 1988?
 - Yes, application date was on or after Jan. 1, 1988. Proceed to signature and permit submittal. (Documentation required substantiating this application date)
 - No. Continue with questions below.

2. Applicant must provide documentation for the value of the building. Indicate type provided.
 - Copy of current home insurance summary sheet.
 - Copy of the latest Tax Bill or Property Appraiser Office webpage for the home.
 Note: The appraised value of the improvement determines the threshold amount.

3. Based on documentation provided, is the value of the Building \$300,000.00 or more?
 - Yes.
 - No.

4. If the answer to question 3 is no, proceed to signature and permit submittal on this page.

5. If the answer to question 3 is yes, the roof is subject to enhanced fastening unless meeting one of the following exceptions and signature should be provided on page 3 of this form:
 - Exception 1: Evaluation and roof to wall connections at gable ends or **all** corners cannot be completed for 15% of the cost of roof replacement (supporting documentation is required).
 - Exception 2: Documentation can be provided from design professional demonstrating existing roof to wall load path connection compliance for wind loads.

Check one of the following (**must check one**):

- Mitigation required. Roof to wall connections will be enhanced to comply with 611.8.1. The priorities for upgrading are outlined in section 611.8.1.7. Up to 15% of the cost of the re-roofing must be spent on enhanced connections, but the mitigation is not required to exceed that.
- Cost of evaluation and installation cannot be completed for 15%. Documentation of costs is provided. **NOTICE: This documentation will be reviewed for appropriateness, since prescriptive methods of mitigating roof to wall connections provide necessary designs to accomplish roof to wall connection improvements. Misrepresentation may be construed as a willful code violation.**
- Documentation from design professional is attached demonstrating compliance of existing load path connections with section 611.8 or complying with uplift calculations. The method used to determine compliance must be provided by the design professional.

If enhanced roof to wall connections are required, the following page (Hurricane Mitigation Connection Details) must also be completed and submitted along with a roof plan of the building, with span distances and gable and hip locations identified. Plan should indicate areas to be retrofitted, connectors to be used, and fastener requirements. Please include product approvals for all the connectors specified.

Qualifier/Owner Builder Name Printed

Qualifier/ Owner Builder's Signature

Date



ROOFING FORM 200
Hurricane Mitigation Supplement (Cont.)
HURRICANE MITIGATION CONNECTION DETAILS

Exterior walls constructed of:

- Wood
- CBS
- Other explain: _____

Detail roof Geometry:

- Gable
- Hip
- Flat
- Other explain: _____

Provide information on existing anchors and fasteners at the locations proposed for mitigation retrofit: _____

Will additional fasteners in the existing anchors provide compliance? YES NO

If YES, how many fasteners will be added and specify size: _____

If NO, list anchors to be added. Provide manufacture and model number of proposed retrofit anchors:

Detail the method of attachment of proposed anchors: _____
 (Nails, Screws, Bolts, Etc.)

 Qualifier/Owner Builder Name Printed

 Qualifier/ Owner Builder's Signature

 Date



ROOFING FORM 300

Palm Beach County Building Division

Owner's Notification of Re-roofing Considerations

It is the responsibility of the roofing contractor to provide the owner with the required re-roofing permit, and to explain to the owner the content of this form. The provisions of Chapter 15 of the *Florida Building Code, Building*, Chapter 9 of the *Florida Building Code, Residential*, and Chapter 6 of the *Florida Building Code, Existing Building* govern the minimum requirements and standards of the industry for roofing system installations, as they apply. Additionally, the following items should be addressed as part of the agreement between the owner and the contractor. The owner's initials placed in the designated space, indicates that the item has been explained.

Owner's Initials

- _____ 1. **Aesthetics-workmanship:** The workmanship provisions of the Chapters cited above 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 the code related workmanship provisions. Aesthetic issues such as color or architectural appearance, should be addressed as part of the agreement between the owner and the contractor.
- _____ 2. **Re-nailing and replacement of 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 of the Florida Building Code, Building. (The roof deck is usually concealed prior to removing the existing roof system.) In some cases, deteriorated decking may need to be replaced. Spaced sheathing may need to be sheathed-over or replaced with solid sheathing, if required for the new roofing system.
- _____ 3. **When replacing a lighter-weight roof covering with a heavier system,** such as concrete or clay tile, an engineering evaluation and certification may be required, if no previously permitted and approved plans can attest to the structural adequacy of the roof framing system.
- _____ 4. **Hurricane Mitigation:** When a roof covering on an existing site-built single-family residential structure that has an insured or a taxation assessed value of \$300,000 or more is removed and replaced, roof to wall connections shall be improved up to 15% of the cost of re-roofing.
Exceptions:
- Unless constructed under the FBC,
 - Constructed originally with an application date on or after Jan. 1, 1988,
 - Documentation from a design professional is provided demonstrating compliance of existing load path connections (with method used to determine compliance provided), or
 - Evaluation and installation of connections at gable ends or all corners cannot be completed for 15 percent of the cost of roof replacement (documentation justifying must be provided).
- _____ 5. **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, and provide a letter from the HOA acknowledging the partial re-roof.
- _____ 6. **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 should cite the need to the contractor to maintain this appearance.



ROOFING FORM 300

Palm Beach County Building Division

Owner's Notification of Re-roofing Considerations

(Cont'd.)

Owner's Initials

- _____
- 7. Ponding water:** After a rain event, some water may remain on a roof and be evaporated within a short period of time. However, 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, if the system is not designed to allow ponding. Ponding conditions may not be evident until the original roofing system is removed. Ponding conditions should be addressed.
- _____
- 8. Overflow scuppers (wall outlets):** It is required that rainwater flows off of a roof, 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. If required, and overflow scuppers were not required in the original construction, it may be necessary to install them to prevent the overloading of the roof.
- _____
- 9. Ventilation:** Most roof structures should have some ability to vent natural airflow through the attic area. The required amount of attic ventilation shall be maintained. Adequate ventilation can play an important role in extending the life of the roof.

Owner's/Agent Signature Date Contractor's Signature Date