

TO: ALL BUILDING DIVISION PERSONNEL

FROM: DOUG WISE
BUILDING DIVISION DIRECTOR

PREPARED BY: BUILDING DIVISION

SUBJECT: ROOF REPLACEMENTS, ROOF COVERING SYSTEMS &
MANDATED “ROOF-TO-WALL CONNECTION” RETROFITS

PPM #: PB-O-094

ISSUE DATE
April 18, 2012

EFFECTIVE DATE
May 14, 2021

PURPOSE:

To provide technical and procedural guidelines for the permitting of roof replacements, roof-covering systems and mandated retrofits of roof-to-wall connections (when required for reroofing over wood decks).

UPDATES:

Future updates to this PPM are the responsibility of the Director of the Building Division, Deputy Building Official, Assistant Deputy Building Official, or Codes Product & Training Supervisor, under the authority of the Director of the Building Division.

AUTHORITY:

- Chapter 7 - Florida Building Code-Existing Building
- Chapter 1 – Administration, Palm Beach County Amendments to Florida Building Code
- Rule 61G20-3 Product Approval (Florida Administrative Code)

DEFINITIONS:

Reroofing- The process of recovering or replacing an existing roof covering.

Roof Recover- The process of installing an additional roof covering over a prepared existing roof covering without removing the existing roof covering.

Roof Covering - The covering applied to the roof deck for weather resistance, fire classification or appearance.

Roof Coating - BOAF Informal Interpretation #4760 (11/14/2006) states a “*Liquid-applied roof coating is a Roof Covering* and its installation must conform to all the provisions of section 1507.15, FBC. *Recovering* an existing roof also activates all of the applicable requirements found in Chapter 7, FBC-Existing, as it constitutes a Level 1 alteration”.

Roof Repair- Reconstruction or renewal of any part of an existing roof for the purposes of its maintenance.

Note: Not more than 25 percent of the total roof area or roof section of any existing building or structure shall be *repaired, replaced or recovered* (*see **Roof Coating**) in any 12-month period unless the entire existing roofing system or roof section is replaced to conform to the requirements for new construction.

Roof Replacement. The process of removing the existing *roof covering*, repairing any damaged substrate and installing a new *roof covering*.

Roof Section- A separation or division of a roof area by existing joints, parapet walls, flashing (excluding valleys), difference of elevation (excluding hips and ridges), roof type or legal description; not including the roof area required for a proper tie-off with an existing system.

POLICY:

Permitting and installation of re-roofs, roof repairs, roof coverings, and mandated ‘roof-to-wall connection’ retrofits shall comply with the Florida Building Code, Florida Administrative Code and Local Administrative Amendment provisions referenced. See PPM PB-O-131 for site-built detached single-family dwelling expedited permit procedures.

PROCEDURE

The following procedures shall be adhered to for the submittal of permits for:

- (1) Re-roofing, Recovering, and Recoating
- (2) Roof Repairs
- (3) Mandated ‘Roof-to-Wall connection’ retrofits on existing structures (w/wood decks) whose market or appraised “improvement” value is \$300,000 or more, unless built per:
 - Florida Building Code (Effective Date: 3/1/2002); or
 - Equivalent local Palm Beach County standards:
 - 1989 PBC Amendments to the 1988 SBC (PBC Ordinance 89-31)
Effective Date: 1/1/1990 - Roof-to-Wall Connections
 - 1997 PBC Amendments to 1997 SBC (PBC Ordinance 99-9)
Effective Date: 5/1/1999 – Roof Sheathing
- (4) New Construction – When Roofing details are not included with the original plans

A) **PERMIT APPLICATION** (submit online, or provide two physical copies of each to office)

**** Required Documents for all roofing permit applications:**

- ▶ **Aerial Depiction of Structure (per Google Earth, Pictometry, EagleView, etc.)**
- ▶ **Roofing Installation Summary Form specific to the Reroofing material & type:**
 - › **Form 100 (Asphalt Shingles or Wood Shakes/Shingles)**
Complete the Form and include all supplemental information required for the site-specific scope of work proposed.
 - › **Form 200 (Concrete/Clay Tile)**
Complete the Form and include all supplemental information required for the site-specific scope of work proposed.
 - › **Form 300 (Metal Roofs)**
Complete the Form and include all supplemental information required for the site-specific scope of work proposed.
 - › **Form 400 (Flat Roofs - Replacement, Recover or Coating)**
Complete the Form and include all supplemental information required for the site-specific scope of work proposed.
- ▶ **State of Florida (FL) or Miami-Dade County (NOA) Product Approval(s)**
Identify the specific covering or system and all details. All components, materials and approvals must be compatible and of the same type.

Supplemental Information that may be required for the scope of work proposed:

- ▶ **‘Mandated Retrofits of Roof-to-Wall Connection’ Form (existing wood deck)**

***Building Contractor (CGC, CBC or CRC) must pull “B” sub-permit for “Retrofit Roof-to-Wall Connections” if additional straps are required**

▶ **Enhanced Fastening Specifications (Applicable to Form 400 – Flat Roofs)**

Provide when base sheet or roof covering system does not meet the design uplift pressures required for perimeter roof zones. Increased fastener density *must be allowed within the product approval limitations-of-use*, and be prepared by a FL licensed P.E., Architect or Registered Roof Consultant.

Exception: Flat roofs not exceeding 400 ft² may fasten the base sheet with tin-tags spaced at 4” maximum (on center, both ways) within 4’ (feet) of the roof edge.

▶ **“Sheath-over” details** specifications from a registered architect or engineer when installing plywood or other approved solid sheathing over existing spaced sheathing.

▶ **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.

▶ **Townhouse** – Individual unit re-roofing on common roof with no structural separation from the adjacent units:

1. **“Tie-in” Details** - Engineered “mating” or “tie-in” detail from a design professional or registered roof consultant (with no financial interest with company installing the roof), or a manufacturer’s approved tie-in detail.
2. **HOA Letter** from the homeowners association acknowledging that a partial re-roof is being installed on the building.

B) INSPECTIONS

Schedule inspections as required per Section 110.3.A.2.3 PBC Amendments to the Florida Building Code, Chapter 1-Administration



DOUG WISE
BUILDING DIVISION DIRECTOR

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
10. PPM# PBO-094, issued 05/14/21



FORM 100 - REROOFING INSTALLATION SUMMARY FORM

ASPHALT SHINGLES or WOOD SHAKES/SHINGLES

(NEW CONSTRUCTION – INCLUDE FORM 100 IF “REVISION” OR “ROOFING SUB-PERMIT” IS REQUIRED ON THE PLANS FOR A NEW STRUCTURE)

SITE ADDRESS: _____

Sloped Roof Pitch: ____ / 12 Mean Roof Height: ____ Ft Sloped Roof Area (SQRs): ____

AERIAL DEPICTION of Structure is included (per Google Earth, Pictometry, EagleView, etc.)

****SUPPLEMENTAL Details and Information (Identify all items related to the site-specific conditions)**

- MANDATED RETROFITS- Existing Wood decks, include **Mandated Roof-to-Wall Connection Retrofit** Form
- Tie-In Detail (FL LICENSED ENGINEER or ROOFING CONSULTANT) Repair (<25% ROOF AREA- INCLUDE DETAILED SCOPE-OF-WORK)
- Re-Nail Deck (IF STRUCTURE WAS PERMITTED PRIOR TO 5/1/99) Sheath-over (ENGINEERING DETAILS ATTACHED)
- Re-cover (ONE ADDITIONAL LAYER ONLY/ MUST BE ALLOWED BY PRODUCT APPROVAL)
- Skylights/ Vents/ etc. (REPLACEMENT ONLY) Provide FL or NOA # _____ (ATTACHED)
- FLAT Roof Deck portion included in Reroofing Scope (PROVIDE FORM 400-FLAT ROOF)

UNDERLAYMENT Method & Material (Select one): FL or NOA # _____ (ATTACHED)

A	B	C	D	E
<input type="checkbox"/> Self-Adhered (Direct to Deck) <i>**NOT an Option for Wood Shake/Shingle**</i>	<input type="checkbox"/> 4” Wide Strip (ASTM D1970) Over all Joints/Seams (Per Table R905.1.1.1)	<input type="checkbox"/> 3 ¾” Wide Strip (AAMA 711) Over all Joints/Seams (Per Table R905.1.1.1)	<input type="checkbox"/> 2 Layers of 30# Felt (ASTM Approved)	<input type="checkbox"/> 2 Layers Synthetic U/L <i>**NOT an Option for Wood Shake/Shingle**</i>
Self-Adhered (ASTM D1970) Polymer-Modified Bitumen Underlayment Applied directly to <u>entire roof deck</u>	4” Wide Strip of self-adhering polymer-modified bitumen membrane per ASTM D1970 applied over all joints with <u>30# felt on top</u>	3 ¾” Wide Strip of self-adhering flexible flashing tape per AAMA 711 applied over all joints with <u>30# felt on top</u>	Two layers of ASTM D226 Type II or ASTM D4869 Type III or IV. <u>Layers to be lapped at 19” O.C</u>	Two layers of reinforced synthetic underlayment. (Provide FL/NOA). Layer to be lapped by <u>min. half width of rolls.</u>

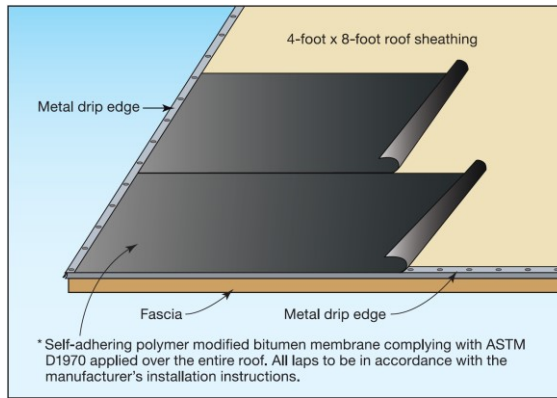
PRODUCT Specifications:

<u>Manufacturer</u>	<u>Product Name</u>	<u>Material Type</u>	<u>NOA or FL Approval #</u>

Applicant’s Affidavit: I hereby certify that I have read the material on all pages of this document and have FULLY provided ALL the information requested.

_____ _____ _____
Qualifier Name Qualifier Signature Date

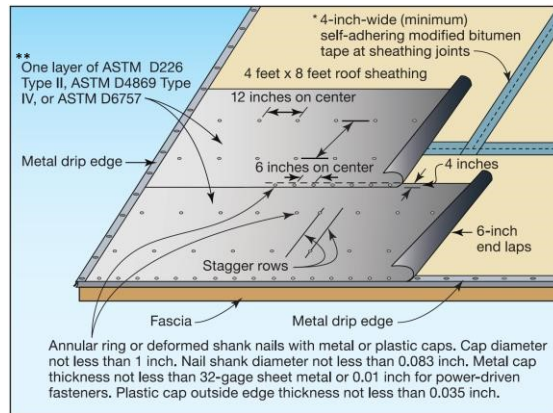
Underlayment Options (CIRCLE One)



Source: FEMA Hurricane Michael in Florida Recovery Advisory 2

Sealed Roof Deck Option A

[NOTE: A is NOT an Option for Wood Shake/Shingle]

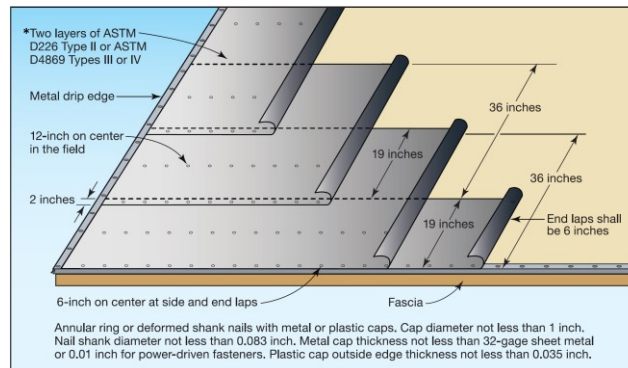


Source: FEMA Hurricane Michael in Florida Recovery Advisory 2

* $\frac{3}{4}$ inch AAMA 711 flashing tape is also permitted.

**Synthetic underlayment meeting the performance requirements specified in Option E may also be used.

Sealed Roof Deck Option B or C



Source: FEMA Hurricane Michael in Florida Recovery Advisory 2

*Synthetic underlayment meeting the performance requirements specified in Option E may also be used.

Sealed Roof Deck Option D or E

[NOTE: E is NOT an Option for Wood Shake/Shingle]

2300 N. Jog Road, West Palm Beach, FL 33411

Phone: (561) 233-5100 * Fax: (561) 233-5020 * www.discover.pbcgov.org/



FORM 200 - REROOFING INSTALLATION SUMMARY FORM

CONCRETE or CLAY TILE

(NEW CONSTRUCTION – INCLUDE FORM 100 IF “REVISION” OR “ROOFING SUB-PERMIT” IS REQUIRED ON THE PLANS FOR A NEW STRUCTURE)

SITE ADDRESS: _____

Sloped Roof Pitch: ____ / 12* Mean Roof Height: ____ Ft Sloped Roof Area (SQRs): ____

Roof Design: Gable Roof Design Pressures: LPZ: _____
 Hip Roof (Obtained from Tables on Page 2) HPZ: _____

AERIAL DEPICTION of Structure is included (per Google Earth, Pictometry, EagleView, etc.)

**SUPPLEMENTAL Details and Information (Identify all items related to the site-specific conditions)

- MANDATED RETROFITS- Existing Wood decks, include **Mandated Roof-to-Wall Connection Retrofit Form**
- Tie-In Detail (DESIGN PROFESSIONAL or ROOFING CONSULTANT) Repair (<25% ROOF AREA- INCLUDE DETAILED SCOPE-OF-WORK)
- Re-Nail Deck (IF STRUCTURE WAS PERMITTED PRIOR TO 5/1/99) Battens (Engineering may be required if fasteners not in Approval)
- Skylights/ Vents/ etc. (REPLACEMENT ONLY) Provide FL or NOA # _____ (ATTACHED)
- FLAT Roof Deck portion included in Reroofing Scope (PROVIDE FORM 400-FLAT ROOF)

BASE SHEET/CAP SHEET Specifications: (Identify One System)

<input type="checkbox"/> Double Ply		<input type="checkbox"/> Single Ply
Base Sheet	Cap Sheet	Direct-to-Deck
Type: _____	<input type="checkbox"/> Self-Adhered <input type="checkbox"/> Other	<input type="checkbox"/> Self-Adhered
<input type="checkbox"/> Mechanically Attached <input type="checkbox"/> Self-Adhered (EXPOSURE NOT TO EXCEED 90 DAYS.)	<input type="checkbox"/> Heat Applied <input type="checkbox"/> Cold Applied <input type="checkbox"/> Hot Mop FL or NOA# _____ System: _____	Type: _____ FL or NOA# _____ System: _____

ROOF TILE Specifications:

Manufacturer	Product Name	Material Type	NOA or FL Approval #

ROOF TILE ATTACHMENT Details (Attachment details **SHALL be identified/circled** in Product Approval)

MECHANICAL	FOAM ADHESIVE *	MORTAR *
Per: <input type="checkbox"/> FRSA or <input type="checkbox"/> NOA	FL or NOA# _____	FL or NOA# _____
<input type="checkbox"/> ___ # Ring Shank Nails <input type="checkbox"/> ___ # Smooth Shank Nails, w/clip <input type="checkbox"/> ___ # 8 Screws	Paddy: <input type="checkbox"/> Single <input type="checkbox"/> Double	Paddy Size: _____ Paddy Weight (g): _____ Moment Resistance (ft-lbf): _____
		Allowable Moment Resistance: _____ (ft-lbf) Per: <input type="checkbox"/> FRSA or <input type="checkbox"/> NOA

*** Slopes over 6/12 require additional mechanical fasteners (per FL/NOA – FRSA Manual or RAS 120, as applicable)**

Applicant’s Affidavit: I hereby certify that I have read the material on all pages of this document and have FULLY provided ALL the information requested.

Qualifier Name

Qualifier Signature

Date

2300 N. Jog Road, West Palm Beach, FL 33411

Phone: (561) 233-5100 * Fax: (561) 233-5020 * www.discover.pbcgov.org/



TABLE 2 GC

Gable Roof – ASCE 7-16

Exposure C – Tile Factor = 1.407 ft³

Roof Slopes	Mean Roof Height (ft)	Roof Zones	170
			Ma (ft-lbf)
Less than 4.5:12	0-15	LPZ	36.1
		HPZ	41.5
	20	LPZ	38.2
		HPZ	44.0
	30	LPZ	41.6
		HPZ	47.9
	40	LPZ	44.2
		HPZ	50.8
	50	LPZ	46.3
		HPZ	53.2
	60	LPZ	48.0
		HPZ	55.2
4.5:12 to less than 6:12	0-15	LPZ	31.6
		HPZ	41.5
	20	LPZ	33.4
		HPZ	44.0
	30	LPZ	36.4
		HPZ	47.9
	40	LPZ	38.7
		HPZ	50.8
	50	LPZ	40.5
		HPZ	53.2
	60	LPZ	42.0
		HPZ	55.2
6:12 to 12:12	0-15	LPZ	27.1
		HPZ	37.9
	20	LPZ	26.8
		HPZ	40.1
	30	LPZ	31.2
		HPZ	43.7
	40	LPZ	33.1
		HPZ	46.4
	50	LPZ	34.7
		HPZ	48.6
	60	LPZ	36.0
		HPZ	45.6

LPZ = Low Pressure Zones 1, 2e, 2n, & 2r for Gable Roofs
 HPZ = High Pressure Zones 3e & 3r for Gable Roofs

TABLE 2 HC

Hip Roof – ASCE 7-16

Exposure C – Tile Factor = 1.407 ft³

Roof Slopes	Mean Roof Height (ft)	Roof Zones	170
			Ma (ft-lbf)
Less than 4.5:12	0-15	LPZ	32.5
		HPZ	32.5
	20	LPZ	34.4
		HPZ	34.4
	30	LPZ	37.5
		HPZ	37.5
	40	LPZ	39.8
		HPZ	39.8
	50	LPZ	41.7
		HPZ	41.7
	60	LPZ	43.2
		HPZ	43.2
4.5:12 to less than 6:12	0-15	LPZ	27.1
		HPZ	27.1
	20	LPZ	28.7
		HPZ	28.7
	30	LPZ	31.2
		HPZ	31.2
	40	LPZ	33.1
		HPZ	33.1
	50	LPZ	34.7
		HPZ	34.7
	60	LPZ	36.0
		HPZ	36.0
6:12 to 12:12	0-15	LPZ	34.3
		HPZ	41.5
	20	LPZ	36.3
		HPZ	44.0
	30	LPZ	39.5
		HPZ	47.9
	40	LPZ	42.0
		HPZ	50.8
	50	LPZ	44.0
		HPZ	53.2
	60	LPZ	45.6
		HPZ	45.6

LPZ - Low Pressure Zones 1, 2e & 2r for Hip Roofs
 HPZ - High Pressure Zones 3 for Hip Roofs
 h/B ≤ 0.80 values used where applicable (most conservative)

**FOR MEAN ROOF HEIGHTS OVER 60', DESIGN PRESSURES MUST BE DETERMINED BY DESIGN PROFESSIONAL



FORM 300 - REROOFING INSTALLATION SUMMARY FORM

METAL ROOFING

(NEW CONSTRUCTION – INCLUDE FORM 300 IF “REVISION” OR “ROOFING SUB-PERMIT” IS REQUIRED ON THE PLANS FOR A NEW STRUCTURE)

SITE ADDRESS: _____

Sloped Roof Pitch: _____ / 12 Mean Roof Height: _____ Ft Sloped Roof Area (SQRs): _____

AERIAL DEPICTION of Structure is included (per Google Earth, Pictometry, EagleView, etc.)

DESIGN WIND UPLIFT Pressure: _____ (psf)

**SUPPLEMENTAL Details and Information (Identify all items related to the site-specific conditions)

- MANDATED RETROFITS- Existing Wood decks, include **Mandated Roof-to-Wall Connection Retrofit Form**
- Tie-In Detail (FL LICENSED ENGINEER or ROOFING CONSULTANT) Repair (<25% ROOF AREA- INCLUDE DETAILED SCOPE-OF-WORK)
- Re-Nail Deck (IF STRUCTURE WAS PERMITTED PRIOR TO 5/1/99) Battens (ENGINEERING DETAILS ATTACHED)
- Skylights/ Vents/ etc. (REPLACEMENT ONLY) Provide FL or NOA # _____ (ATTACHED)
- FLAT Roof Deck portion included in Reroofing Scope (PROVIDE FORM 400-FLAT ROOF)

UNDERLAYMENT Method & Material (Select one Method): FL or NOA # _____ (ATTACHED)

A	B	C	D	E
<input type="checkbox"/> <u>Self-Adhered</u> (Direct to Deck) **NOT an Option for Wood Shake/Shingle**	<input type="checkbox"/> <u>4” Wide Strip</u> (ASTM D1970) Over all Joints/Seams (Per Table R905.1.1.1)	<input type="checkbox"/> <u>3 ¾” Wide Strip</u> (AAMA 711) Over all Joints/Seams (Per Table R905.1.1.1)	<input type="checkbox"/> <u>2 Layers of</u> <u>30# Felt</u> (ASTM Approved)	<input type="checkbox"/> <u>2 Layers</u> <u>Synthetic U/L</u> **NOT an Option for Wood Shake/Shingle**
Self-Adhered (ASTM D1970) Polymer-Modified Bitumen Underlayment Applied directly to <u>entire</u> <u>roof deck</u>	4” Wide Strip of self- adhering polymer- modified bitumen membrane per ASTM D1970 applied over all joints with <u>30# felt on top</u>	3 ¾” Wide Strip of self-adhering flexible flashing tape per AAMA 711 applied over all joints with <u>30# felt on top</u>	Two layers of ASTM D226 Type II or ASTM D4869 Type III or IV. <u>Layers to be lapped</u> <u>at 19” O.C</u>	Two layers of reinforced synthetic underlayment. (Provide <u>FL/NOA</u>). Layer to be lapped by <u>min. half width of rolls.</u>

METAL PANEL SPECIFICATIONS:

Manufacturer	Product Name	Panel Type	FL or NOA Approval #
_____	_____	_____	_____

METAL PANEL ATTACHMENT: (Attachment details **SHALL be identified/ circled** in Product Approval)

Maximum Allowed Pressure (FL/NOA)	FASTENER Type	FASTENER/CLIP Spacing
_____ (psf)	<input type="checkbox"/> Fasteners* <input type="checkbox"/> Clips* *Screws (size & quantity): _____	_____ (inches)

Applicant’s Affidavit: I hereby certify that I have read the material on all pages of this document and have FULLY provided ALL the information requested.

Qualifier Name

Qualifier Signature

Date

2300 N. Jog Road, West Palm Beach, FL 33411

Phone: (561) 233-5100 * Fax: (561) 233-5020 * www.discover.pbcgov.org/



SIMPLIFIED ROOF UPLIFT CHART FOR ROOFING APPLICATIONS

This simplified chart represents the worse-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 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			Hip Roof			
		1.51 to 4:12		4.1 to 6:12	6.1 to 12:12	1.51 to 4:12		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	Roof	Roof	Zone	Roof	Roof
1	-60.5	1, 2e	-70.1	-54	-63.7	1	-63.7	-50.8
1'	-34.8	2n & 2r	-102	-86.2	-70.1	2e	-89.4	-70.1
2	-79.8	3e	-102	-86.2	-86.7	2r	-83	-70.1
3*	-109	3r	-102	-102	-70.1	3	-89.4	-70.1

MEAN ROOF HEIGHT = 20 FEET

Flat Roof		Gable Roof			Hip Roof			
		1.51 to 4:12		4.1 to 6:12	6.1 to 12:12	1.51 to 4:12		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	Roof	Roof	Zone	Roof	Roof
1	-64.2	1, 2e	-74.5	-57.4	-67.7	1	-67.6	-54
1'	-36.9	2n & 2r	-109	-91.5	-74.5	2e	-95	-74.5
2	-84.8	3e	-109	-91.5	-92.1	2r	-88.1	-74.5
3*	-116	3r	-129	-108	-74.5	3	-95	-74.5

MEAN ROOF HEIGHT = 25 FEET

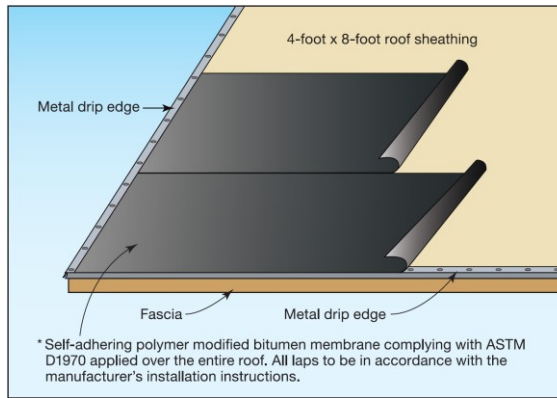
Flat Roof		Gable Roof			Hip Roof			
		1.51 to 4:12		4.1 to 6:12	6.1 to 12:12	1.51 to 4:12		4.1 to 6:12
Positive*	17.2/42.3	Positive 25.8		Positive 25.8	Positive 38.7	Positive 31.5		Positive 31.5
Zone		Zone	Roof	Roof	Roof	Zone	Roof	Roof
1	-67.3	1, 2e	-78.1	-60.2	-70.9	1	-70.9	-58.6
1'	-38.7	2n & 2r	-114	-96	-78.1	2e	-99.6	-78.1
2	-88.8	3e	-114	-96	-96.6	2r	-92.4	-78.1
3*	-121	3r	-135	-113	-78.1	3	-99.6	-78.1

MEAN ROOF HEIGHT = 30 FEET

Flat Roof		Gable Roof			Hip Roof			
		1.51 to 4:12		4.1 to 6:12	6.1 to 12:12	1.51 to 4:12		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	Roof	Roof	Zone	Roof	Roof
1	-70	1, 2e	-81.1	-62.6	-73.7	1	-73.7	-58.8
1'	-40.2	2n & 2r	-118	-99.8	-81.1	2e	-103	-81.1
2	-92.3	3e	-118	-99.8	-100	2r	-96	-81.1
3*	-126	3r	-141	-118	-81.1	3	-103	-81.1

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

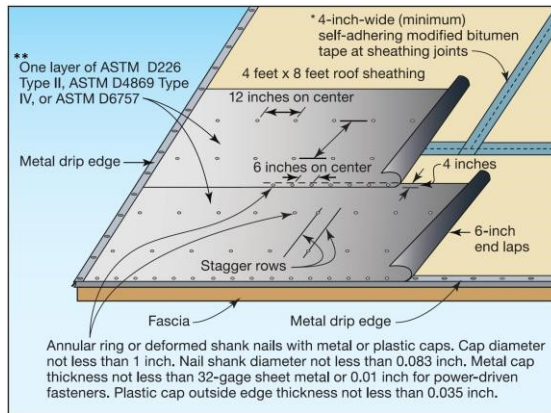
Underlayment Options (CIRCLE One)



Source: FEMA Hurricane Michael in Florida Recovery Advisory 2

Sealed Roof Deck Option A

[NOTE: A is NOT an Option for Wood Shake/Shingle]

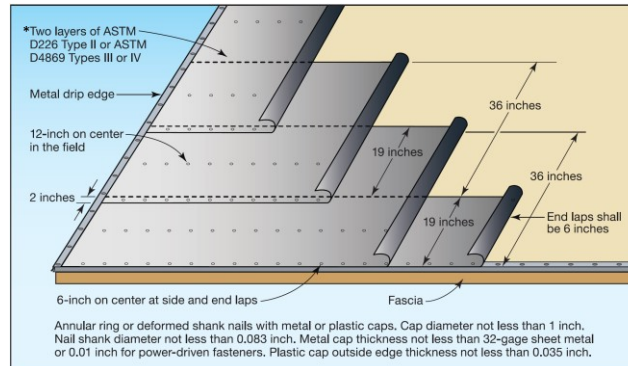


Source: FEMA Hurricane Michael in Florida Recovery Advisory 2

* $\frac{3}{4}$ inch AAMA 711 flashing tape is also permitted.

**Synthetic underlayment meeting the performance requirements specified in Option E may also be used.

Sealed Roof Deck Option B or C



Source: FEMA Hurricane Michael in Florida Recovery Advisory 2

*Synthetic underlayment meeting the performance requirements specified in Option E may also be used.

Sealed Roof Deck Option D or E

[NOTE: E is NOT an Option for Wood Shake/Shingle]

2300 N. Jog Road, West Palm Beach, FL 33411

Phone: (561) 233-5100 * Fax: (561) 233-5020 * www.discover.pbcgov.org/



FORM 400 - REROOFING INSTALLATION SUMMARY FORM

FLAT ROOFING

(NEW CONSTRUCTION – INCLUDE FORM 400 IF “REVISION” OR “ROOFING SUB-PERMIT” IS REQUIRED ON THE PLANS FOR A NEW STRUCTURE)

SITE ADDRESS: _____

EXISTING Flat Roof System: _____ Roof Area (SQRs): _____ Roof Height: _____ (ft)

AERIAL DEPICTION of Structure is included (per Google Earth, Pictometry, EagleView, etc.)

DESIGN WIND UPLIFT Pressure: *Field (Zone 1): _____ (psf) *Perimeter/Corner (Zones 2,3): _____ (psf)

TESTS/ REPORTS/ CALCUATIONS

- Roof Moisture Survey and Report (PREPARED BY AN APPROVED TESTING AGENCY)
- Pull-Test (PERFORMED BY AN APPROVED TESTING AGENCY)
- Enhanced Fastening Specifications (FL ENGINEER, ARCHITECT or ROOFING CONSULTANT– ONLY IF allowed in product approval)
EXCEPTION: Flat roofs not over 400 ft², 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.

**SUPPLEMENTAL DETAILS and Information (Identify all items related to the site-specific conditions)

- MANDATED RETROFITS- Existing Wood decks, include **Mandated Roof-to-Wall Connection Retrofit Form**
- Tie-In Detail (FL LICENSED ENGINEER or ROOFING CONSULTANT) Repair (<25% ROOF AREA-INCLUDE DETAILED SCOPE-OF-WORK)
- Re-Nail Deck (IF STRUCTURE WAS PERMITTED PRIOR TO 5/1/99) Sheath-Over (ENGINEERING DETAILS ATTACHED)
- Recover/ Roof-over (ALL MATERIALS AND COMPONENTS MUST BE COMPATIBLE WITH EXISTING MATERIALS)
- Skylights/ Vents/ etc. (REPLACEMENT ONLY) Provide FL or NOA # _____ (ATTACHED)

FLAT ROOF SYSTEM Specifications:

- BUILT-UP ROOF System/MODIFIED Bitumen System**
 - A. Design Uplift Pressure (FROM ATTACHED CHART): _____
 - B. Max Allowable Uplift Pressure (PER FL/ NOA): _____ (If A>B: See Enhanced Fastening Requirements Above)
 - C. FL or NOA# Number: _____
 - D. System & Components (Identify in Product Approval or Provide Additional Specifications):
(ie: Insulation Layers/ Cover Board/ Ply Sheets/ Cap Sheet/ Other)
- SINGLE-Ply System**
 - A. Design Pressure (SEE ATTACHED CHART): _____
 - B. Max Allowable Pressure (PER FL/ NOA): _____ (If A>B: See Enhanced Nailing Requirements Above)
 - C. FL or NOA# Number: _____
 - D. System # (Identify in Product Approval): _____
 - E. Insulation Layer(s): _____
 - F. Cover Board: _____
 - G. Other: _____

ROOF COATING – FL/NOA #: _____ System: _____

- Existing Roof Assembly: _____
- Proof of Material Compatibility: _____

* **Affidavit: I hereby certify that I have read the material on this document and have FULLY provided ALL information requested.**

Qualifier Name _____ Qualifier Signature _____ Date _____
2300 N. Jog Road, West Palm Beach, FL 33411
Phone: (561) 233-5100 * Fax: (561) 233-5020 * www.discover.pbcgov.org/



SIMPLIFIED ROOF UPLIFT CHART FOR ROOFING APPLICATIONS

This simplified chart represents the worse-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 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			Hip Roof			
		1.51 to 4:12		4.1 to 6:12	6.1 to 12:12	1.51 to 4:12		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	Roof	Roof	Zone	Roof	Roof
1	-60.5	1, 2e	-70.1	-54	-63.7	1	-63.7	-50.8
1'	-34.8	2n & 2r	-102	-86.2	-70.1	2e	-89.4	-70.1
2	-79.8	3e	-102	-86.2	-86.7	2r	-83	-70.1
3*	-109	3r	-102	-102	-70.1	3	-89.4	-70.1

MEAN ROOF HEIGHT = 20 FEET

Flat Roof		Gable Roof			Hip Roof			
		1.51 to 4:12		4.1 to 6:12	6.1 to 12:12	1.51 to 4:12		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	Roof	Roof	Zone	Roof	Roof
1	-64.2	1, 2e	-74.5	-57.4	-67.7	1	-67.6	-54
1'	-36.9	2n & 2r	-109	-91.5	-74.5	2e	-95	-74.5
2	-84.8	3e	-109	-91.5	-92.1	2r	-88.1	-74.5
3*	-116	3r	-129	-108	-74.5	3	-95	-74.5

MEAN ROOF HEIGHT = 25 FEET

Flat Roof		Gable Roof			Hip Roof			
		1.51 to 4:12		4.1 to 6:12	6.1 to 12:12	1.51 to 4:12		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	Roof	Roof	Zone	Roof	Roof
1	-67.3	1, 2e	-78.1	-60.2	-70.9	1	-70.9	-58.6
1'	-38.7	2n & 2r	-114	-96	-78.1	2e	-99.6	-78.1
2	-88.8	3e	-114	-96	-96.6	2r	-92.4	-78.1
3*	-121	3r	-135	-113	-78.1	3	-99.6	-78.1

MEAN ROOF HEIGHT = 30 FEET

Flat Roof		Gable Roof			Hip Roof			
		1.51 to 4:12		4.1 to 6:12	6.1 to 12:12	1.51 to 4:12		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	Roof	Roof	Zone	Roof	Roof
1	-70	1, 2e	-81.1	-62.6	-73.7	1	-73.7	-58.8
1'	-40.2	2n & 2r	-118	-99.8	-81.1	2e	-103	-81.1
2	-92.3	3e	-118	-99.8	-100	2r	-96	-81.1
3*	-126	3r	-141	-118	-81.1	3	-103	-81.1

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



Mandated Retrofits of Roof-to-Wall Connection

THIS FORM MUST BE FILLED OUT AND INCLUDED WITH ALL RE-ROOFING APPLICATIONS FOR EXISTING STRUCTURES WITH WOOD ROOF DECKS.

Address: _____

For the purpose of this document, "Sections" as cited below are from the Florida Building Code-Existing Building, 7TH Edition (2020) Section 706.8, unless otherwise noted.

When the roof covering on an existing structure with a wood roof deck is removed and replaced...the structure shall be evaluated for mandated retrofits of the roof-to-wall connections in accordance with Section 706.8.

1. Was permit for the original construction of the building applied for on or after January 1, 1990?

- Yes** – The application date was on or after January 1, 1990.
*** Proceed to signature and permit submittal. (Attach documentation verifying the application date)*
- No** – The application date was prior to January 1, 1990.
*** Continue with questions and details below.*

2. Applicant must provide one of the following to document the value of the building.

- Copy of current home insurance summary sheet.
- Copy of the latest Tax Bill or Property Appraiser Valuation for the structure (the *Appraised Improvement Value* determines the threshold amount).

3. Based on the documentation provided, is the value of the Building \$300,000 or more?

- No** - Building is valued at less than \$300,000
*** Proceed to signature and permit submittal.*
- Yes** - Building valuation exceeds \$300,000
*** Enhanced Roof-to-Wall connections are required unless meeting one of the following exceptions:*
 - Exception 1:** Cost of "evaluation and roof-to-wall connections" at gable ends or **all** corners will exceed 15% of the cost of the roof replacement (attach professional estimate).
 - Exception 2:** Analysis submitted by FL Design Professional validates the existing roof-to-wall load path connections are compliant for the applicable wind loads in Table 706.8.1.

COMPLIANCE Options to Complete Mandated Retrofits (Identify one)

- Prescriptive Retrofit Procedures.**
 - Roof-to-wall connections will be enhanced using the prescriptive measures in Sections 706.8.1.3 – 7.
 - Priority of work shall be determined by Section 706.8.1.7.
 - Details provided on page 2
- Professional Design**
 - Provide engineered design plan, and identify details on page 2

If enhanced roof to wall connections are required, the following page (Connection Details) must also be completed and submitted along with a roof plan of the building, including span distances and gable/ 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 or Owner/Builder Name (Print)

Qualifier or Owner/Builder Signature

Date



Roof to Wall Mandated Retrofits (Cont.)

MANDATED RETROFIT CONNECTION DETAILS

Exterior Wall Construction:

- Wood
- CBS
- Other explain: _____

Roof Geometry:

- Gable
- Hip
- Flat
- Other explain: _____

Existing Anchors

Identify existing straps/anchors and fasteners (quantity & size) at areas proposed for retrofit.

Strap/Anchor: _____ Fasteners: _____

Determine if *Existing Straps* were manufactured and rated for four (4) fasteners at each end.

- YES - *Existing Straps* were manufactured and rated for four (4) fasteners at each end
 - o Specify additional fastener size and quantity: _____

NOTE: A Roofing Contractor (CCC) may install the additional fasteners to the existing straps – Details shall be included in primary Reroof permit scope of work.

- NO - *Existing Straps* were not manufactured and rated for four (4) fasteners at each end
 - o Retrofit straps/anchors shall be added and installed (CGC, CBC or CRC required)

NOTE: Installation of new straps/ anchors is outside the scope of a Roofing Contractor (CCC), and requires an appropriately licensed *building* Contractor (CGC, CBC or CRC).

Retrofit Straps/ Anchors (Minimum uplift capacity of 500 pounds each, unless designed by FL P.E.)

“B” Subpermit (“Mandated Retrofits, GC required”) shall be added to the primary Reroof permit.

Manufacturer: _____

Type/ Model: _____

Fasteners: _____

(Nails, Screws, Bolts / Size / Quantity / Minimum Embedment / Spacing / etc.)

Qualifier or Owner/Builder Name (Print)

Qualifier or Owner/Builder Signature

Date