Roofing

Proposed Code Modifications

2013 Florida Building Code - Full Report

This document created by the Florida Department of Business and Professional Regulation - 850-487-1824

TAC: Roofing

Sub Code: Building

Total Mods for Roofing: 85

R5258

Date Submitted	7/18/2012	**Section**	1502	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION 1502 DEFINITIONS

1502.1 ~~Definitions~~ General.
~~The following terms are defined in Chapter 2:~~
The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

~~**AGGREGATE.**~~

~~**BALLAST.**~~

~~**BUILT-UP ROOF COVERING.**~~

~~**INTERLAYMENT.**~~

~~**MECHANICAL EQUIPMENT SCREEN.**~~

~~**METAL ROOF PANEL.**~~

~~**METAL ROOF SHINGLE.**~~

~~**MODIFIED BITUMEN ROOF COVERING.**~~

~~**PENTHOUSE.**~~

~~**PHOTOVOLTAIC MODULES/SHINGLES.**~~

~~**POSITIVE ROOF DRAINAGE.**~~

~~**REROOFING.**~~

~~**ROOF ASSEMBLY.**~~

~~**ROOF COVERING.**~~

~~**ROOF COVERING SYSTEM.**~~

~~**ROOF DECK.**~~

~~**ROOF RECOVER.**~~

~~**ROOF REPAIR.**~~

~~**ROOF REPLACEMENT.**~~

~~**ROOF VENTILATION.**~~

~~**ROOFTOP STRUCTURE.**~~

~~**SCUPPER.**~~

~~**SINGLE-PLY MEMBRANE.**~~

~~UNDERLAYMENT.~~

AGGREGATE. In roofing, crushed stone, crushed slag or water-worn gravel used for surfacing for roof coverings.

BALLAST. In roofing, ballast comes in the form of large stones or paver systems or light-weight interlocking paver systems and is used to provide uplift resistance for roofing systems that are not adhered or mechanically attached to the roof deck.

BUILDING INTEGRATED PHOTOVOLTAIC ROOFING. A roofing product consisting of electricity generating photovoltaic component integrated into a roof covering.

BUILT-UP ROOF COVERING. Two or more layers of felt cemented together and surfaced with a cap sheet, mineral aggregate, smooth coating or similar surfacing material.

INTERLAYMENT. A layer of felt or nonbituminous saturated felt not less than 18 inches (457 mm) wide, shingled between each course of a wood-shake roof covering.

MECHANICAL EQUIPMENT SCREEN. A partially enclosed rooftop structure used to aesthetically conceal heating, ventilating and air conditioning (HVAC) electrical or mechanical equipment from view.

METAL ROOF PANEL. An interlocking metal sheet having a minimum installed weather exposure of 3 square feet (0.279 m^2) per sheet.

METAL ROOF SHINGLE. An interlocking metal sheet having an installed weather exposure less than 3 square feet (0.279 m^2) per sheet.

MODIFIED BITUMEN ROOF COVERING. One or more layers of polymer-modified asphalt sheets. The sheet materials shall be fully adhered or mechanically attached to the substrate or held in place with an approved ballast layer.

PENTHOUSE. An enclosed, unoccupied structure above the roof of a building, other than a tank, tower, spire, dome cupola or bulkhead.

POSITIVE ROOF DRAINAGE. The drainage condition in which consideration has been made for all loading deflections of the roof deck, and additional slope has been provided to ensure drainage of the roof within 48 hours of precipitation.

REROOFING. The process of recovering or replacing an existing roof covering. See "Roof recover" and "Roof replacement."

ROOF ASSEMBLY. A system designed to provide weather protection and resistance to design loads. The system consists of a roof covering and roof deck or a single component serving as both the roof covering and the roof deck. A roof assembly includes the roof deck, vapor retarder, substrate or thermal barrier, insulation, vapor retarder and roof covering.

The definition of "Roof assembly" is limited in application to the provisions of Chapter 15.

ROOF COVERING. The covering applied to the roof deck for weather resistance, fire classification or appearance.

ROOF COVERING SYSTEM. See "Roof assembly."

ROOF DECK. The flat or sloped surface not including its supporting members or vertical supports.

ROOF RECOVER. The process of installing an additional roof covering over a prepared existing roof covering without removing the existing roof covering.

ROOF REPAIR. Reconstruction or renewal of any part of an existing roof for the purposes of its maintenance.

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.

ROOF VENTILATION. The natural or mechanical process of supplying conditioned or unconditioned air to, or removing such air from, attics, cathedral ceilings or other enclosed spaces over which a roof assembly is installed.

ROOFTOP STRUCTURE. An enclosed structure on or above the roof of any part of a building.

SCUPPER. An opening in a wall or parapet that allows water to drain from a roof.

SINGLE-PLY MEMBRANE. A roofing membrane that is field applied using one layer of membrane material (either homogeneous or composite) rather than multiple layers.

UNDERLAYMENT. One or more layers of felt, sheathing paper, nonbituminous saturated felt or other approved material over which a steep-slope roof covering is applied.

Date Submitted	7/19/2012	**Section**	1503.2 Flashing	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1503.2 Flashing.
Flashing shall be installed in such a manner so as to prevent moisture entering the wall and roof through joints in copings, through moisture-permeable materials and at intersections with parapet walls and other penetrations through the roof plane.

TABLE 1503.2
METAL FLASHING MATERIAL

MATERIAL	MINIMUM THICKNESS (INCHES)	GAGE	WEIGHT (LBS PER SQ FT)
Copper			1 (16 oz)
Aluminum	0.024		
Stainless Steel		28	
Galvanized Steel	0.0179	26 (zinc coated G90)	
Aluminum Zinc Coated Steel	0.0179	26 (AZ50 Alum Zinc)	
Zinc Alloy	0.027		
Lead			2.5 (40 oz)
Painted Terne			1.25 (20 oz)

R5340

Date Submitted	7/19/2012	**Section**	1503.2.1 Locations.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1503.2.1 Locations.
Flashing shall be installed at wall and roof intersections, at gutters, wherever there is a change in roof slope or direction and around roof openings. Where flashing is of metal, the metal shall be corrosion resistant with a thickness not less than ~~0.019 inch (0.483 mm) (No. 26 galvanized sheet)~~ provided in Table 1503.2.

Exception: This requirement does not apply to hip and ridge junctions.

Date Submitted	7/19/2012	**Section**	1503.4 Roof drainage.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1503.4 Roof drainage.

Unless roofs are sloped to drain over roof edges, ~~D~~ design and installation of roof drainage systems shall comply with Section 1503 ~~of this code and Sections 1106 and 1108, as applicable, of~~ and the *Florida Building Code, Plumbing,* Chapter 11 ~~*International Plumbing Code*~~.

Date Submitted	7/19/2012	**Section**	1503.4.1 Secondary (emergency d	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1503.4.1 Secondary (emergency overflow) drains or scuppers.
Where roof drains are required, secondary (emergency overflow) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. The installation and sizing of secondary emergency overflow drains, leaders and conductors shall comply with Sections 1106 and ~~1108~~ 1107, as applicable, of the ~~International Plumbing Code~~ Florida Building Code, Plumbing, Chapter 11 .

Date Submitted	7/19/2012	**Section**	1503.4.2 Scuppers.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1503.4.2 Scuppers.

~~When scuppers are used for secondary (emergency overflow) roof drainage, the quantity, size, location and inlet elevation of the scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1611.1. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when locating and sizing scuppers.~~

Where required for roof drainage, a scupper shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the slope and the contributing area of the roof. The exterior facing or lining of a scupper, if metal, shall be the same as flashing material required by Sections 1503 through 1510 for the particular type of covering specified for the building. For other type materials, follow manufacturer's specifications.

Date Submitted	7/19/2012	**Section**	1503.4.2.1 Overflow scuppers.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1503.4.2.1 Overflow scuppers.

When other means of drainage of overflow water is not provided, overflow scuppers shall be placed in walls or parapets not less than 2 inches (51 mm) nor more than 4 inches (102 mm) above the finished roof covering and shall be located as close as practical to required vertical leaders or downspouts or wall and parapet scuppers. An overflow scupper shall be sized in accordance with the Florida Building Code, Plumbing.

Date Submitted	7/19/2012	**Section**	1503.5 Roof ventilation.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1503.5 Roof ventilation.

Attic ventilation ~~Intake and exhaust vents~~ shall be provided in accordance with Section 1203.2 and the manufacturer's installation instructions.

Date Submitted	7/19/2012	**Section**	1503.6 Crickets and saddles.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5347-G1

Proponent Roger LeBrun **Submitted** 9/20/2012 **Attachments** No

Comment:

This modification is not justified as a Florida-specific need. Also, there has been no evidence presented denying the proven effectiveness of flashing saddles designed and provided by the skylight manufacturer as a matched set, and no recognition of skylights that carry warranties against leakage.

The proposal should be disapproved. Also affects R5260 and R5474.

1503.6 Crickets and saddles.
A cricket or saddle shall be installed on the ridge side of any chimney or penetration greater than 30 inches (762 mm) wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.

~~**Exception:** Unit skylights installed in accordance with Section 2405.5 and flashed in accordance with the manufacturer's instructions shall be permitted to be installed without a cricket or saddle~~

Date Submitted	7/18/2012	**Section**	1503	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION 1503 WEATHER PROTECTION

1503.1 General.
Roof decks shall be covered with approved roof coverings secured to the building or structure in accordance with the provisions of this chapter. Roof coverings shall be designed and installed in accordance with this code and the approved manufacturer's instructions such that the roof covering shall serve to protect the building or structure.

1503.2 Flashing.
Flashing shall be installed in such a manner so as to prevent moisture entering the wall and roof through joints in copings, through moisture-permeable materials and at intersections with parapet walls and other penetrations through the roof plane.

1503.2.1 Locations.
Flashing shall be installed at wall and roof intersections, at gutters, wherever there is a change in roof slope or direction and around roof openings. Where flashing is of metal, the metal shall be corrosion resistant with a thickness not less than ~~0.019 inch (0.483 mm) (No. 26 galvanized sheet)~~ provided in Table 1503.2.

Exception: This requirement does not apply to hip and ridge junctions.

TABLE 1503.2 METAL FLASHING MATERIAL

MATERIAL	MINIMUM THICKNESS (INCHES)	GAGE	WEIGHT (LBS PER SQ FT)
Copper	1 (16 oz)		
Aluminum	0.024		
Stainless Steel	28		
Galvanized Steel	0.0179	26 (zinc coated G90)	
Aluminum Zinc Coated Steel	0.0179	26 (AZ50 Alum Zinc)	
Zinc Alloy	0.027		
Lead	2.5 (40 oz)		
Painted Terne	-	1.25 (20 oz)	

1503.3 Coping.
Parapet walls shall be properly coped with noncombustible, weatherproof materials of a width no less than the thickness of the parapet wall.

[P] 1503.4 Roof drainage.
Unless roofs are sloped to drain over roof edges, ~~D~~ design and installation of roof drainage systems shall comply with Section 1503 ~~of this code and Sections 1106 and 1108, as applicable, of~~ and the Florida Building Code, Plumbing, Chapter 11 ~~International Plumbing Code~~.

[P] 1503.4.1 Secondary (emergency overflow) drains or scuppers.
Where roof drains are required, secondary (emergency overflow) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. The installation and sizing of secondary emergency

overflow drains, leaders and conductors shall comply with Sections 1106 and 1108, as applicable, of the ~~International Plumbing Code~~ Florida Building Code, Plumbing.

1503.4.2 Scuppers.
~~When scuppers are used for secondary (emergency overflow) roof drainage, the quantity, size, location and inlet elevation of the scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1611.1. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when locating and sizing scuppers.~~

Where required for roof drainage, a scupper shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the slope and the contributing area of the roof. The exterior facing or lining of a scupper, if metal, shall be the same as flashing material required by Sections 1503 through 1510 for the particular type of covering specified for the building. For other type materials, follow manufacturer's specifications.

1503.4.2.1 Overflow scuppers.

When other means of drainage of overflow water is not provided, overflow scuppers shall be placed in walls or parapets not less than 2 inches (51 mm) nor more than 4 inches (102 mm) above the finished roof covering and shall be located as close as practical to required vertical leaders or downspouts or wall and parapet scuppers. An overflow scupper shall be sized in accordance with the Florida Building Code, Plumbing.

1503.4.3 Gutters.
Gutters and leaders placed on the outside of buildings, other than Group R-3, private garages and buildings of Type V construction, shall be of noncombustible material or a minimum of Schedule 40 plastic pipe.

1503.5 Roof ventilation.
Attic ventilation ~~Intake and exhaust vents~~ shall be provided in accordance with Section 1203.2 and the manufacturer's installation instructions.

1503.6 Crickets and saddles.
A cricket or saddle shall be installed on the ridge side of any chimney or penetration greater than 30 inches (762 mm) wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.

~~Exception: Unit skylights installed in accordance with Section 2405.5 and flashed in accordance with the manufacturer's instructions shall be permitted to be installed without a cricket or saddle~~

Date Submitted	7/19/2012	**Section**	1504.1.1 Wind resistance of asphal	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1504.1.1 Wind resistance of asphalt shingles.
Asphalt shingles shall ~~comply~~ be designed for wind speeds in accordance with Section 1507.2.7.

R5349

Date Submitted	7/19/2012	**Section**	1504.3.2 Metal panel roof systems	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1504.3.2 Metal panel roof systems.
Metal panel roof systems through fastened or standing seam shall be tested in accordance with UL 580 or ASTM E 1592 or TAS 125.

Date Submitted	7/19/2012	**Section**	1504.5 Edge securement for low-s	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1504.5 Edge securement for low-slope roofs.
Low-slope built-up, modified bitumen and single-ply roof system metal edge securement, except gutters, shall be designed and installed for wind loads in accordance with Chapter 16 and tested for resistance in accordance with Test Methods RE-1, RE-2 and RE-3 of ANSI/SPRI ES-1, or RAS 111 except V_{ult} wind speed shall be determined from Figure 1609A, 1609B, or 1609C as applicable.

Date Submitted	7/19/2012	**Section**	1504.6 Physical properties.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1504.6 Physical properties.

Roof coverings installed on low-slope roofs (roof slope < 2:12) in accordance with Section 1507 shall demonstrate physical integrity over the working life of the roof based upon 2,000 hours of exposure to accelerated weathering tests conducted in accordance with ASTM G 152, ASTM G 153, ASTM G 155 or ASTM G 154. Those roof coverings that are subject to cyclical flexural response due to wind loads shall not demonstrate any significant loss of tensile strength for unreinforced membranes or breaking strength for reinforced membranes when tested as herein required.

Date Submitted	7/19/2012	**Section**	1504.6 Physical properties.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1504.7 Impact resistance.

Roof coverings installed on low-slope roofs (roof slope < 2:12) in accordance with Section 1507 shall resist impact damage based on the results of tests conducted in accordance with ASTM D 3746, ASTM D 4272, CGSB 37-GP-52M or the "Resistance to Foot Traffic Test" in Section 5.5 of FM 4470. All structural metal roofing systems having a thickness equal to or greater than 22 gage and all non-structural metal roof systems having a thickness equal to or greater than 26 gage shall be exempt from the tests listed above.

Date Submitted	7/19/2012	**Section**	1504.8 Aggregate.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1504.8 Aggregate.

Aggregate ~~used as surfacing for roof coverings and aggregate, gravel or stone used as ballast shall not be used on the roof of a building located in a hurricane-prone region as defined in Section 202, or on any other building with a mean roof height exceeding that permitted by Table 1504.8 based on the exposure category and basic wind speed at the site~~ shall be permitted as roof surfacing when installed on slopes of 3:12 or less, not less than 400 pound (182 kg) of roofing gravel or 300 pounds (145 kg) of slag per square shall be applied. A minimum of 50 percent of the total aggregate shall be embedded in the flood coat of bitumen or installed in accordance with its product approval. Aggregate shall be dry and free from dirt and shall be in compliance with the sizing requirements set forth in ASTM D 1863. A building official may request a test to confirm compliance with these requirements.

TABLE 1504.8 MAXIMUM ALLOWABLE MEAN ROOF HEIGHT PERMITTED FOR BUILDINGS WITH AGGREGATE ON THE ROOF IN AREAS OUTSIDE A HURRICANE-PRONE REGION

~~NOMINAL DESIGN WIND SPEED, V_{asd} (mph)[b, d]~~	~~MAXIMUM MEAN ROOF HEIGHT (ft)[a, c]~~		
	~~Exposure category~~		
	~~B~~	~~C~~	~~D~~
~~85~~	~~170~~	~~60~~	~~30~~
~~90~~	~~110~~	~~35~~	~~15~~
~~95~~	~~75~~	~~20~~	~~NP~~
~~100~~	~~55~~	~~15~~	~~NP~~
~~105~~	~~40~~	~~NP~~	~~NP~~
~~110~~	~~30~~	~~NP~~	~~NP~~
~~115~~	~~20~~	~~NP~~	~~NP~~
~~120~~	~~15~~	~~NP~~	~~NP~~
~~Greater than 120~~	~~NP~~	~~NP~~	~~NP~~

~~For SI: 1 foot = 304.8 mm; 1 mile per hour = 0.447 m/s.~~

~~a. Mean roof height as defined in ASCE 7.~~

~~b. For intermediate values of V_{asd}, the height associated with the next higher value of V_{asd} shall be used, or direct interpolation is permitted.~~

~~c. NP = gravel and stone not permitted for any roof height.~~

~~**d. V_{asd} shall be determined in accordance with Section 1609.3.1.**~~

Reserved.

Date Submitted	7/19/2012	**Section**	1504.9 Margin of Safety.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1504.9 Margin of Safety.

A margin of safety of 2:1 shall be applied to all wind uplift resistance test results except when a margin of safety is specified in the test standard.

Exception: Asphalt shingles testing resulting in a miles per hour rating as required in Section 1507.2.7.

Date Submitted	7/26/2012	**Section**	1504.9	**Proponent**	James L. Buckner P.E.@CBUCK Engin
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

To reinstate the margin of safety from the 2007 and 2010 FBC that is applicable to the roof assemblies performance requirements, section 1504.

Rationale

This modification provides a uniform application of the various test standards applicable to roof coverings in section 1504. About half of the test report results contains a design safety factor (usually 2 : 1) and the other half reports the ultimate or the maximum test pressure. This modification will also provide uniform nomenclature for the state product approvals.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Section 1504.9 is currently stated in the 2007 and 2010 Code. No new requirements are being established.

Impact to building and property owners relative to cost of compliance with code

None. Section 1504.9 is currently stated in the 2007 and 2010 Code. No new requirements are being established.

Impact to industry relative to the cost of compliance with code

None. Section 1504.9 is currently stated in the 2007 and 2010 Code. No new requirements are being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Carried over from previous 2007 and 2010 FBC

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Carried over from previous 2007 and 2010 FBC, and helps provide uniform method of reporting roof design resistance.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Carried over from previous 2007 and 2010 FBC, and applies to all roof systems performance which will be reported with a design safety factor.

Does not degrade the effectiveness of the code

Does not reduce the scope of test standards, and is carried over from previous 2007 and 2010 FBC.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

To be consistent with the Florida Statutes and to implement to commision plan to update the 2013 Code

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1504.9 Margin of Safety. A margin of safety of 2:1 shall be applied to all wind uplift resistance test results except when a margin of safety is specified in the test standard.

Exception: Asphalt shingles testing resulting in a miles per hour rating as required in section 1507.2.7.

Date Submitted	7/18/2012	**Section**	1504	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION 1504 PERFORMANCE REQUIREMENTS

1504.1 Wind resistance of roofs.
Roof decks and roof coverings shall be designed for wind loads in accordance with Chapter 16 and Sections 1504.2, 1504.3 and 1504.4.

1504.1.1 Wind resistance of asphalt shingles.
Asphalt shingles shall ~~comply~~ be designed for wind speeds in accordance with Section 1507.2.7.

1504.2 Wind resistance of clay and concrete tile.
Wind loads on clay and concrete tile roof coverings shall be in accordance with Section 1609.5.

1504.3 Wind resistance of nonballasted roofs.
Roof coverings installed on roofs in accordance with Section 1507 that are mechanically attached or adhered to the roof deck shall be designed to resist the design wind load pressures for components and cladding in accordance with Section 1609.

1504.3.1 Other roof systems.
Roof systems with built-up, modified bitumen, fully adhered or mechanically attached single-ply through fastened metal panel roof systems, and other types of membrane roof coverings shall also be tested in accordance with FM 4474, UL 580 or UL 1897.

1504.3.2 Metal panel roof systems.
Metal panel roof systems through fastened or standing seam shall be tested in accordance with UL 580 or ASTM E 1592 or TAS 125.

Exception: Metal roofs constructed of cold-formed steel, where the roof deck acts as the roof covering and provides both weather protection and support for structural loads, shall be permitted to be designed and tested in accordance with the applicable referenced structural design standard in Section 2210.1.

1504.4 Ballasted low-slope roof systems.
Ballasted low-slope (roof slope < 2:12) single-ply roof system coverings installed in accordance with Sections 1507.12 and 1507.13 shall be designed in accordance with Section 1504.8 and ANSI/SPRI RP-4.

1504.5 Edge securement for low-slope roofs.
Low-slope built-up, modified bitumen and single-ply roof system metal edge securement, except gutters, shall be designed and installed for wind loads in accordance with Chapter 16 and tested for resistance in accordance with Test Methods RE-1, RE-2 and RE-3 of ANSI/SPRI ES-1, or RAS 111 except V_{ult} wind speed shall be determined from Figure 1609A, 1609B, or 1609C as applicable.

1504.6 Physical properties.

Roof coverings installed on low-slope roofs (roof slope < 2:12) in accordance with Section 1507 shall demonstrate physical integrity over the working life of the roof based upon 2,000 hours of exposure to accelerated weathering tests conducted in accordance with ASTM G 152, ASTM G 153, ASTM G 155 or ASTM G 154. Those roof coverings that are subject to cyclical flexural response due to wind loads shall not

demonstrate any significant loss of tensile strength for unreinforced membranes or breaking strength for reinforced membranes when tested as herein required.

1504.7 Impact resistance.

Roof coverings installed on low-slope roofs (roof slope < 2:12) in accordance with Section 1507 shall resist impact damage based on the results of tests conducted in accordance with ASTM D 3746, ASTM D 4272, CGSB 37-GP-52M or the "Resistance to Foot Traffic Test" in Section 5.5 of FM 4470. All structural metal roofing systems having a thickness equal to or greater than 22 gage and all non-structural metal roof systems having a thickness equal to or greater than 26 gage shall be exempt from the tests listed above.

1504.8 Aggregate.

Aggregate ~~used as surfacing for roof coverings and aggregate, gravel or stone used as ballast shall not be used on the roof of a building located in a hurricane-prone region as defined in Section 202, or on any other building with a mean roof height exceeding that permitted by Table 1504.8 based on the exposure category and basic wind speed at the site~~ shall be permitted as roof surfacing when installed on slopes of 3:12 or less, not less than 400 pound (182 kg) of roofing gravel or 300 pounds (145 kg) of slag per square shall be applied. A minimum of 50 percent of the total aggregate shall be embedded in the flood coat of bitumen or installed in accordance with its product approval. Aggregate shall be dry and free from dirt and shall be in compliance with the sizing requirements set forth in ASTM D 1863. A building official may request a test to confirm compliance with these requirements.

TABLE 1504.8 MAXIMUM ALLOWABLE MEAN ROOF HEIGHT PERMITTED FOR BUILDINGS WITH AGGREGATE ON THE ROOF IN AREAS OUTSIDE A HURRICANE-PRONE REGION

~~NOMINAL DESIGN WIND SPEED, V_{asd} (mph)[b, d]~~	~~MAXIMUM MEAN ROOF HEIGHT (ft)[a, c]~~		
	~~Exposure category~~		
	~~B~~	~~C~~	~~D~~
~~85~~	~~170~~	~~60~~	~~30~~
~~90~~	~~110~~	~~35~~	~~15~~
~~95~~	~~75~~	~~20~~	~~NP~~
~~100~~	~~55~~	~~15~~	~~NP~~
~~105~~	~~40~~	~~NP~~	~~NP~~
~~110~~	~~30~~	~~NP~~	~~NP~~
~~115~~	~~20~~	~~NP~~	~~NP~~
~~120~~	~~15~~	~~NP~~	~~NP~~
~~Greater than 120~~	~~NP~~	~~NP~~	~~NP~~

~~For SI: 1 foot = 304.8 mm; 1 mile per hour = 0.447 m/s.~~

~~a. Mean roof height as defined in ASCE 7.~~

~~b. For intermediate values of V_{asd}, the height associated with the next higher value of V_{asd} shall be used, or direct interpolation is permitted.~~

~~c. NP = gravel and stone not permitted for any roof height.~~

~~d. V_{asd} shall be determined in accordance with Section 1609.3.1.~~

Reserved.

1504.9 Margin of Safety.

A margin of safety of 2:1 shall be applied to all wind uplift resistance test results except when a margin of safety is specified in the test standard.

Exception: Asphalt shingles testing resulting in a miles per hour rating as required in Section 1507.2.7.

Date Submitted	7/19/2012	**Section**	1505.2 Class A roof assemblies.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1505.2 Class A roof assemblies.
Class A roof assemblies are those that are effective against severe fire test exposure. Class A roof assemblies and roof coverings shall be *listed* and identified as Class A by an *approved* testing agency. Class A roof assemblies shall be permitted for use in buildings or structures of all types of construction.

Exceptions:

1. Class A roof assemblies include those with coverings of brick, masonry or an exposed concrete roof deck.

2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile or slate installed on noncombustible decks or ferrous, copper or metal sheets installed without a roof deck on noncombustible framing.

~~3. Class A roof assemblies include minimum 16 oz/sq. ft. (0.0416 kg/m^2) copper sheets installed over combustible decks.~~

Date Submitted	7/19/2012	**Section**	1505.7 Special purpose roofs.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1505.7 Special purpose roofs.

~~Special purpose wood shingle or wood shake roofing shall conform with the grading and application requirements of Section 1507.8 or 1507.9. In addition, an underlayment of $^{5}/_{8}$-inch (15.9 mm) Type X water-resistant gypsum backing board or gypsum sheathing shall be placed under minimum nominal $^{1}/_{2}$-inch-thick (12.7 mm) wood structural panel solid sheathing or 1-inch (25 mm) nominal spaced sheathing.~~

Reserved.

Date Submitted	7/18/2012	**Section**	1505	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION 1505 FIRE CLASSIFICATION

1505.1 General.
Roof assemblies shall be divided into the classes defined below. Class A, B and C roof assemblies and roof coverings required to be listed by this section shall be tested in accordance with ASTM E 108 or UL 790. In addition, fire-retardant-treated wood roof coverings shall be tested in accordance with ASTM D 2898. The minimum roof coverings installed on buildings shall comply with Table 1505.1 based on the type of construction of the building.

Exception: Skylights and sloped glazing that comply with Chapter 24 or Section 2610.

TABLE 1505.1[a, b] MINIMUM ROOF COVERING CLASSIFICATION FOR TYPES OF CONSTRUCTION

IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB
B	B	B	C[c]	B	C[c]	B	B	C[c]

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m^2.
a. Unless otherwise required in accordance with the International Wildland-Urban Interface Code or due to the location of the building within a fire district in accordance with Appendix D.
b. Nonclassified roof coverings shall be permitted on buildings of Group R-3 and Group U occupancies, where there is a minimum fire-separation distance of 6 feet measured from the leading edge of the roof.
c. Buildings that are not more than two stories above grade plane and having not more than 6,000 square feet of projected roof area and where there is a minimum 10-foot fire-separation distance from the leading edge of the roof to a lot line on all sides of the building, except for street fronts or public ways, shall be permitted to have roofs of No. 1 cedar or redwood shakes and No. 1 shingles.

1505.2 Class A roof assemblies.
Class A roof assemblies are those that are effective against severe fire test exposure. Class A roof assemblies and roof coverings shall be listed and identified as Class A by an approved testing agency. Class A roof assemblies shall be permitted for use in buildings or structures of all types of construction.

Exceptions:

1. Class A roof assemblies include those with coverings of brick, masonry or an exposed concrete roof deck.

2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile or slate installed on noncombustible decks or ferrous, copper or metal sheets installed without a roof deck on noncombustible framing.

~~**3. Class A roof assemblies include minimum 16 oz/sq. ft. (0.0416 kg/m^2) copper sheets installed over combustible decks.**~~

1505.3 Class B roof assemblies.
Class B roof assemblies are those that are effective against moderate fire-test exposure. Class B roof assemblies and roof coverings shall be listed and identified as Class B by an approved testing agency.

1505.4 Class C roof assemblies.
Class C roof assemblies are those that are effective against light fire-test exposure. Class C roof assemblies and roof coverings shall be listed and identified as Class C by an approved testing agency.

1505.5 Nonclassified roofing.
Nonclassified roofing is approved material that is not listed as a Class A, B or C roof covering.

1505.6 Fire-retardant-treated wood shingles and shakes.
Fire-retardant-treated wood shakes and shingles shall be treated by impregnation with chemicals by the full-cell vacuum-pressure process, in accordance with AWPA C1. Each bundle shall be marked to identify the manufactured unit and the manufacturer, and shall also be labeled to identify the classification of the material in accordance with the testing required in Section 1505.1, the treating company and the quality control agency.

1505.7 Special purpose roofs.
~~**Special purpose wood shingle or wood shake roofing shall conform with the grading and application requirements of Section 1507.8 or 1507.9. In addition, an underlayment of $^{5}/_{8}$-inch (15.9 mm) Type X water-resistant gypsum backing board or gypsum sheathing shall be placed under minimum nominal $^{1}/_{2}$-inch-thick (12.7 mm) wood structural panel solid sheathing or 1-inch (25 mm) nominal spaced sheathing.**~~

Reserved.

1505.8 Photovoltaic systems.
Rooftop installed photovoltaic systems that are adhered or attached to the roof covering or photovoltaic modules/shingles installed as roof coverings shall be labeled to identify their fire classification in accordance with the testing required in Section 1505.1.

Date Submitted	7/19/2012	**Section**	1506.5 Nails.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1506.5 Nails.

Nails shall be corrosion resistant nails conforming to ASTM F 1667. The corrosion resistance shall meet ASTM A 641, Class 1 or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metal and alloys or other suitable corrosion resistant material.

Date Submitted	7/19/2012	**Section**	1506.6 Screws.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1506.6 Screws.

Wood screws conform to ANSI/ASME B 18.6.1. Screws shall be corrosion resistant by coating, galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material. The corrosion resistance shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to ASTM A 641, Class 1;

2. Corrosion resistance in accordance with TAS114, *Appendix E*; or

3. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with ASTM B 117.

Date Submitted	7/19/2012	**Section**	1506.7 Clips.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1506.7 Clips.

Clips shall be corrosion resistant clips. The corrosion resistance shall meet 0.90 ounce per square foot (0.458 kg/m^2) measured according to ASTM A 90/A 90M, TAS 114 *Appendix E* or an equal corrosion resistance coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metals and alloys or other suitable corrosion resistant material. Stainless steel clips shall conform to ASTM A167, Type 304.

Date Submitted	7/18/2012	**Section**	1506	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION 1506 MATERIALS

1506.1 Scope.
The requirements set forth in this section shall apply to the application of roof-covering materials specified herein. Roof coverings shall be applied in accordance with this chapter and the manufacturer's installation instructions. Installation of roof coverings shall comply with the applicable provisions of Section 1507.

1506.2 Compatibility of materials.
Roofs and roof coverings shall be of materials that are compatible with each other and with the building or structure to which the materials are applied.

1506.3 Material specifications and physical characteristics.
Roof-covering materials shall conform to the applicable standards listed in this chapter. In the absence of applicable standards or where materials are of questionable suitability, testing by an approved agency shall be required by the building code official to determine the character, quality and limitations of application of the materials.

1506.4 Product identification.
Roof-covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels required in accordance with Section 1505. Bulk shipments of materials shall be accompanied with the same information issued in the form of a certificate or on a bill of lading by the manufacturer.

1506.5 Nails.

Nails shall be corrosion resistant nails conforming to ASTM F 1667. The corrosion resistance shall meet ASTM A 641, Class 1 or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metal and alloys or other suitable corrosion resistant material.

1506.6 Screws.

Wood screws conform to ANSI/ASME B 18.6.1. Screws shall be corrosion resistant by coating, galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material. The corrosion resistance shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to ASTM A 641, Class 1;

2. Corrosion resistance in accordance with TAS114, Appendix E; or

3. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with ASTM B 117.

1506.7 Clips.

Clips shall be corrosion resistant clips. The corrosion resistance shall meet 0.90 ounce per square foot (0.458 kg/m^2) measured according to ASTM A 90/A 90M, TAS 114 Appendix E or an equal corrosion resistance coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metals and alloys or other suitable corrosion resistant material. Stainless steel clips shall conform to ASTM A167, Type 304.

R5270

Date Submitted	7/18/2012	**Section**	1507.10 Built-up roofs.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.10 Built-up roofs.
The installation of built-up roofs shall comply with the provisions of this section.

1507.10.1 Slope.
Built-up roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage, except for coal-tar built-up roofs that shall have a design slope of a minimum one-eighth unit vertical in 12 units horizontal (1-percent slope).

1507.10.2 Material standards.
Built-up roof covering materials shall comply with the standards in Table 1507.10.2 or UL 55A.

TABLE 1507.10.2 BUILT-UP ROOFING MATERIAL STANDARDS

MATERIAL STANDARD	STANDARD
Acrylic coatings used in roofing	ASTM D 6083
Aggregate surfacing	ASTM D 1863
Asphalt adhesive used in roofing	ASTM D 3747
Asphalt cements used in roofing	ASTM D 3019; D 2822; D 4586
Asphalt-coated glass fiber base sheet	ASTM D 4601
Asphalt coatings used in roofing	ASTM D 1227; D 2823; D 2824; D 4479
Asphalt glass felt	ASTM D 2178
Asphalt primer used in roofing	ASTM D 41
Asphalt-saturated and asphalt-coated organic felt base sheet	ASTM D 2626
Asphalt-saturated organic felt (perforated)	ASTM D 226
Asphalt used in roofing	ASTM D 312
Coal-tar cements used in roofing	ASTM D 4022; D 5643
Coal-tar saturated organic felt	ASTM D 227
Coal-tar pitch used in roofing	ASTM D 450; Type I or II
Coal-tar primer used in roofing, dampproofing and waterproofing	ASTM D 43
Glass mat, coal tar	ASTM D 4990
Glass mat, venting type	ASTM D 4897
Mineral-surfaced inorganic cap sheet	ASTM D 3909
Thermoplastic fabrics used in roofing	ASTM D 5665, D 5726

1507.10.3 Red rosin paper.

Red rosin paper shall be used when the membrane is applied directly to a wood deck or cementitious fiber decks.

R5409

Date Submitted	7/19/2012	**Section**	1507.10.3 Red rosin paper.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.10.3 Red rosin paper.

Red rosin paper shall be used when the membrane is applied directly to a wood deck or cementitious fiber decks.

R5280

Date Submitted	7/18/2012	**Section**	1507.17 Photovoltaic modules/shi	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.17 Photovoltaic modules/shingles.
~~The installation~~ Building integrated ~~P~~ photovoltaic roofing modules/shingles. The installation of building integrated ~~P~~ photovoltaic roofing modules/shingles shall comply with the provisions of this section.

1507.17.1 Material standards.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be listed and labeled in accordance with UL 1703.

1507.17.2 Attachment.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be attached in accordance with the manufacturer's installation instructions.

1507.17.3 Wind resistance.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be tested in accordance with procedures and acceptance criteria in ASTM D 3161 or TAS 107. Building integrated ~~P~~ photovoltaic roofing modules/shingles shall comply with the classification requirements of Table 1507.2.7.1~~(2)~~ for the appropriate maximum ~~nominal design~~ basic wind speed. Building integrated ~~P~~ photovoltaic roofing modules/shingle packaging shall bear a label to indicate compliance with the procedures in ASTM D 3161 or TAS 107 and the required classification from Table 1507.2.7.1~~(2)~~ .

R5410

Date Submitted	7/19/2012	**Section**	1507.17 Photovoltaic modules/shi	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.17 Photovoltaic modules/shingles.
Building integrated photovoltaic roofing modules/shingles. The installation of building integrated photovoltaic roofing modules/shingles shall comply with the provisions of this section.

1507.17.1 Material standards.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be listed and labeled in accordance with UL 1703.

1507.17.2 Attachment.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be attached in accordance with the manufacturer's installation instructions.

1507.17.3 Wind resistance.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be tested in accordance with procedures and acceptance criteria in ASTM D 3161 or TAS 107. Building integrated ~~P~~ photovoltaic roofing modules/shingles shall comply with the classification requirements of Table 1507.2.7.1~~(2)~~ for the appropriate maximum ~~nominal design~~ basic wind speed. Building integrated ~~P~~ photovoltaic roofing modules/shingle packaging shall bear a label to indicate compliance with the procedures in ASTM D 3161 or TAS 107 and the required classification from Table 1507.2.7.1~~(2)~~ .

Date Submitted	7/19/2012	**Section**	1507.2.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria. Provide correct Types for previously approved ASTM D 4869.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events. Provide correct Types for previously Commission approved ASTM D 4869.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

Unless otherwise noted, required underlayment shall conform to ASTM D 226, Type I or Type II, or ASTM D 4869 Type~~I~~ II or Type IV or ASTM D 6757.

R5361

Date Submitted	7/19/2012	**Section**	1507.2.5 Asphalt shingles.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.2.5 Asphalt shingles.
Asphalt shingles shall have self-seal strips or be interlocking and comply with ASTM D 225 or ASTM D 3462. Shingles shall also comply with Table 1507.2.7.1. Asphalt shingle packaging shall bear labeling indicating compliance with one of the required classifications as shown in Table 1507.2.7.1.

Date Submitted	7/19/2012	**Section**	1507.2.6.1	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.2.6.1

The nail component of plastic cap nails shall meet the corrosion resistance requirements of Section 1506.5.

Date Submitted	7/19/2012	**Section**	1507.2.7 Attachment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.2.7 Attachment.

Asphalt shingles shall have the minimum number of fasteners required by the manufacturer~~, but~~ and Section 1504.1. Asphalt shingles shall be secured to the roof with not less than four fasteners per strip shingle or two fasteners per ~~individual~~ strip shingle or two fasteners per individual shingle. Where the roof slope exceeds 21 units vertical in 12 units horizontal (21:12), asphalt shingles shall be installed ~~as required by~~ in accordance with the manufacturer's printed installation instructions for steep-slope roof applications.

Date Submitted	7/19/2012	**Section**	1507.2.7.1 Wind Resistance of As	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.2.7.1 Wind Resistance of Asphalt Shingles.

Asphalt Shingles shall be ~~tested~~ classified in accordance with ASTM D 3161, TAS 107 or ASTM D 7158 ~~in accordance with Table 1507.2.7.1. Asphalt shingles shall meet the classification requirements of Table 1507.2.7.1(1) for the appropriate maximum basic wind speed.~~ Shingles classified as ASTM D 3161 Class D or ASTM D 7158 Class G are acceptable for use in the 100-mph wind zone. Shingles classified as ASTM D 3161 Class F, TAS107 or ASTM D 7158 Class H are acceptable for use in all wind zones. Asphalt shingle ~~packaging~~ wrappers shall ~~bear a label to~~ indicate compliance ~~with ASTM D 7158 and the~~ with one of the required classifications as shown in Table 1507.2.7.(1).

~~**Exception: Asphalt shingles not included in the scope of ASTM D 7158 shall be tested and labeled to indicate compliance with ASTM D 3161 and the required classification in Table 1507.2.7.1(2).**~~

TABLE 1507.2.7.1~~(1)~~ CLASSIFICATION OF ASPHALT ~~ROOF~~ SHINGLES ~~PER ASTM D 7158~~[a]

~~NOMINAL DESIGN WIND SPEED, V_{asd}[b] (mph)~~	~~CLASSIFICATION REQUIREMENT~~
~~85~~	~~D, G or H~~
~~90~~	~~D, G or H~~
~~100~~	~~G or H~~
~~110~~	~~G or H~~
~~120~~	~~G or H~~
~~130~~	~~H~~
~~140~~	~~H~~
~~150~~	~~H~~

-

~~For SI: 1 foot = 304.8 mm; 1 mph = 0.447 m/s.~~
~~a. The standard calculations contained in ASTM D 7158 assume exposure category B or C and building height of 60 feet or less. Additional calculations are required for conditions outside of these assumptions.~~
~~b. V_{asd} shall be determined in accordance with Section 1609.3.1.~~

-

MAXIMUM BASIC WIND SPEED FROM FIGURE 1609A, B, C or ASCE-7	V_{asd}	ASTM D 7158	ASTM D 3161
110	85	D, G or H	A, D or F
116	90	D, G or H	A, D or F
129	100	G or H	A, D or F
142	110	G or H	F
155	120	G or H	F
168	130	H	F
181	140	H	F
194	150	H	F

TABLE 1507.2.7.1(2) CLASSIFICATION OF ASPHALT SHINGLES PER ASTM D 3161

~~NOMINAL DESIGN WIND SPEED, V_{asd}[a] (mph)~~	~~CLASSIFICATION REQUIREMENT~~
~~85~~	~~A, D or F~~
~~90~~	~~A, D or F~~
~~100~~	~~A, D or F~~
~~110~~	~~F~~
~~120~~	~~F~~
~~130~~	~~F~~
~~140~~	~~F~~
~~150~~	~~F~~

-

~~For SI: 1 mph = 0.447 m/s.~~
~~a. V_{asd} shall be determined in accordance with Section 1609.3.1.~~

Reserved.

Date Submitted	7/19/2012	**Section**	1507.2.8 Underlayment applicatio	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code -specific slope criteria addressed in DEC Statement DCA08-DEC-331 and removes unnecessary language.

Rationale

To simplify intent and carry forward previous Commission approved DEC Statement DCA08-DEC-331. Remove unnecessary language found in manufacturers specifications and correlates with Residential Code. To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.2.8 Underlayment application.
For roof slopes from two units vertical in 12 units horizontal (17-percent slope) and ~~up to~~ less than four units vertical in 12 units horizontal (33-percent slope), underlayment shall be two layers applied in the following manner. Apply a minimum 19-inch-wide (483 mm) strip of underlayment felt parallel with and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment overlapping successive sheets 19 inches (483 mm), by fastened sufficiently to hold in place. ~~Distortions in the underlayment shall not interfere with the ability of the shingles to seal.~~ For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater, underlayment shall be one layer applied in the following manner. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened sufficiently to hold in place. ~~Distortions in the underlayment shall not interfere with the ability of the shingles to seal.~~

R5562

Date Submitted	7/21/2012	**Section**	1507.2.8 Underlayment applicatio	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~**1507.2.8 Underlayment application.**~~

~~For roof slopes from two units vertical in 12 units horizontal (17-percent slope) and up to four units vertical in 12 units horizontal (33-percent slope), underlayment shall be two layers applied in the following manner. Apply a minimum 19-inch-wide (483 mm) strip of underlayment felt parallel with and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment overlapping successive sheets 19 inches (483 mm), by fastened sufficiently to hold in place. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater, underlayment shall be one layer applied in the following manner. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened sufficiently to hold in place. Distortions in the underlayment shall not interfere with the ability of the shingles to seal.~~

1507.2.8 Underlayment application.

Underlayment shall be installed using one of the following methods:

1. For roof slopes from two units vertical in 12 units horizontal (17-percent slope), and less than four units vertical in 12 units horizontal (33-percent slope). Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757 and shall be two layers applied in the following manner. Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

2. For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater. Underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV or ASTM D 6757 and shall be one layer applied in the following manner. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations End laps shall be offset by 6 feet (1829 mm).

3. As an alternative, 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.

Date Submitted	7/19/2012	**Section**	1507.2.8.1 High wind attachment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.2.8.1 High wind attachment.
~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's instructions. Fasteners are to be applied along the overlap at a maximum spacing of 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 6757. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section 1507.2.8 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32 gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^3/_4$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved

R5569

Date Submitted	7/21/2012	**Section**	1507.2.8.1 High wind attachment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.2.8.1 High wind attachment.
~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's instructions. Fasteners are to be applied along the overlap at a maximum spacing of 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 6757. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section 1507.2.8 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12-gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved

Date Submitted	7/19/2012	**Section**	1507.2.8.2 Ice barrier	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.2.8.2 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the *exterior wall* line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~

Reserved.

Date Submitted	7/19/2012	**Section**	1507.2.9.1 Base and counter flashi	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code -specific slope criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.2.9.1 Base and ~~cap~~ counter flashing.
Base and ~~cap~~ counter flashing shall be installed ~~in accordance with the manufacturer's instructions. Base flashing shall be of either corrosion-resistant metal of minimum nominal 0.019-inch (0.483 mm) thickness or mineral-surfaced roll roofing weighing a minimum of 77 pounds per 100 square feet (3.76 kg/m^2). Cap flashing shall be corrosion-resistant metal of minimum nominal 0.019-inch (0.483 mm) thickness.~~ as follows:

Base and counter flashing shall be installed as follows:

1. In accordance with manufacturer's installation instructions, or

2. A continuous metal minimum 4? × 4? "L" flashing shall be set in approved flashing cement and set flush to base of wall and over the underlayment. Both horizontal and vertical metal flanges shall be fastened 6 inches (152 mm) on center with approved fasteners. All laps shall be a minimum of 4 inches (102 mm) fully sealed in approved flashing cement. Flashing shall start at the lower portion of roof to insure water-shedding capabilities of all metal laps. The entire edge of the horizontal flange shall be sealed covering all nail penetrations with approved flashing cement and membrane. Shingles will overlap the horizontal flange and shall be set in approved flashing cement.

Base flashing shall be of either corrosion resistant metal with a minimum thickness provided in Table 1503.2 or mineral surface roll roofing weighing a minimum of 77 pounds per 100 square feet (3.76 kg/m^2). Counter flashing shall be corrosion resistant metal with a minimum thickness provided in Table 1503.2.

Date Submitted	7/19/2012	**Section**	1507.2.9.2 Valleys.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.2.9.2 Valleys.

Valley linings shall be installed in accordance with the manufacturer's instructions before applying shingles. Valley linings of the following types shall be permitted:

1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be at least ~~24~~ 16 inches (~~610~~ 406 mm) wide and of any of the corrosion-resistant metals in Table 150~~7~~3.2~~.9. 2~~.

2. For open valleys, valley lining of two plies of mineral-surfaced roll roofing complying with ASTM D 3909 or ASTM D 6380 Class M shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer a minimum of 36 inches (914 mm) wide.

3. For closed valleys (valleys covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D 6380 Class S , and at least 36 inches (914 mm) wide or types as described in Item 1 or 2 above shall be permitted. Self-adhering polymer modified bitumen underlayment complying with ASTM D 1970 shall be permitted in lieu of the lining material.

TABLE 1507.2.9.2 VALLEY LINING MATERIAL

~~MATERIAL~~	~~MINIMUM THICKNESS~~	~~GAGE~~	~~WEIGHT~~
~~Aluminum~~	~~0.024 in.~~	—	—
~~Cold-rolled copper~~	~~0.0216 in.~~	—	~~ASTM B 370, 16 oz. per square ft.~~
~~Copper~~	—	—	~~16 oz~~
~~Galvanized steel~~	~~0.0179 in.~~	~~26 (zinc-coated G90)~~	—
~~High-yield copper~~	~~0.0162 in.~~	—	~~ASTM B 370, 12 oz. per square ft.~~
~~Lead~~	—	—	~~2.5 pounds~~
~~Lead-coated copper~~	~~0.0216 in.~~	—	~~ASTM B 101, 16 oz. per square ft.~~
~~Lead-coated high-yield copper~~	~~0.0162 in.~~	—	~~ASTM B 101, 12 oz. per square ft.~~
~~Painted terne~~	—	—	~~20 pounds~~
~~Stainless steel~~	—	~~28~~	—
~~Zinc alloy~~	~~0.027 in.~~	—	—

~~For SI: 1 inch = 25.4 mm, 1 pound = 0.454 kg, 1 ounce = 28.35 g, 1 square foot = 0.093 m^2.~~

Reserved.

.

Date Submitted	7/19/2012	**Section**	1507.2.9.3 Drip edge.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.2.9.3 Drip edge.

Provide drip edge at eaves and gables of shingle roofs. Overlap to be a minimum of ~~2~~ 3 inches (~~51~~ 76 mm). Eave drip edges shall extend ~~¼~~ $^1/_2$ inch (~~6.4~~ 13 mm) below sheathing and extend back on the roof a minimum of 2 inches (51 mm). Drip edge at eaves shall be permitted to be installed either over or under the underlayment. If installed over the underlayment, there shall be a minimum 4 inches (51 mm) width of roof cement installed over the drip edge flange. Drip edge shall be mechanically fastened a maximum of 12 inches (305 mm) on center. Where the V_{asd} as determined in accordance with Section 1609.3.1 is 110 mph (177 km/h) or greater or the mean roof height exceeds 33 feet (10 058 mm), drip edges shall be mechanically fastened a maximum of 4 inches (102 mm) on center.

Date Submitted	7/18/2012	**Section**	1507.3 Clay and concrete tile.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3 Clay and concrete tile.
The installation of clay and concrete tile shall comply with the provisions of this section.

1507.3.1 Deck requirements.
Concrete and clay tile shall be installed only over solid sheathing ~~or~~ except where the roof covering is specifically designed and tested in accordance with Section 1609.5.2 to be applied over ~~spaced~~ structural spaced sheathing boards.

1507.3.2 Deck slope.
Clay and concrete roof tile shall be installed ~~on roof slopes of 2½ units vertical in 12 units horizontal (21-percent slope) or greater. For roof slopes from 2½ units vertical in 12 units horizontal (21-percent slope) to four units vertical in 12 units horizontal (33-percent slope), double underlayment application is required in accordance with Section 1507.3.3.~~ in accordance with the recommendations of FRSA/TRI 07320 where the V_{asd} as determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.

1507.3.3 Underlayment.
Unless otherwise noted, required underlayment shall conform to: ASTM D 226, Type II; ASTM D 2626, ASTM D 1970 or ASTM D 6380, Class M mineral-surfaced roll roofing. Underlayment shall be applied according to the tile manufacturer's installation instructions or the recommendations of the FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.

1507.3.3.1 ~~Low-slope roofs~~ Slope and underlayment requirements.
~~For roof slopes from 2½ units vertical in 12 units horizontal (21-percent slope), up to four units vertical in 12 units horizontal (33-percent slope), underlayment shall be a minimum of two layers applied as follows:~~

~~1. Starting at the eave, a 19-inch (483 mm) strip of underlayment shall be applied parallel with the eave and fastened sufficiently in place.~~

~~2. Starting at the eave, 36-inch-wide (914 mm) strips of underlayment felt shall be applied overlapping successive sheets 19 inches (483 mm) and fastened sufficiently in place.~~ Refer to FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 for underlayment and slope requirements for specific roof tile systems or the recommendations of RAS 118, 119 or 120.

1507.3.3.2 High-slope roofs.
~~For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater, underlayment shall be a minimum of one layer of underlayment felt applied shingle fashion, parallel to, and starting from the eaves and lapped 2 inches (51 mm), fastened only as necessary to hold in place.~~ Reserved.

1507.3.3.3 High wind attachment.
~~Underlayment applied in areas subject to high wind [V_{asd} greater than 110 mph (49 m/s) as determined in~~

~~accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Sections 1507.3.3.1 and 1507.3.3.2 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19.1 mm) into the roof sheathing.~~

~~Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~
Reserved.

1507.3.4 Clay tile.
Clay roof tile shall comply with ASTM C 1167.

1507.3.5 Concrete tile.
Concrete roof tile shall comply with ASTM C 1492.

1507.3.6 Fasteners.
Tile fasteners shall be corrosion resistant and not less than 11 gage, $^{5}/_{16}$-inch (8.0 mm) head, and of sufficient length to penetrate the deck a minimum of ~~¾~~ 0.75 inch (19.1 mm) or through the thickness of the deck, whichever is less or in accordance with the FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or in accordance with RAS 118, 119 or 120. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). ~~Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.~~

1507.3.7 Attachment.
Clay and concrete roof tiles shall be fastened in accordance with ~~Table 1507.3.7~~Section 1609 or in accordance with FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1. .

TABLE 1507.3.7 CLAY AND CONCRETE TILE ATTACHMENT[a, b, c]

~~GENERAL - CLAY OR CONCRETE ROOF TILE~~			
~~Maximum Nominal Design Wind Speed, V_{asd}[f] (mph)~~	~~Mean roof height (feet)~~	~~Roof slope < 3:12~~	~~Roof slope 3:12 and over~~
~~85~~	~~0-60~~	~~One fastener per tile. Flat tile without vertical laps, two fasteners per tile.~~	~~Two fasteners per tile. Only one fastener on slopes of 7:12 and less for tiles with installed weight exceeding 7.5 lbs./sq. ft. having a width no greater than 16 inches.~~
~~100~~	~~0-40~~		

~~100~~	~~>40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.~~
~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~All~~	~~>60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~

~~**INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS[d, e]**~~

~~**(Installations on spaced/solid sheathing with battens or spaced sheathing)**~~

~~**Maximum Nominal Design Wind Speed, V_{asd}[f] (mph)**~~	~~**Mean roof height (feet)**~~	~~**Roof slope < 5:12**~~	~~**Roof slope 5:12 < 12:12**~~	~~**Roof slope 12:12 and over**~~
~~85~~	~~0-60~~	~~Fasteners are not required. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~	~~One fastener per tile every other row. All perimeter tiles require one fastener. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~	~~One fastener required for every tile. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~
~~100~~	~~0-40~~			
~~100~~	~~>40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.~~		
~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~		
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~		
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~		
~~All~~	~~>60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~		

~~**INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS**~~

~~**(Installations on solid sheathing without battens)**~~

~~**Maximum Nominal Design Wind Speed, V_{asd}[f] (mph)**~~	~~**Mean roof height (feet)**~~	~~**All roof slopes**~~
~~85~~	~~0-60~~	~~One fastener per tile.~~
~~100~~	~~0-40~~	~~One fastener per tile.~~

~~100~~	~~> 40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.~~
~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~All~~	~~> 60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~

~~For SI: 1 inch =25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 pound per square foot = 4.882 kg/m^2.~~
~~a. Minimum fastener size. Corrosion-resistant nails not less than No. 11 gage with $^5/_{16}$ inch head. Fasteners shall be long enough to penetrate into the sheathing $^3/_4$ inch or through the thickness of the sheathing, whichever is less. Attaching wire for clay and concrete tile shall not be smaller than 0.083 inch.~~
~~b. Snow areas. A minimum of two fasteners per tile are required or battens and one fastener.~~
~~c. Roof slopes greater than 24:12. The nose of all tiles shall be securely fastened.~~
~~d. Horizontal battens. Battens shall be not less than 1 inch by 2 inch nominal. Provisions shall be made for drainage by a minimum of $^1/_8$ inch riser at each nail or by 4-foot long battens with at least a $^1/_2$ inch separation between battens. Horizontal battens are required for slopes over 7:12.~~
~~e. Perimeter fastening areas include three tile courses but not less than 36 inches from either side of hips or ridges and edges of eaves and gable rakes.~~
~~f. V_{asd} shall be determined in accordance with Section 1609.3.1.~~

Reserved.

1507.3.8 Application.
Tile shall be applied according to the manufacturer's installation instructions or recommendations of the FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendation of RAS 118, 119 or 120.

~~, based on the following:~~

~~1. Climatic conditions.~~

~~2. Roof slope.~~

~~3. Underlayment system.~~

~~4. Type of tile being installed.~~

1507.3.9 Flashing.
At the juncture of the roof vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions ~~, and where of metal, shall not be less than 0.019-inch (0.48~~

~~mm) (No. 26 galvanized sheet gage) corrosion-resistant metal. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25 percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) underlayment of either one layer of Type I underlayment running the full length of the valley, or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment. In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solid cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58 percent slope) or self-adhering polymer-modified bitumen sheet shall be installed~~ or the recommendations of the FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendation of RAS 118, 119 or 120.

Date Submitted	7/23/2012	**Section**	1507.3 Clay and concrete tile.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

1507.3.2, 1507.3.3, 1507.3.3.1, 1507.3.6, 1507.3.7, 1507.3.8, 1507.3.9

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3 Clay and concrete tile.

The installation of clay and concrete tile shall comply with the provisions of this section.

1507.3.1 Deck requirements.
Concrete and clay tile shall be installed only over solid sheathing ~~or~~ except where the roof covering is specifically designed and tested in accordance with Section 1609.5.2 to be applied over ~~spaced~~ structural spaced sheathing boards.

1507.3.2 Deck slope.
Clay and concrete roof tile shall be installed ~~on roof slopes of 2½ units vertical in 12 units horizontal (21 percent slope) or greater. For roof slopes from 2½ units vertical in 12 units horizontal (21 percent slope) to four units vertical in 12 units horizontal (33 percent slope), double underlayment application is required in accordance with Section 1507.3.3.~~ in accordance with the recommendations of FRSA/TRI ~~07320~~ 04-12 where the V_{asd} as determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.

1507.3.3 Underlayment.
Unless otherwise noted, required underlayment shall conform to: ASTM D 226, Type II; ASTM D 2626, ASTM D 1970 or ASTM D 6380, Class M mineral-surfaced roll roofing. Underlayment shall be applied according to the tile manufacturer's installation instructions or the recommendations of the FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.

1507.3.3.1 ~~Low-slope roofs~~ Slope and underlayment requirements.
~~For roof slopes from 2½ units vertical in 12 units horizontal (21 percent slope), up to four units vertical in 12 units horizontal (33 percent slope), underlayment shall be a minimum of two layers applied as follows:~~

~~1. Starting at the eave, a 19 inch (483 mm) strip of underlayment shall be applied parallel with the eave and fastened sufficiently in place.~~

~~2. Starting at the eave, 36 inch wide (914 mm) strips of underlayment felt shall be applied overlapping successive sheets 19 inches (483 mm) and fastened sufficiently in place.~~ Refer to FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 for underlayment and slope requirements for specific roof tile systems or the recommendations of RAS 118, 119 or 120.

1507.3.3.2 High-slope roofs.
~~For roof slopes of four units vertical in 12 units horizontal (33 percent slope) or greater, underlayment shall be a minimum of one layer of underlayment felt applied shingle fashion, parallel to, and starting from the eaves and lapped 2 inches (51 mm), fastened only as necessary to hold in place.~~ Reserved.

1507.3.3.3 High wind attachment.
~~Underlayment applied in areas subject to high wind [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Sections 1507.3.3.1 and 1507.3.3.2 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12-gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

1507.3.4 Clay tile.
Clay roof tile shall comply with ASTM C 1167.

1507.3.5 Concrete tile.
Concrete roof tile shall comply with ASTM C 1492.

1507.3.6 Fasteners.
Tile fasteners shall be corrosion resistant and not less than 11 gage, $^{5}/_{16}$-inch (8.0 mm) head, and of sufficient length to penetrate the deck a minimum of ~~¾~~ 0.75 inch (19.1 mm) or through the thickness of the deck, whichever is less or in accordance with the FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or in accordance with RAS 118, 119 or 120. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). ~~Perimeter-fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.~~

1507.3.7 Attachment.
Clay and concrete roof tiles shall be fastened in accordance with ~~Table 1507.3.7~~Section 1609 or in accordance with FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1. .

TABLE 1507.3.7 CLAY AND CONCRETE TILE ATTACHMENT[a, b, c]

~~GENERAL—CLAY OR CONCRETE ROOF TILE~~			
~~Maximum Nominal Design Wind Speed, V_{asd}[f] (mph)~~	~~Mean roof height (feet)~~	~~Roof slope < 3:12~~	~~Roof slope 3:12 and over~~
~~85~~	~~0-60~~	~~One fastener per~~	~~Two fasteners per tile. Only one fastener~~

~~100~~	~~0-40~~	~~tile. Flat tile without vertical laps, two fasteners per tile.~~	~~on slopes of 7:12 and less for tiles with installed weight exceeding 7.5 lbs./sq. ft. having a width no greater than 16 inches.~~
~~100~~	~~>40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.~~	
~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	
~~All~~	~~>60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	

~~**INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS[d, e]**~~ ~~**(Installations on spaced/solid sheathing with battens or spaced sheathing)**~~				
~~**Maximum Nominal Design Wind Speed, V_{asd}[f] (mph)**~~	~~**Mean roof height (feet)**~~	~~**Roof slope < 5:12**~~	~~**Roof slope 5:12 < 12:12**~~	~~**Roof slope 12:12 and over**~~
~~85~~	~~0-60~~	~~Fasteners are not required. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~	~~One fastener per tile every other row. All perimeter tiles require one fastener. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~	~~One fastener required for every tile. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~
~~100~~	~~0-40~~			
~~100~~	~~>40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.~~		
~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~		
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~		
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~		
~~All~~	~~>60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~		

~~**INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS**~~ ~~**(Installations on solid sheathing without battens)**~~		
~~**Maximum Nominal Design Wind**~~	~~**Mean roof height**~~	~~**All roof slopes**~~

~~Speed, V_{asd}[f] (mph)~~	~~(feet)~~	
~~85~~	~~0-60~~	~~One fastener per tile.~~
~~100~~	~~0-40~~	~~One fastener per tile.~~
~~100~~	~~> 40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.~~
~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~All~~	~~> 60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~

~~For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 pound per square foot = 4.882 kg/m^2.~~
~~a. Minimum fastener size. Corrosion-resistant nails not less than No. 11 gage with $^5/_{16}$ inch head. Fasteners shall be long enough to penetrate into the sheathing $^3/_4$ inch or through the thickness of the sheathing, whichever is less. Attaching wire for clay and concrete tile shall not be smaller than 0.083 inch.~~
~~b. Snow areas. A minimum of two fasteners per tile are required or battens and one fastener.~~
~~c. Roof slopes greater than 24:12. The nose of all tiles shall be securely fastened.~~
~~d. Horizontal battens. Battens shall be not less than 1 inch by 2 inch nominal. Provisions shall be made for drainage by a minimum of $^1/_8$ inch riser at each nail or by 4-foot long battens with at least a $^1/_2$ inch separation between battens. Horizontal battens are required for slopes over 7:12.~~
~~e. Perimeter fastening areas include three tile courses but not less than 36 inches from either side of hips or ridges and edges of eaves and gable rakes.~~
~~f. V_{asd} shall be determined in accordance with Section 1609.3.1.~~

Reserved.

1507.3.8 Application.
Tile shall be applied according to the manufacturer's installation instructions or recommendations of the FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendation of RAS 118, 119 or 120.

~~, based on the following:~~

~~1. Climatic conditions.~~

~~2. Roof slope.~~

~~3. Underlayment system.~~

~~4. Type of tile being installed.~~

1507.3.9 Flashing.

At the juncture of the roof vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions ~~, and where of metal, shall not be less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25 percent slope) and over, the valley flashing shall have a 36 inch wide (914 mm) underlayment of either one layer of Type I underlayment running the full length of the valley, or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment. In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solid cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58 percent slope) or self-adhering polymer-modified bitumen sheet shall be installed~~ or the recommendations of the FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendation of RAS 118, 119 or 120.

Date Submitted	7/19/2012	**Section**	1507.3.1 Deck requirements	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.1 Deck requirements.
Concrete and clay tile shall be installed only over solid sheathing ~~or~~ except where the roof covering is specifically designed and tested in accordance with Section 1609.5.2 to be applied over ~~spaced~~ structural spaced sheathing boards.

Date Submitted	7/19/2012	**Section**	1507.3.2 Deck slope.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.2 Deck slope.

Clay and concrete roof tile shall be installed ~~on roof slopes of 2½ units vertical in 12 units horizontal (21 percent slope) or greater. For roof slopes from 2½ units vertical in 12 units horizontal (21 percent slope) to four units vertical in 12 units horizontal (33 percent slope), double underlayment application is required in accordance with Section 1507.3.3.~~ in accordance with the recommendations of FRSA/TRI 07320 where the V_{asd} as determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.

Date Submitted	7/23/2012	**Section**	1507.3.2	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

1507.3.3, 1507.3.3.1, 1507.3.6, 1507.3.7, 1507.3.8, 1507.3.9

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.2 Deck slope.

Clay and concrete roof tile shall be installed ~~on roof slopes of 2½ units vertical in 12 units horizontal (21 percent slope) or greater. For roof slopes from 2½ units vertical in 12 units horizontal (21 percent slope) to four units vertical in 12 units horizontal (33 percent slope), double underlayment application is required in accordance with Section 1507.3.3.~~ in accordance with the recommendations of FRSA/TRI ~~07320~~ 04-12 where the V_{asd} as determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.

Date Submitted	7/19/2012	**Section**	1507.3.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.3 Underlayment.

Unless otherwise noted, required underlayment shall conform to: ASTM D 226, Type II; ASTM D 2626, ASTM D 1970 or ASTM D 6380, Class M mineral-surfaced roll roofing. Underlayment shall be applied according to the tile manufacturer's installation instructions or the recommendations of the FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.

Date Submitted	7/19/2012	**Section**	1507.3.3.1 Slope and underlayme	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.3.1 ~~Low-slope roofs~~ Slope and underlayment requirements.
~~For roof slopes from 2 1/2 units vertical in 12 units horizontal (21 percent slope), up to four units vertical in 12 units horizontal (33 percent slope), underlayment shall be a minimum of two layers applied as follows:~~

~~1. Starting at the eave, a 19 inch (483 mm) strip of underlayment shall be applied parallel with the eave and fastened sufficiently in place.~~

~~2. Starting at the eave, 36 inch wide (914 mm) strips of underlayment felt shall be applied overlapping successive sheets 19 inches (483 mm) and fastened sufficiently in place.~~ Refer to FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 for underlayment and slope requirements for specific roof tile systems or the recommendations of RAS 118, 119 or 120.

Date Submitted	7/23/2012	**Section**	1507.3.3.1	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

1507.3.2, 1507.3.3, 1507.3.6, 1507.3.7, 1507.3.8, 1507.3.9

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.3.1 ~~Low-slope roofs~~ Slope and underlayment requirements.

~~For roof slopes from 2 1/2 units vertical in 12 units horizontal (21 percent slope), up to four units vertical in 12 units horizontal (33 percent slope), underlayment shall be a minimum of two layers applied as follows:~~

~~1. Starting at the eave, a 19 inch (483 mm) strip of underlayment shall be applied parallel with the eave and fastened sufficiently in place.~~

~~2. Starting at the eave, 36 inch wide (914 mm) strips of underlayment felt shall be applied overlapping successive sheets 19 inches (483 mm) and fastened sufficiently in place.~~ Refer to FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 for underlayment and slope requirements for specific roof tile systems or the recommendations of RAS 118, 119 or 120.

Date Submitted	7/19/2012	**Section**	1507.3.3.2 High-slope roofs.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.3.2 High-slope roofs.

~~For roof slopes of four units vertical in 12 units horizontal (33 percent slope) or greater, underlayment shall be a minimum of one layer of underlayment felt applied shingle fashion, parallel to, and starting from the eaves and lapped 2 inches (51 mm), fastened only as necessary to hold in place.~~ Reserved.

Date Submitted	7/19/2012	**Section**	1507.3.3.3 High wind attachment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.3.3 High wind attachment.

~~Underlayment applied in areas subject to high wind [V_{asd}, greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Sections 1507.3.3.1 and 1507.3.3.2except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^3/_4$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

Date Submitted	7/21/2012	**Section**	1507.3.3.3 High wind attachment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.3.3 High wind attachment.

~~Underlayment applied in areas subject to high wind [V_{asd}, greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Sections 1507.3.3.1 and 1507.3.3.2except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^3/_4$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

Date Submitted	7/23/2012	**Section**	1507.3.3	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

1507.3.2, 1507.3.3.1, 1507.3.6, 1507.3.7, 1507.3.8, 1507.3.9

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.3 Underlayment.
Unless otherwise noted, required underlayment shall conform to: ASTM D 226, Type II; ASTM D 2626, ASTM D 1970 or ASTM D 6380, Class M mineral-surfaced roll roofing. Underlayment shall be applied according to the tile manufacturer's installation instructions or the recommendations of the FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.

Date Submitted	7/19/2012	**Section**	1507.3.6 Fasteners.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.6 Fasteners.

Tile fasteners shall be corrosion resistant and not less than 11 gage, $^{5}/_{16}$-inch (8.0 mm) head, and of sufficient length to penetrate the deck a minimum of ~~¾~~ 0.75 inch (19.1 mm) or through the thickness of the deck, whichever is less or in accordance with the FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or in accordance with RAS 118, 119 or 120. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). ~~Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.~~

Date Submitted	7/23/2012	**Section**	1507.3.6	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

1507.3.2, 1507.3.3, 1507.3.3.1, 1507.3.7, 1507.3.8, 1507.3.9

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.6 Fasteners.
Tile fasteners shall be corrosion resistant and not less than 11 gage, $^{5}/_{16}$-inch (8.0 mm) head, and of sufficient length to penetrate the deck a minimum of ~~¾~~ 0.75 inch (19.1 mm) or through the thickness of the deck, whichever is less or in accordance with the FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or in accordance with RAS 118, 119 or 120. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). ~~Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.~~

Date Submitted	7/31/2012	**Section**	1507.3.6	**Proponent**	Randall Shackelford
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

FBC-R R905.3.6

Summary of Modification

Adds methods for determining corrosion resistance of screws for roof tile.

Rationale

Because so much of Florida is in proximity to the coast, corrosion resistance of roof tile fasteners is critical. This proposal gives guidance on evaluating the corrosion resistance of roof tile screws.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Nearly identical to requirements in 2010 FBC.

Impact to building and property owners relative to cost of compliance with code

No impact. Nearly identical to requirements in 2010 FBC.

Impact to industry relative to the cost of compliance with code

No impact. Nearly identical to requirements in 2010 FBC. Adds an additional option of ASTM A153 so that nails are covered.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This proposal will ensure that roof tile fasteners are adequately corrosion resistant. If roof tile fasteners rust, tiles can become dislodged in wind events and become missiles, damaging nearby structures, and leaving the roof of the structure unprotected.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves the base code by giving a way to define what "corrosion resistant" is.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Nearly identical to 2010 FBC. Provides both prescriptive and performance standards so many types of alternate materials can be evaluated.

Does not degrade the effectiveness of the code

Does not degrade. Similar to what was in 2010 FBC.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

OTHER

Explanation of Choice

Very similar wording is contained in the ICC 600-2008, Standard for Residential Construction in High-Wind Regions. See Section 304.3.1

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

OTHER

Explanation of Choice

Submitted successfully to ICC 600.

1507.3.6 Fasteners. Tile fasteners shall be corrosion resistant and not less than 11 gage, 5/16-inch (8.0 mm) head, and of sufficient length to penetrate the deck a minimum of 3/4 inch (19.1 mm) or through the thickness of the deck, whichever is less. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes. The corrosion resistance of fasteners shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to ASTM A 641, Class 1;

2. Corrosion resistance in accordance with ASTM A153.

3. Corrosion resistance in accordance with TAS114, Appendix E; or

4. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with ASTM B 117.

R5381

Date Submitted	7/19/2012	**Section**	1507.3.7 Attachment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.7 Attachment.

Clay and concrete roof tiles shall be fastened in accordance with ~~Table 1507.3.7~~Section 1609 or in accordance with FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1.

TABLE 1507.3.7 CLAY AND CONCRETE TILE ATTACHMENT[a, b, c]

~~GENERAL - CLAY OR CONCRETE ROOF TILE~~			
~~Maximum Nominal Design Wind Speed, V_{asd}[f] (mph)~~	~~Mean roof height (feet)~~	~~Roof slope < 3:12~~	~~Roof slope 3:12 and over~~
~~85~~	~~0-60~~	~~One fastener per tile. Flat tile without vertical laps, two fasteners per tile.~~	~~Two fasteners per tile. Only one fastener on slopes of 7:12 and less for tiles with installed weight exceeding 7.5 lbs./sq. ft. having a width no greater than 16 inches.~~
~~100~~	~~0-40~~		
~~100~~	~~>40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.~~	
~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	
~~All~~	~~>60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	

~~INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS[d, e] (Installations on spaced/solid sheathing with battens or spaced sheathing)~~				
~~Maximum Nominal Design Wind Speed, V_{asd}[f] (mph)~~	~~Mean roof height (feet)~~	~~Roof slope < 5:12~~	~~Roof slope 5:12 < 12:12~~	~~Roof slope 12:12 and over~~
~~85~~	~~0-60~~	~~Fasteners are not required. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~	~~One fastener per tile every other row. All perimeter tiles require one fastener. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~	~~One fastener required for every tile. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~
~~100~~	~~0-40~~			
~~100~~	~~>40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.~~		

~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~All~~	~~>60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~**INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS**~~ ~~**(Installations on solid sheathing without battens)**~~		
~~**Maximum Nominal Design Wind Speed, V_{asd}[f]**~~ ~~(mph)~~	~~**Mean roof height (feet)**~~	~~**All roof slopes**~~
~~85~~	~~0-60~~	~~One fastener per tile.~~
~~100~~	~~0-40~~	~~One fastener per tile.~~
~~100~~	~~>40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.~~
~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~All~~	~~>60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~

~~For SI: 1 inch =25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 pound per square foot = 4.882 kg/m^2.~~

~~a. Minimum fastener size. Corrosion-resistant nails not less than No. 11 gage with $^5/_{16}$ inch head. Fasteners shall be long enough to penetrate into the sheathing $^3/_4$ inch or through the thickness of the sheathing, whichever is less. Attaching wire for clay and concrete tile shall not be smaller than 0.083 inch.~~

~~b. Snow areas. A minimum of two fasteners per tile are required or battens and one fastener.~~

~~c. Roof slopes greater than 24:12. The nose of all tiles shall be securely fastened.~~

~~d. Horizontal battens. Battens shall be not less than 1 inch by 2 inch nominal. Provisions shall be made for drainage by a minimum of $^1/_8$ inch riser at each nail or by 4-foot long battens with at least a $^1/_2$ inch separation between battens. Horizontal battens are required for slopes over 7:12.~~

~~e. Perimeter fastening areas include three tile courses but not less than 36 inches from either side of hips or ridges and edges of eaves and gable rakes.~~

~~f. V_{asd} shall be determined in accordance with Section 1609.3.1.~~

Reserved.

Date Submitted	7/23/2012	**Section**	1507.3.7	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

1507.3.2, 1507.3.3, 1507.3.3.1, 1507.3.6, 1507.3.8, 1507.3.9

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.7 Attachment.
Clay and concrete roof tiles shall be fastened in accordance with ~~Table 1507.3.7~~Section 1609 or in accordance with FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1. .

TABLE 1507.3.7 CLAY AND CONCRETE TILE ATTACHMENT[a, b, c]

~~GENERAL – CLAY OR CONCRETE ROOF TILE~~			
~~Maximum Nominal Design Wind Speed, V_{asd}[f] (mph)~~	~~Mean roof height (feet)~~	~~Roof slope < 3:12~~	~~Roof slope 3:12 and over~~
~~85~~	~~0-60~~	~~One fastener per tile. Flat tile without vertical laps, two fasteners per tile.~~	~~Two fasteners per tile. Only one fastener on slopes of 7:12 and less for tiles with installed weight exceeding 7.5 lbs./sq. ft. having a width no greater than 16 inches.~~
~~100~~	~~0-40~~		
~~100~~	~~>40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.~~	
~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	
~~All~~	~~>60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~	

~~INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS[d, e] (Installations on spaced/solid sheathing with battens or spaced sheathing)~~				
~~Maximum Nominal Design Wind Speed, V_{asd}[f] (mph)~~	~~Mean roof height (feet)~~	~~Roof slope < 5:12~~	~~Roof slope 5:12 < 12:12~~	~~Roof slope 12:12 and over~~
~~85~~	~~0-60~~	~~Fasteners are not required. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~	~~One fastener per tile every other row. All perimeter tiles require one fastener. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~	~~One fastener required for every tile. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.~~
~~100~~	~~0-40~~			
~~100~~	~~>40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails The nose of all ridge, hip~~		

		~~and rake tiles shall be set in a bead of roofer's mastic.~~
~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~All~~	~~>60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~**INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS (Installations on solid sheathing without battens)**~~		
~~**Maximum Nominal Design Wind Speed, V_{asd}[f] (mph)**~~	~~**Mean roof height (feet)**~~	~~**All roof slopes**~~
~~85~~	~~0-60~~	~~One fastener per tile.~~
~~100~~	~~0-40~~	~~One fastener per tile.~~
~~100~~	~~>40-60~~	~~The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.~~
~~110~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~120~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~130~~	~~0-60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~
~~All~~	~~>60~~	~~The fastening system shall resist the wind forces in Section 1609.5.3.~~

~~For SI: 1 inch =25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 pound per square foot = 4.882 kg/m^2.~~

~~a. Minimum fastener size. Corrosion-resistant nails not less than No. 11 gage with $^5/_{16}$ inch head. Fasteners shall be long enough to penetrate into the sheathing $^3/_4$ inch or through the thickness of the sheathing, whichever is less. Attaching wire for clay and concrete tile shall not be smaller than 0.083 inch.~~

~~b. Snow areas. A minimum of two fasteners per tile are required or battens and one fastener.~~

~~c. Roof slopes greater than 24:12. The nose of all tiles shall be securely fastened.~~

~~d. Horizontal battens. Battens shall be not less than 1 inch by 2 inch nominal. Provisions shall be made for drainage by a minimum of $^1/_8$ inch riser at each nail or by 4 foot long battens with at least a $^1/_2$ inch separation between battens. Horizontal battens are required for slopes over 7:12.~~

~~e. Perimeter fastening areas include three tile courses but not less than 36 inches from either side of hips or ridges and edges of eaves and gable rakes.~~

~~f. V_{asd} shall be determined in accordance with Section 1609.3.1.~~

Reserved.

R5382

Date Submitted	7/19/2012	**Section**	1507.3.8 Application.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.8 Application.
Tile shall be applied according to the manufacturer's installation instructions or recommendations of the FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendation of RAS 118, 119 or 120.

~~, based on the following:~~

~~1. Climatic conditions.~~

~~2. Roof slope.~~

~~3. Underlayment system.~~

~~4. Type of tile being installed.~~

Date Submitted	7/23/2012	**Section**	1507.3.8	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

1507.3.2, 1507.3.3, 1507.3.3.1, 1507.3.6, 1507.3.7, 1507.3.9

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.8 Application.
Tile shall be applied according to the manufacturer's installation instructions or recommendations of the FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendation of RAS 118, 119 or 120.

~~, based on the following:~~

~~1. Climatic conditions.~~

~~2. Roof slope.~~

~~3. Underlayment system.~~

~~4. Type of tile being installed.~~

Date Submitted	7/19/2012	**Section**	1507.3.9 Flashing.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.9 Flashing.

At the juncture of the roof vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions ~~, and where of metal, shall not be less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25 percent slope) and over, the valley flashing shall have a 36 inch wide (914 mm) underlayment of either one layer of Type I underlayment running the full length of the valley, or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment. In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solid cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58 percent slope) or self-adhering polymer-modified bitumen sheet shall be installed~~ or the recommendations of the FRSA/TRI 07320 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendation of RAS 118, 119 or 120.

Date Submitted	7/23/2012	**Section**	1507.3.9	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

1507.3.2, 1507.3.3, 1507.3.3.1, 1507.3.6, 1507.3.7, 1507.3.8

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.3.9 Flashing.

At the juncture of the roof vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions ~~, and where of metal, shall not be less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25 percent slope) and over, the valley flashing shall have a 36 inch wide (914 mm) underlayment of either one layer of Type I underlayment running the full length of the valley, or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment. In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solid cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58 percent slope) or self-adhering polymer-modified bitumen sheet shall be installed~~ or the recommendations of the FRSA/TRI ~~07320~~ 04-12 where the basic wind speed, V_{asd}, is determined in accordance with Section 1609.3.1 or the recommendation of RAS 118, 119 or 120.

R5275

Date Submitted	7/18/2012	**Section**	1507.4 Metal roof panels.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.4 Metal roof panels.
The installation of metal roof panels shall comply with the provisions of this section.

1507.4.1 Deck requirements.
Metal roof panel roof coverings shall be applied to a solid or closely fitted deck, except where the roof covering is specifically designed to be applied to spaced supports.

1507.4.2 Deck slope.
Minimum slopes for metal roof panels shall comply with the following:

1. The minimum slope for lapped, nonsoldered seam metal roofs without applied lap sealant shall be three units vertical in 12 units horizontal (25-percent slope).

2. The minimum slope for lapped, nonsoldered seam metal roofs with applied lap sealant shall be one-half unit vertical in 12 units horizontal (4-percent slope). Lap sealants shall be applied in accordance with the approved manufacturer's installation instructions.

3. The minimum slope for standing seam of roof systems shall be one-quarter unit vertical in 12 units horizontal (2-percent slope).

1507.4.3 Material standards.
Metal-sheet roof covering systems that incorporate supporting structural members shall be designed in accordance with Chapter 22. Metal-sheet roof coverings installed over structural decking shall comply with Table 1507.4.3(1). The materials used for metal-sheet roof coverings shall be naturally corrosion resistant or provided with corrosion resistance in accordance with the standards and minimum thicknesses shown in Table 1507.4.3(2).

.TABLE 1507.4.3(1) METAL ROOF COVERINGS

~~ROOF COVERING TYPE~~	~~STANDARD APPLICATION RATE/THICKNESS~~
~~Aluminum~~	~~ASTM B 209, 0.024 inch minimum thickness for roll-formed panels and 0.019 inch minimum thickness for press-formed shingles.~~
~~Aluminum-zinc alloy coated steel~~	~~ASTM A 792 AZ 50~~
~~Cold-rolled copper~~	~~ASTM B 370 minimum 16 oz./sq. ft. and 12 oz./sq. ft. high yield copper for metal-sheet roof covering systems; 12 oz./sq. ft. for preformed metal shingle systems.~~
~~Copper~~	~~16 oz./sq. ft. for metal-sheet roof covering systems; 12 oz./sq. ft. for preformed metal shingle systems.~~
~~Galvanized steel~~	~~ASTM A 653 G 90 zinc-coated*.~~
~~Hard lead~~	~~2 lbs./sq. ft.~~
~~Lead-coated copper~~	~~ASTM B 101~~
~~Prepainted steel~~	~~ASTM A 755~~
~~Soft lead~~	~~3 lbs./sq. ft.~~
~~Stainless steel~~	~~ASTM A 240, 300 Series Alloys~~
~~Steel~~	~~ASTM A 924~~
~~Terne and terne-coated stainless~~	~~Terne coating of 40 lbs. per double base box, field painted where~~

	~~applicable in accordance with manufacturer's installation instructions.~~
~~Zinc~~	~~0.027 inch minimum thickness; 99.995% electrolytic high grade zinc with alloy additives of copper (0.08% - 0.20%), titanium (0.07% - 0.12%) and aluminum (0.015%).~~

ROOF COVERING TYPE	STANDARD	STANDARD APPLICATION RATE/THICKNESS
Aluminum	ASTM B 209	0.024 inch minimum thickness for roll-formed panels and 0.019 inch minimum thickness for press-formed shingles.
Aluminum-zinc coated steel	ASTM A 792	0.013 inch minimum thickness, AZ 50 (coated minimum application rate)
Cold-rolled copper	ASTM B 370	Minimum 16 oz/sq. ft. and 12 oz./sq. ft. high yield copper for metal-sheet roof covering systems: 12 oz/sq. ft. for preformed metal shingle systems.
Copper	ASTM B 370	16 oz./sq. ft. for metal-sheet roof-covering systems; 12 oz./sq. ft. for preformed metal shingle systems.
Galvanized steel	ASTM A 653	0.013 inch minimum thickness, G-90 zinc-coated[a].
Hard lead	2 lbs./sq. ft.	
Lead-coated copper	ASTM B 101	
Prepainted steel	ASTM A 755	
Soft lead	3 lbs./sq. ft.	
Stainless steel	ASTM A 240	300 Series Alloys
Steel	ASTM A 924/ ASTM A 924M	
Terne and terne-coated stainless	Terne coating of 40 lbs. per double base box, field painted where applicable in accordance with manufacturer's installation instructions.	
Zinc	0.027 inch minimum thickness; 99.995% electrolytic high grade zinc with alloy additives of copper (0.08% - 0.20%), titanium (0.07% - 0.12%) and aluminum (0.015%).	

For SI: 1 ounce per square foot = 0.0026 kg/m^2,
1 pound per square foot = 4.882 kg/m^2,
1 inch = 25.4 mm, 1 pound = 0.454 kg.
a. For Group U buildings, the minimum coating thickness for ASTM A 653 galvanized steel roofing shall be G-60.

-

TABLE 1507.4.3(2) MINIMUM CORROSION RESISTANCE

55% Aluminum-zinc alloy coated steel	ASTM A 792 AZ 50
5% Aluminum alloy-coated steel	ASTM A 875 GF60
Aluminum-coated steel	ASTM A 463 T2 65
Galvanized steel	ASTM A 653 G-90
Prepainted steel	ASTM A 755[a]

a. Paint systems in accordance with ASTM A 755 shall be applied over steel products with corrosion-resistant coatings complying with ASTM A 792, ASTM A 875, ASTM A 463 or ASTM A 653.

1507.4.4 Attachment.

Metal roof panels shall be secured to the supports in accordance with the approved manufacturer's fasteners. In the absence of manufacturer recommendations, the following fasteners shall be used:

1. Galvanized fasteners shall be used for steel roofs.

2. Copper, brass, bronze, copper alloy or 300 series stainless-steel fasteners shall be used for copper roofs.

3. Aluminum-zinc coated fasteners are acceptable for aluminum-zinc coated roofs.

4. Stainless-steel fasteners are acceptable for all types of metal roofs.

1507.4.5 Underlayment ~~and high wind~~.
~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 1970. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32 gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67~~

~~mm)] with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19.1 mm) into the roof sheathing.~~

~~Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~
Underlayment shall be installed as per manufacturer's installation guidelines

Date Submitted	7/19/2012	**Section**	1507.4.4 Attachment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.4.4 Attachment.

Metal roof panels shall be secured to the supports in accordance with the *approved* manufacturer's fasteners. In the absence of manufacturer recommendations, the following fasteners shall be used:

1. Galvanized fasteners shall be used for steel roofs.

2. Copper, brass, bronze, copper alloy or 300 series stainless-steel fasteners shall be used for copper roofs.

3. Aluminum-zinc coated fasteners are acceptable for aluminum-zinc coated roofs.

4. Stainless-steel fasteners are acceptable for all types of metal roofs.

Date Submitted	7/21/2012	**Section**	1507.4.5 Underlayment and high w	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.4.5 Underlayment and high wind.

~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 1970. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12-gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19.1 mm) into the roof sheathing.~~ Reserved.

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~

1507.4.5.1 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 1970 or ASTM D 6757.

1507.4.5.2 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV or ASTM D 6757: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations End laps shall be offset by 6 feet (1829 mm).

3. As an alternative, 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.

Date Submitted	7/19/2012	**Section**	1507.4.5 Underlayment	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.4.5 Underlayment ~~and high wind~~.

~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 1970. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^3/_4$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~
Underlayment shall be installed as per manufacturer's installation guidelines

R5276

Date Submitted	7/18/2012	**Section**	1507.5 Metal roof shingles.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.5 Metal roof shingles.
The installation of metal roof shingles shall comply with the provisions of this section.

1507.5.1 Deck requirements.
Metal roof shingles shall be applied to a solid or closely fitted deck, except where the roof covering is specifically designed to be applied to spaced sheathing.

1507.5.2 Deck slope.
Metal roof shingles shall not be installed on roof slopes below three units vertical in 12 units horizontal (25-percent slope).

1507.5.2.1
Underlayment shall be installed as per manufacturer's installation guidelines.

1507.5.3 Underlayment.
Underlayment shall comply with ASTM D 226, Type I or Type II, ASTM D 4869, Type I or Type II.

1507.5.3.1 Underlayment and high wind.
~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch spacing (152 mm) at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

1507.5.4 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

1507.5.5 Material standards.
Metal roof shingle roof coverings shall comply with Table 1507.4.3(1). The materials used for metal-roof shingle roof coverings shall be naturally corrosion resistant or provided with corrosion resistance in accordance with the standards and minimum thicknesses specified in the standards listed in Table 1507.4.3(2).

1507.5.6 Attachment.
Metal roof shingles shall be secured to the roof in accordance with the approved manufacturer's installation instructions.

1507.5.7 Flashing.
Roof valley flashing shall be of corrosion-resistant metal of the same material as the roof covering or shall comply with the standards in Table 1507.4.3(1). The valley flashing shall extend at least 8 inches (203 mm) from the centerline each way and shall have a splash diverter rib not less than ~~3/4~~ 0.75 inch (19.1 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). ~~In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing shall have a 36-inch-wide (914 mm) underlayment directly under it consisting of either one layer of underlayment running the full length of the valley or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to underlayment required for metal roof shingles. The metal valley flashing underlayment shall be solidly cemented to the roofing underlayment for roof slopes under seven units vertical in 12 units horizontal (58 percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.~~

Date Submitted	7/19/2012	**Section**	1507.5.2.1	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.5.2.1

Underlayment shall be installed as per manufacturer's installation guidelines.

Date Submitted	7/19/2012	**Section**	1507.5.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.5.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 1970 or ASTM D 4869.

R5564

Date Submitted	7/21/2012	**Section**	1507.5.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~**1507.5.3 Underlayment**~~

~~Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 1970 or ASTM D 4869.~~

1507.5.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 1970 or ASTM D 6757.

-

-

1507.5.3.1 Underlayment and high wind.
~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch spacing (152 mm) at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12-gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

1507.5.3.2 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV or ASTM D 6757: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations End laps shall be offset by 6 feet (1829 mm).

3. As an alternative, 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.

R5389

Date Submitted	7/19/2012	**Section**	1507.5.4 Ice barrier.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.5.4 Ice barrier.

~~In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

Date Submitted	7/19/2012	**Section**	1507.5.7 Flashing.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.5.7 Flashing.

Roof valley flashing shall be of corrosion-resistant metal of the same material as the roof covering or shall comply with the standards in Table 1507.4.3(1). The valley flashing shall extend at least 8 inches (203 mm) from the centerline each way and shall have a splash diverter rib not less than ~~3/4~~ 0.75 inch (19.1 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). ~~In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing shall have a 36-inch-wide (914 mm) underlayment directly under it consisting of either one layer of underlayment running the full length of the valley or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to underlayment required for metal roof shingles. The metal valley flashing underlayment shall be solidly cemented to the roofing underlayment for roof slopes under seven units vertical in 12 units horizontal (58-percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.~~

R5278

Date Submitted	7/18/2012	**Section**	1507.6 Mineral-surfaced roll roofing	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.6 Mineral-surfaced roll roofing.
The installation of mineral-surfaced roll roofing shall comply with this section.

1507.6.1 Deck requirements.
Mineral-surfaced roll roofing shall be fastened to solidly sheathed roofs.

1507.6.2 Deck slope.
Mineral-surfaced roll roofing shall not be applied on roof slopes below one unit vertical in 12 units horizontal (8-percent slope).

1507.6.3 Underlayment.
Underlayment shall comply with ASTM D 226, Type I or Type II, ASTM D 4869, Type I or Type II or ASTM D 1970. Underlayment shall be installed in accordance with the manufacturer'sinstallation instructions

1507.6.3.1 Underlayment and high wind.
~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

1507.6.4 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

1507.6.5 Material standards.
Mineral-surfaced roll roofing shall conform to ASTM D 3909 or ASTM D 6380 Class M or Class WS.

Date Submitted	7/19/2012	**Section**	1507.6.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.6.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 1970 or ASTM D 4869.

Date Submitted	7/21/2012	**Section**	1507.6.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~1507.6.3~~

~~Underlayment shall comply with ASTM D 226, Type I or Type II orASTM D 1970 or ASTM D 4869.~~

-

1507.6.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 1970 or ASTM D 6757.

-

-

-

1507.6.3.1 Underlayment and high wind.
~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch spacing (152 mm) at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12-gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

1507.6.3.2 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV or ASTM D 6757: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations End laps shall be offset by 6 feet (1829 mm).

3. As an alternative, 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.

R5391

Date Submitted	7/19/2012	**Section**	1507.6.3.1 Underlayment and high	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.6.3.1 Underlayment and high wind.

~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^3/_4$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~

RESERVED

Date Submitted	7/19/2012	**Section**	1507.6.4 Ice barrier.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.6.4 Ice barrier.

~~In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

Date Submitted	7/19/2012	**Section**	1507.6.5 Material standards.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.6.5 Material standards.

Mineral-surfaced roll roofing shall conform to ASTM D 3909 or ASTM D 6380 Class M or Class WS

R5281

Date Submitted	7/18/2012	**Section**	1507.7 Slate shingles.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.7 Slate shingles.
The installation of slate shingles shall comply with the provisions of this section.

1507.7.1 Deck requirements.
Slate shingles shall be fastened to solidly sheathed roofs.

1507.7.2 Deck slope.
Slate shingles shall only be used on slopes of four units vertical in 12 units horizontal (4:12) or greater.

1507.7.3 Underlayment.
Underlayment shall comply with ASTM D 226, Type I or Type II, ASTM D 4869, Type I or Type II. Underlayment shall be installed in accordance with the manufacturer's installation instructions

1507.7.3.1 Underlayment and high wind.
~~**Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.**~~

~~**Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19.1 mm) into the roof sheathing.**~~

~~**Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.**~~
Reserved.

1507.7.4 Ice barrier.
~~**In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.**~~

~~**Exception: Detached accessory structures that contain no conditioned floor area.**~~ **Reserved.**

1507.7.5 Material standards.
Slate shingles shall comply with ASTM C 406.

1507.7.6 Application.
Minimum headlap for slate shingles shall be in accordance with Table 1507.7.6. Slate shingles shall be secured to the roof with two fasteners per slate.

TABLE 1507.7.6 SLATE SHINGLE HEADLAP

SLOPE	HEADLAP (inches)
4:12 < slope < 8:12	4
8:12 < slope < 20:12	3
slope = 20:12	2

For SI: 1 inch = 25.4 mm.

1507.7.7 Flashing.
Flashing and counterflashing shall be made with sheet metal. Valley flashing shall be a minimum of ~~15~~ 16 inches (381 mm) wide. Valley and flashing metal shall be a minimum ~~uncoated thickness of 0.0179 inch (0.455 mm) zinc-coated G90~~ thickness provided in Table 1503.2 nonferrous metal or stainless steel.~~Chimneys, stucco or brick walls shall have a minimum of two plies of felt for a cap flashing consisting of a 4-inch-wide (102 mm) strip of felt set in plastic cement and extending 1 inch (25 mm) above the first felt and a top coating of plastic cement. The felt shall extend over the base flashing 2 inches (51 mm).~~

Date Submitted	7/19/2012	**Section**	1507.7.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.7.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type ~~I~~ II or ASTM D 4869 Type II.

Date Submitted	7/21/2012	**Section**	1507.7.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~**1507.7.3 Underlayment.**~~

~~**Underlayment shall comply with ASTM D 226, Type I II or ASTM D 4869 Type II.**~~

-

1507.7.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 1970 or ASTM D 6757.

-

1507.7.3.1 Underlayment and high wind.

~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch spacing (152 mm) at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^3/_4$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

1507.7.3.2 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV or ASTM D 6757: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations End laps shall be offset by 6 feet (1829 mm).

3. As an alternative, 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.

Date Submitted	7/19/2012	**Section**	1507.7.4 Ice barrier.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.7.4 Ice barrier.

~~In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

Roofing

Proposed Code Modifications

2013 Florida Building Code - Full Report

This document created by the Florida Department of Business and Professional Regulation - 850-487-1824

TAC: Roofing

Sub Code: Building

Total Mods for Roofing: 85

Date Submitted	7/19/2012	**Section**	1507.7.7 Flashing.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.7.7 Flashing.

Flashing and counterflashing shall be made with sheet metal. Valley flashing shall be a minimum of ~~15~~ 16 inches (381 mm) wide. Valley and flashing metal shall be a minimum ~~uncoated thickness of 0.0179 inch (0.455 mm) zinc-coated G90~~ thickness provided in Table 1503.2 nonferrous metal or stainless steel~~.Chimneys, stucco or brick walls shall have a minimum of two plies of felt for a cap flashing consisting of a 4-inch-wide (102 mm) strip of felt set in plastic cement and extending 1 inch (25 mm) above the first felt and a top coating of plastic cement. The felt shall extend over the base flashing 2 inches (51 mm).~~

Date Submitted	7/18/2012	**Section**	1507.8 Wood shingles.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.8 Wood shingles.
The installation of wood shingles shall comply with the provisions of this section and Table 1507.8.

TABLE 1507.8 WOOD SHINGLE AND SHAKE INSTALLATION

ROOF ITEM	WOOD SHINGLES	WOOD SHAKES
1. Roof slope	Wood shingles shall be installed on slopes of three units vertical in 12 units horizontal (3:12) or greater.	Wood shakes shall be installed on slopes of four units vertical in 12 units horizontal (4:12) or greater.
2. Deck requirement		
Temperate climate	Shingles shall be applied to roofs with solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be less than 1? × 4? nominal dimensions and shall be spaced on center equal to the weather exposure to coincide with the placement of fasteners.	Shakes shall be applied to roofs with solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be less than 1? × 4? nominal dimensions and shall be spaced on center equal to the weather exposure to coincide with the placement of fasteners. When 1? × 4? spaced sheathing is installed at 10 inches, boards must be installed between the sheathing boards.
In areas where the average daily temperature in January is 25°F or less or where there is a possibility of ice forming along the eaves causing a backup of water.	Solid sheathing required.	Solid sheathing is required.
3. Interlayment	No requirements.	Interlayment shall comply with ASTM D 226, Type 1.
4. Underlayment		
Temperate climate	Underlayment shall comply with ASTM D 226, Type 1.	Underlayment shall comply with ASTM D 226, Type 1.
In areas where there is a possibility of ice forming along the eaves causing a backup of water.	An ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall extend from the eave's edge to a point at least 24 inches inside the exterior wall line of the building.	An ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall extend from the lowest edges of all roof surfaces to a point at least 24 inches inside the exterior wall line of the building.
5. Application		
Attachment	Fasteners for wood shingles shall be hot-dipped	Fasteners for wood shakes shall be hot-dipped galvanized

	galvanized or Type 304 (Type 316 for coastal areas) stainless steel with a minimum penetration of 0.75 inch into the sheathing. For sheathing less than 0.5 inch thick, the fasteners shall extend through the sheathing.	or Type 304 (Type 316 for coastal areas) with a minimum penetration of 0.75 inch into the sheathing. For sheathing less than 0.5 inch thick, the fasteners shall extend through the sheathing.
No. of fasteners	Two per shingle.	Two per shake.
Exposure	Weather exposures shall not exceed those set forth in Table 1507.8.7.	Weather exposures shall not exceed those set forth in Table 1507.9.8.
Method	Shingles shall be laid with a side lap of not less than 1.5 inches between joints in courses, and no two joints in any three adjacent courses shall be in direct alignment. Spacing between shingles shall be 0.25 to 0.375 inch.	Shakes shall be laid with a side lap of not less than 1.5 inches between joints in adjacent courses. Spacing between shakes shall not be less than 0.375 inch or more than 0.625 inch for shakes and taper sawn shakes of naturally durable wood and shall be 0.25 to 0.375 inch for preservative-treated taper sawn shakes.
Flashing	In accordance with Section 1507.8.8.	In accordance with Section 1507.9.9.

For SI: 1 inch = 25.4 mm, °C = [(°F) - 32]/1.8.

1507.8.1 Deck requirements.
Wood shingles shall be installed on solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be less than 1-inch by 4-inch (25 mm by 102 mm) nominal dimensions and shall be spaced on centers equal to the weather exposure to coincide with the placement of fasteners.

1507.8.1.1 Solid sheathing required.
~~**Solid sheathing is required in areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water.**~~ **Reserved.**

1507.8.2 Deck slope.
Wood shingles shall be installed on slopes of three units vertical in 12 units horizontal (25-percent slope) or greater.

1507.8.3 Underlayment.
Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869 Type I or II.

1507.8.3.1 Underlayment and high wind.
~~**Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.**~~

~~**Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19.1 mm) into the roof sheathing.**~~

~~**Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.**~~
Reserved

1507.8.4 Ice barrier.
~~**In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.**~~

~~**Exception: Detached accessory structures that contain no conditioned floor area.**~~ **Reserved**

1507.8.5 Material standards.
Wood shingles shall be of naturally durable wood and comply with the requirements of Table 1507.8.5.

TABLE 1507.8.5 WOOD SHINGLE MATERIAL REQUIREMENTS

MATERIAL	APPLICABLE MINIMUM GRADES	GRADING RULES
Wood shingles of naturally durable wood	1, 2 or 3	CSSB

CSSB = Cedar Shake and Shingle Bureau

1507.8.6 Attachment.
Fasteners for wood shingles shall be corrosion resistant with a minimum penetration of $^3/_4$ inch (19.1 mm) into the sheathing. For sheathing less than $^1/_2$ inch (12.7 mm) in thickness, the fasteners shall extend through the sheathing. Each shingle shall be attached with a minimum of two fasteners.

1507.8.7 Application.
Wood shingles shall be laid with a side lap not less than $1^1/_2$ inches (38 mm) between joints in adjacent courses, and not be in direct alignment in alternate courses. Spacing between shingles shall be $^1/_4$ to $^3/_8$ inches (6.4 to 9.5 mm). Weather exposure for wood shingles shall not exceed that set in Table 1507.8.7.

TABLE 1507.8.7 WOOD SHINGLE WEATHER EXPOSURE AND ROOF SLOPE

ROOFING MATERIAL	LENGTH (inches)	GRADE	EXPOSURE (inches)	
			3:12 pitch to < 4:12	4:12 pitch or steeper
Shingles of naturally durable wood	16	No. 1	3.75	5
		No. 2	3.5	4
		No. 3	3	3.5
	18	No. 1	4.25	5.5
		No. 2	4	4.5
		No. 3	3.5	4
	24	No. 1	5.75	7.5
		No. 2	5.5	6.5
		No. 3	5	5.5

For SI: 1 inch = 25.4 mm.

1507.8.8 Flashing.
At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, ~~shall not be less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal~~ comply with Table 1503.2. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) layer of underlayment of either one layer of Type I underlayment running the full length of the valley or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment~~. In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solidly cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58-percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.~~

R5400

Date Submitted	7/19/2012	**Section**	1507.8.1.1 Solid sheathing require	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.8.1.1 Solid sheathing required.

~~Solid sheathing is required in areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water.~~ Reserved.

R5401

Date Submitted	7/19/2012	**Section**	1507.8.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.8.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869 Type II.

Date Submitted	7/21/2012	**Section**	1507.8.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~**1507.8.3 Underlayment.**~~

~~Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869 Type II.~~

-

1507.8.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV.

-

-

1507.8.3.1 Underlayment and high wind.
~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch spacing (152 mm) at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

1507.8.3.2 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm).

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). End laps shall be offset by 6 feet (1829 mm).

R5402

Date Submitted	7/19/2012	**Section**	1507.8.4 Ice barrier.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.8.4 Ice barrier.

~~In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~

Reserved

R5403

Date Submitted	7/19/2012	**Section**	1507.8.8 Flashing.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.8.8 Flashing.

At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, ~~shall not be less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal~~ comply with Table 1503.2. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) layer of underlayment of either one layer of Type I underlayment running the full length of the valley or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment~~. In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solidly cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58-percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.~~

R5284

Date Submitted	7/18/2012	**Section**	1507.9 Wood shakes.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.9 Wood shakes.
The installation of wood shakes shall comply with the provisions of this section and Table 1507.8.

1507.9.1 Deck requirements.
Wood shakes shall only be used on solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be less than 1-inch by 4-inch (25 mm by 102 mm) nominal dimensions and shall be spaced on centers equal to the weather exposure to coincide with the placement of fasteners. Where 1-inch by 4-inch (25 mm by 102 mm) spaced sheathing is installed at 10 inches (254 mm) o.c., additional 1-inch by 4-inch (25 mm by 102 mm) boards shall be installed between the sheathing boards.

1507.9.1.1 Solid sheathing required.
~~**Solid sheathing is required in areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water.**~~ **Reserved.**

1507.9.2 Deck slope.
Wood shakes shall only be used on slopes of four units vertical in 12 units horizontal (33-percent slope) or greater.

1507.9.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869, Type I or II

1507.9.3.1 Underlayment and high wind.
~~**Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.**~~

~~**Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^3/_4$ inch (19.1 mm) into the roof sheathing.**~~

~~**Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.**~~
Reserved.

1507.9.4 Ice barrier.
~~**In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.**~~

~~**Exception: Detached accessory structures that contain no conditioned floor area.**~~ **Reserved.**

1507.9.5 Interlayment.
Interlayment shall comply with ASTM D 226, Type I.

1507.9.6 Material standards.
Wood shakes shall comply with the requirements of Table 1507.9.6.

TABLE 1507.9.6 WOOD SHAKE MATERIAL REQUIREMENTS

MATERIAL	MINIMUM GRADES	APPLICABLE GRADING RULES
Wood shakes of naturally durable wood	1	CSSB
Taper sawn shakes of naturally durable wood	1 or 2	CSSB
Preservative-treated shakes and shingles of naturally durable wood	1	CSSB
Fire-retardant-treated shakes and shingles of naturally durable wood	1	CSSB
Preservative-treated taper sawn shakes of Southern pine treated in accordance with AWPA U1 (Commodity Specification A, Use Category 3B and Section 5.6)	1 or 2	TFS

CSSB = Cedar Shake and Shingle Bureau.
TFS = Forest Products Laboratory of the Texas Forest Services.

1507.9.7 Attachment.
Fasteners for wood shakes shall be corrosion resistant with a minimum penetration of $^3/_4$ inch (19.1 mm) into the sheathing. For sheathing less than $^1/_2$ inch (12.7 mm) in thickness, the fasteners shall extend through the sheathing. Each shake shall be attached with a minimum of two fasteners.

1507.9.8 Application.
Wood shakes shall be laid with a side lap not less than $1^1/_2$ inches (38 mm) between joints in adjacent courses. Spacing between shakes in the same course shall be $^3/_8$ to $^5/_8$ inches (9.5 to 15.9 mm) for shakes and taper sawn shakes of naturally durable wood and shall be $^1/_4$ to $^3/_8$ inch (6.4 to 9.5 mm) for preservative taper sawn shakes. Weather exposure for wood shakes shall not exceed those set in Table 1507.9.8.

1507.9.9 Flashing.

At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, ~~shall not be less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal~~ comply with Table 1503.2. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) layer of underlayment of either one layer of Type I underlayment running the full length of the valley or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment~~. In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solidly cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58-percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.~~

R5404

Date Submitted	7/19/2012	**Section**	1507.9.1.1 Solid sheathing require	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.9.1.1 Solid sheathing required.

~~Solid sheathing is required in areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water.~~ Reserved.

R5405

Date Submitted	7/19/2012	**Section**	1507.9.2 Deck slope.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.9.2 Deck slope.
Wood shakes shall only be used on slopes of ~~four~~ three units vertical in 12 units horizontal (33-percent slope) or greater.

R5406

Date Submitted	7/19/2012	**Section**	1507.9.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.9.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869 Type I.

R5568

Date Submitted	7/21/2012	**Section**	1507.9.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~**1507.9.3 Underlayment.**~~

~~Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869 Type II.~~

-

1507.9.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV.

-

-

1507.9.3.1 Underlayment and high wind.
~~Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch spacing (152 mm) at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

1507.9.3.2 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm).

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). End laps shall be offset by 6 feet (1829 mm).

R5407

Date Submitted	7/19/2012	**Section**	1507.9.4 Ice barrier.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.9.4 Ice barrier.

~~In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer-modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

R5408

Date Submitted	7/19/2012	**Section**	1507.9.9 Flashing.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1507.9.9 Flashing.

At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, ~~shall not be less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal~~ comply with Table 1503.2. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) layer of underlayment of either one layer of Type I underlayment running the full length of the valley or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment~~. In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solidly cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58-percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.~~

Date Submitted	7/18/2012	**Section**	1507	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION 1507 REQUIREMENTS FOR ROOF COVERINGS

1507.1 Scope.
Roof coverings shall be applied in accordance with the applicable provisions of this section and the manufacturer's installation instructions.

1507.2 Asphalt shingles.
The installation of asphalt shingles shall comply with the provisions of this section.

1507.2.1 Deck requirements.
Asphalt shingles shall be fastened to solidly sheathed decks.

1507.2.2 Slope.
Asphalt shingles shall only be used on roof slopes of two units vertical in 12 units horizontal (17-percent slope) or greater. For roof slopes from two units vertical in 12 units horizontal (17-percent slope) up to four units vertical in 12 units horizontal (33-percent slope), double underlayment application is required in accordance with Section 1507.2.8.

1507.2.3 Underlayment.

Unless otherwise noted, required underlayment shall conform to ASTM D 226, Type I or Type II, or ASTM D 4869 Type I or Type II or ASTM D 6757.

1507.2.4 Self-adhering polymer modified bitumen sheet.
Self-adhering polymer modified bitumen sheet shall comply with ASTM D 1970.

1507.2.5 Asphalt shingles.
Asphalt shingles shall have self-seal strips or be interlocking and comply with ASTM D 225 or ASTM D 3462. Shingles shall also comply with Table 1507.2.7.1. Asphalt shingle packaging shall bear labeling indicating compliance with one of the required classifications as shown in Table 1507.2.7.1.

1507.2.6 Fasteners.
Fasteners for asphalt shingles shall be galvanized, stainless steel, aluminum or copper roofing nails, minimum 12 gage [0.105 inch (2.67 mm)] shank with a minimum $^3/_8$ inch-diameter (9.5 mm) head, of a length to penetrate through the roofing materials and a minimum of $^3/_4$ inch (19.1 mm) into the roof sheathing. Where the roof sheathing is less than $^3/_4$ inch (19.1 mm) thick, the nails shall penetrate through the sheathing. Fasteners shall comply with ASTM F 1667.

1507.2.6.1
The nail component of plastic cap nails shall meet the corrosion resistance requirements of Section 1507.5.

1507.2.7 Attachment.
Asphalt shingles shall have the minimum number of fasteners required by the manufacturer~~, but~~ and Section 1504.1. Asphalt shingles shall be secured to the roof with not less than four fasteners per strip shingle or two fasteners per ~~individual~~ strip shingle or two fasteners per individual shingle. Where the roof slope exceeds 21 units vertical in 12 units horizontal (21:12), asphalt shingles shall be installed ~~as required by~~ in accordance with the manufacturer's printed installation instructions for steep-slope roof applications.

1507.2.7.1 Wind Resistance of Asphalt Shingles.

Asphalt Shingles shall be ~~tested~~ classified in accordance with ASTM D 3161, TAS 107 or ASTM D 7158 ~~in accordance with Table 1507.2.7.1. Asphalt shingles shall meet the classification requirements of Table 1507.2.7.1(1) for the appropriate maximum basic wind speed.~~ Shingles classified as ASTM D 3161 Class D or ASTM D 7158 Class G are acceptable for use in the 100-mph wind zone. Shingles classified as ASTM D 3161 Class F, TAS107 or ASTM D 7158 Class H are acceptable for use in all wind zones. Asphalt shingle ~~packaging~~ wrappers shall ~~bear a label to~~ indicate compliance ~~with ASTM D 7158 and the~~ with one of the required classifications as shown in Table 1507.2.7.(1).

~~**Exception: Asphalt shingles not included in the scope of ASTM D 7158 shall be tested and labeled to indicate compliance with ASTM D 3161 and the required classification in Table 1507.2.7.1(2).**~~

TABLE 1507.2.7.1(1) CLASSIFICATION OF ASPHALT ~~ROOF SHINGLES PER ASTM D 7158[a]~~

~~NOMINAL DESIGN WIND SPEED, V_{asd}[b] (mph)~~	~~CLASSIFICATION REQUIREMENT~~
~~85~~	~~D, G or H~~
~~90~~	~~D, G or H~~
~~100~~	~~G or H~~
~~110~~	~~G or H~~
~~120~~	~~G or H~~
~~130~~	~~H~~
~~140~~	~~H~~
~~150~~	~~H~~

~~For SI: 1 foot = 304.8 mm; 1 mph = 0.447 m/s.~~
~~a. The standard calculations contained in ASTM D 7158 assume exposure category B or C and building height of 60 feet or less. Additional calculations are required for conditions outside of these assumptions.~~
~~b. V_{asd} shall be determined in accordance with Section 1609.3.1.~~

MAXIMUM BASIC WIND SPEED FROM FIGURE 1609A, B, C or ASCE-7	V_{asd}	ASTM D 7158	ASTM D 3161
110	85	D, G or H	A, D or F
116	90	D, G or H	A, D or F
129	100	G or H	A, D or F
142	110	G or H	F

155	120	G or H	F
168	130	H	F
181	140	H	F
194	150	H	F

TABLE 1507.2.7.1(2) CLASSIFICATION OF ASPHALT SHINGLES PER ASTM D 3161

~~NOMINAL DESIGN WIND SPEED, V_{asd}[a] (mph)~~	~~CLASSIFICATION REQUIREMENT~~
~~85~~	~~A, D or F~~
~~90~~	~~A, D or F~~
~~100~~	~~A, D or F~~
~~110~~	~~F~~
~~120~~	~~F~~
~~130~~	~~F~~
~~140~~	~~F~~
~~150~~	~~F~~

~~For SI: 1 mph = 0.447 m/s.~~
~~a. V_{asd} shall be determined in accordance with Section 1609.3.1.~~
Reserved.

1507.2.8 Underlayment application.
For roof slopes from two units vertical in 12 units horizontal (17-percent slope) and up to four units vertical in 12 units horizontal (33-percent slope), underlayment shall be two layers applied in the following manner. Apply a minimum 19-inch-wide (483 mm) strip of underlayment felt parallel with and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment overlapping successive sheets 19 inches (483 mm), by fastened sufficiently to hold in place. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater, underlayment shall be one layer applied in the following manner. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened sufficiently to hold in place. Distortions in the underlayment shall not interfere with the ability of the shingles to seal.

1507.2.8.1 High wind attachment.
~~**Underlayment applied in areas subject to high winds [V_{asd} greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's instructions. Fasteners are to be applied along the overlap at a maximum spacing of 36 inches (914 mm) on center.**~~

~~**Underlayment installed where V_{asd}, in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 6757. The underlayment shall**~~

~~be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section 1507.2.8 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of $^3/_4$ inch (19.1 mm) into the roof sheathing.~~

~~Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~
Reserved

1507.2.8.2 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~Exception: Detached accessory structures that contain no conditioned floor area.~~

Reserved.

1507.2.9 Flashings.
Flashing for asphalt shingles shall comply with this section. Flashing shall be applied in accordance with this section and the asphalt shingle manufacturer's printed instructions.

1507.2.9.1 Base and ~~cap~~ counter flashing.
Base and ~~cap~~ counter flashing shall be installed ~~in accordance with the manufacturer's instructions. Base flashing shall be of either corrosion-resistant metal of minimum nominal 0.019-inch (0.483 mm) thickness or mineral-surfaced roll roofing weighing a minimum of 77 pounds per 100 square feet (3.76 kg/m^2). Cap flashing shall be corrosion-resistant metal of minimum nominal 0.019-inch (0.483 mm) thickness.~~ as follows:

Base and counter flashing shall be installed as follows:

1. In accordance with manufacturer's installation instructions, or

2. A continuous metal minimum 4? × 4? "L" flashing shall be set in approved flashing cement and set flush to base of wall and over the underlayment. Both horizontal and vertical metal flanges shall be fastened 6 inches (152 mm) on center with approved fasteners. All laps shall be a minimum of 4 inches (102 mm) fully sealed in approved flashing cement. Flashing shall start at the lower portion of roof to insure water-shedding capabilities of all metal laps. The entire edge of the horizontal flange shall be sealed covering all nail penetrations with approved flashing cement and membrane. Shingles will overlap the horizontal flange and shall be set in approved flashing cement.

Base flashing shall be of either corrosion resistant metal with a minimum thickness provided in Table 1503.2 or mineral surface roll roofing weighing a minimum of 77 pounds per 100 square feet (3.76 kg/m^2). Counter flashing shall be corrosion resistant metal with a minimum thickness provided in Table 1503.2.

1507.2.9.2 Valleys.
Valley linings shall be installed in accordance with the manufacturer's instructions before applying shingles. Valley linings of the following types shall be permitted:

1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be at least ~~24~~ 16 inches (~~610~~ 406 mm) wide and of any of the corrosion-resistant metals in Table 150~~7~~3.~~2.9. 2~~.

2. For open valleys, valley lining of two plies of mineral-surfaced roll roofing complying with ASTM D 3909 or ASTM D 6380 Class M shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer a minimum of 36 inches (914 mm) wide.

3. For closed valleys (valleys covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D 6380 Class S , and at least 36 inches (914 mm) wide or types as described in Item 1 or 2 above shall be permitted. Self-adhering polymer modified bitumen underlayment complying with ASTM D 1970 shall be permitted in lieu of the lining material.

TABLE 1507.2.9.2 VALLEY LINING MATERIAL

~~MATERIAL~~	~~MINIMUM THICKNESS~~	~~GAGE~~	~~WEIGHT~~
~~Aluminum~~	~~0.024 in.~~	—	—
~~Cold-rolled copper~~	~~0.0216 in.~~	—	~~ASTM B 370, 16 oz. per square ft.~~
~~Copper~~	—	—	~~16 oz~~
~~Galvanized steel~~	~~0.0179 in.~~	~~26 (zinc-coated G90)~~	—
~~High-yield copper~~	~~0.0162 in.~~	—	~~ASTM B 370, 12 oz. per square ft.~~
~~Lead~~	—	—	~~2.5 pounds~~
~~Lead-coated copper~~	~~0.0216 in.~~	—	~~ASTM B 101, 16 oz. per square ft.~~
~~Lead-coated high-yield copper~~	~~0.0162 in.~~	—	~~ASTM B 101, 12 oz. per square ft.~~
~~Painted terne~~	—	—	~~20 pounds~~
~~Stainless steel~~	—	~~28~~	—
~~Zinc alloy~~	~~0.027 in.~~	—	—

~~For SI: 1 inch = 25.4 mm, 1 pound = 0.454 kg, 1 ounce = 28.35 g, 1 square foot = 0.093 m^2.~~

Reserved.

.

1507.2.9.3 Drip edge.

Provide drip edge at eaves and gables of shingle roofs. Overlap to be a minimum of ~~2~~ 3 inches (~~51~~ 76 mm). Eave drip edges shall extend ~~¼~~ $^1/_2$ inch (~~6.4~~ 13 mm) below sheathing and extend back on the roof a minimum of 2 inches (51 mm). Drip edge at eaves shall be permitted to be installed either over or under the underlayment. If installed over the underlayment, there shall be a minimum 4 inches (51 mm) width of roof cement installed over the drip edge flange. Drip edge shall be mechanically fastened a maximum of 12 inches (305 mm) on center. Where the V_{asd} as determined in accordance with Section 1609.3.1 is 110 mph (177 km/h) or greater or the mean roof height exceeds 33 feet (10 058 mm), drip edges shall be mechanically fastened a maximum of 4 inches (102 mm) on center.

Date Submitted	7/31/2012	**Section**	1508.1 General	**Proponent**	Deborah Lawson
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

#5739 and #5742

Summary of Modification

Use of above-deck thermal insulation -- adds Factory Mutual reference for cellular concrete.

Rationale

This technical modification provides guidance when lightweight insulating concrete is utilized and recognizes that testing procedures that are equivalent to Factory Mutual testing are utilized.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None.

Impact to building and property owners relative to cost of compliance with code

None.

Impact to industry relative to the cost of compliance with code

None.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Improves clarity of code with respect to use of lightweight insulating concrete as a roof insulation material.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves clarity of code with respect to use of lightweight insulating concrete as a roof insulation material.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Proposed modification includes FM reference within existing section of approval references and provides guidance and clarification without discrimination to other materials, products, methods or systems.

Does not degrade the effectiveness of the code

Improves the effectiveness of the code.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1508.1 General.

The use of above-deck thermal insulation shall be permitted provided such insulation is covered with an *approved* roof covering and passes the tests of FM 4450, FM 4454, ~~or~~ UL 1256, or equivalent, when tested as an assembly.

Exceptions:

1. Foam plastic roof insulation shall conform to the material and installation requirements of Chapter 26.

2. Where a concrete roof deck is used and the above-deck thermal insulation is covered with an *approved* roof covering.

Date Submitted	7/31/2012	**Section**	1508.2 Material Standards for Roof	**Proponent**	Deborah Lawson
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

#5738 and #5742

Summary of Modification

Adds Leightweight Insulating Concrete and appropriate ASTM reference to chart of "material standards for roof insulation."

Rationale

Lightweight insulating concrete is a proven insulation material utilized effectively in the state of Florida including high velocity hurricane zones because of its properties and performance. It should be included in the material standards for Florida.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None.

Impact to building and property owners relative to cost of compliance with code

None.

Impact to industry relative to the cost of compliance with code

None.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Improves comprehensiveness and clarity of code with respect to existing use of lightweight insulating concrete as a roof insulation material.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves clarity of the code with respect to use of lightweight insulating concrete as a roof insulation material.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Proposed modification adds an existing product to the list of products referenced and does not discriminate against materials, products, methods or systems.

Does not degrade the effectiveness of the code

Improves the effectiveness of the code.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1508.2 Material standards.

Above-deck thermal insulation board shall comply with the standards in Table 1508.2.

TABLE 1508.2 MATERIAL STANDARDS FOR ROOF INSULATION

Cellular glass board	ASTM C 552
Composite boards	ASTM C 1289, Type III, IV, V or VI
Expanded polystyrene	ASTM C 578
Extruded polystyrene board	ASTM C 578
Lightweight insulating concrete	**ASTM C 495, C513, C796, C869**
Perlite board	ASTM C 728
Polyisocyanurate board	ASTM C 1289, Type I or Type II
Wood fiberboard	ASTM C 208

R5411

Date Submitted	7/19/2012	**Section**	1509.6.4 Equipment and appliance	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1509.6.4 Equipment and appliances on roofs or elevated structures.

Where equipment and appliances requiring access are installed on roofs or elevated structures at a height exceeding 16 feet (4877 mm), such access shall be provided by a permanent approved means of access, the extent of which shall be from grade or floor level to the equipment and appliances' level service space. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) high or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope).

Permanent ladders installed to provide the required access shall comply with the following minimum design criteria:

1. The side railing shall extend above the parapet or roof edge not less than 30 inches (762 mm).

2. Ladders shall have rung spacing not to exceed 14 inches (356 mm) on center.

3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.

4. There shall be a minimum of 18 inches (457 mm) between rails.

5. Rungs shall have a minimum 0.75-inch (19 mm) diameter and be capable of withstanding a 300-pound (136.1 kg) load.

6. Ladders over 30 feet (9144 mm) in height shall be provided with offset sections and landings capable of withstanding 100 pounds (488.2 kg/m^2) per square foot.

7. Ladders shall be protected against corrosion by approved means. Catwalks installed to provide the required access shall be not less than 24 inches (610 mm) wide and shall have railings as required for service platforms.

Exception: This section shall not apply to Group R-3 occupancies.

R5412

Date Submitted	7/19/2012	**Section**	1509.6.5 Mechanical units.	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1509.6.5 Mechanical units.

Roof mounted mechanical units shall be mounted on curbs raised a minimum of 8 inches (203 mm) above the roof surface, or where roofing materials extend beneath the unit, on raised equipment supports providing a minimum clearance height in accordance with Table 1509.7.

TABLE 1509.6.5 CLEARANCE BELOW RAISED ROOF MOUNTED MECHANICAL UNITS

WIDTH OF MECHANICAL UNIT (inches)	MINIMUM CLEARANCE ABOVE SURFACES (inches)
< 24	14
24 < 36	18
36 < 48	24
48 < 60	30
> 60	48

-

For SI: 1 inch = 25.4 mm.

R5288

Date Submitted	7/18/2012	**Section**	1509	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1509.1 General.
The provisions of this section shall govern the construction of rooftop structures.

1509.2 Penthouses.
Penthouses in compliance with Sections 1509.2.1 through 1509.2.5 shall be considered as a portion of the story directly below the roof deck on which such penthouses are located. All other penthouses shall be considered as an additional story of the building.

1509.2.1 Height above roof deck.
Penthouses constructed on buildings of other than Type I construction shall not exceed 18 feet (5486 mm) in height above the roof deck as measured to the average height of the roof of the penthouse.

Exceptions:

1. Where used to enclose tanks or elevators that travel to the roof level, penthouses shall be permitted to have a maximum height of 28 feet (8534 mm) above the roof deck.

2. Penthouses located on the roof of buildings of Type I construction shall not be limited in height.

1509.2.2 Area limitation.
The aggregate area of penthouses and other enclosed rooftop structures shall not exceed one-third the area of the supporting roof deck. Such penthouses and other enclosed rooftop structures shall not be required to be included in determining the building area or number of stories as regulated by Section 503.1. The area of such penthouses shall not be included in determining the fire area specified in Section 901.7.

1509.2.3 Use limitations.
Penthouses shall not be used for purposes other than the shelter of mechanical or electrical equipment, tanks, or vertical shaft openings in the roof assembly.

1509.2.4 Weather protection.
Provisions such as louvers, louver blades or flashing shall be made to protect the mechanical and electrical equipment and the building interior from the elements.

1509.2.5 Type of construction.
Penthouses shall be constructed with walls, floors and roofs as required for the type of construction of the building on which such penthouses are built.

Exceptions:

1. On buildings of Type I construction, the exterior walls and roofs of penthouses with a fire separation distance greater than 5 feet (1524 mm) and less than 20 feet (6096 mm) shall be permitted to have not less than a 1-hour fire-resistance rating. The exterior walls and roofs of penthouses with a fire separation distance of 20 feet (6096 mm) or greater shall not be required to have a fire-resistance rating.

2. On buildings of Type I construction two stories or less in height above grade plane or of Type II construction, the exterior walls and roofs of penthouses with a fire separation distance greater than 5 feet (1524 mm) and less than 20 feet (6096 mm) shall be permitted to have not less than a 1-hour fire-resistance rating or a lesser fire-resistance rating as required by Table 602 and be constructed of fire-retardant-treated wood. The exterior walls and roofs of penthouses with a fire separation distance of 20 feet (6096 mm) or greater shall be permitted to be constructed of fire-retardant-treated wood and shall not be required to have a fire-resistance rating. Interior framing and walls shall be permitted to be constructed of fire-retardant-treated wood.

3. On buildings of Type III, IV or V construction, the exterior walls of penthouses with a fire separation distance greater than 5 feet (1524 mm) and less than 20 feet (6096 mm) shall be permitted to have not less than a 1-hour fire-resistance rating or a lesser fire-resistance rating as required by Table 602. On buildings of Type III, IV or VA construction, the exterior walls of penthouses with a fire separation distance of 20 feet (6096 mm) or greater shall be permitted to be of Type IV or noncombustible construction or fire-retardant-treated wood and shall not be required to have a fire-resistance rating.

1509.3 Tanks.
Tanks having a capacity of more than 500 gallons (2 m^3) located on the roof deck of a building shall be supported on masonry, reinforced concrete, steel or Type IV construction provided that, where such supports are located in the building above the lowest story, the support shall be fire-resistance rated as required for Type IA construction.

1509.3.1 Valve and drain.
In the bottom or on the side near the bottom of the tank, a pipe or outlet, fitted with a suitable quick-opening valve for discharging the contents into a drain in an emergency shall be provided.

1509.3.2 Location.
Tanks shall not be placed over or near a stairway or an elevator shaft, unless there is a solid roof or floor underneath the tank.

1509.3.3 Tank cover.
Unenclosed roof tanks shall have covers sloping toward the perimeter of the tanks.

1509.4 Cooling towers.
Cooling towers located on the roof deck of a building and greater than 250 square feet (23.2 m^2) in base area or greater than 15 feet (4572 mm) in height above the roof deck, as measured to the highest point on the cooling tower, where the roof is greater than 50 feet (15 240 mm) in height above grade plane shall be constructed of noncombustible materials. The base area of cooling towers shall not exceed one-third the area of the supporting roof deck.

Exception: Drip boards and the enclosing construction shall be permitted to be of wood not less than 1 inch (25 mm) nominal thickness, provided the wood is covered on the exterior of the tower with noncombustible material.

1509.5 Towers, spires, domes and cupolas.
Towers, spires, domes and cupolas shall be of a type of construction having fire-resistance ratings not less than required for the building on top of which such tower, spire, dome or cupola is built. Towers, spires, domes and cupolas greater than 85 feet (25 908 mm) in height above grade plane as measured to the highest point on such structures, and either greater than 200 square feet (18.6 m^2) in horizontal area or used for any purpose other than a belfry or an architectural embellishment, shall be constructed of and supported on Type I or II construction.

1509.5.1 Noncombustible construction required.
Towers, spires, domes and cupolas greater than 60 feet (18 288 mm) in height above the highest point at which such structure contacts the roof as measured to the highest point on such structure, or that exceeds 200 square feet (18.6 m^2) in area at any horizontal section, or which is intended to be used for any purpose other than a belfry or architectural embellishment, or is located on the top of a building greater than 50 feet (1524 mm) in building height shall be constructed of and supported by noncombustible materials and shall be separated from the building below by construction having a fire-resistance rating of not less than 1.5 hours with openings protected in accordance with Section 712. Such structures located on the top of a building greater than 50 feet (15 240 mm) in building height shall be supported by noncombustible construction.

1509.5.2 Towers and spires.
Enclosed towers and spires shall have exterior walls constructed as required for the building on top of which such towers and spires are built. The roof covering of spires shall not be less than the same class of roof covering required for the building on top of which the spire is located.

1509.6 Mechanical equipment screens.
Mechanical equipment screens shall be constructed of the materials specified for the exterior walls in accordance with the type of construction of the building. Where the fire separation distance is greater than 5 feet (1524 mm), mechanical equipment screens shall not be required to comply with the fire-resistance rating requirements.

1509.6.1 Height limitations.
Mechanical equipment screens shall not exceed 18 feet (5486 mm) in height above the roof deck, as measured to the highest point on the mechanical equipment screen.

Exception: Where located on buildings of Type IA construction, the height of mechanical equipment screens shall not be limited.

1509.6.2 Types I, II, III and IV construction.
Regardless of the requirements in Section 1509.6, mechanical equipment screens shall be permitted to be constructed of combustible materials where located on the roof decks of building of Type I, II, III or IV construction in accordance with any one of the following limitations:

1. The fire separation distance shall not be less than 20 feet (6096 mm) and the height of the mechanical equipment screen above the roof deck shall not exceed 4 feet (1219 mm) as measured to the highest point on the mechanical equipment screen.

2. The fire separation distance shall not be less than 20 feet (6096 mm) and the mechanical equipment screen shall be constructed of fire-retardant-treated wood complying with Section 2303.2 for exterior installation.

3. Where exterior wall covering panels are used, the panels shall have a flame spread index of 25 or less when tested in the minimum and maximum thicknesses intended for use with each face tested independently in accordance with ASTM E 84 or UL 723. The panels shall be tested in the minimum and maximum thicknesses intended for use in accordance with, and shall comply with the acceptance criteria of, NFPA 285 and shall be installed as tested. Where the panels are tested as part of an exterior wall assembly in accordance with NFPA 285, the panels shall be installed on the face of the mechanical equipment screen supporting structure in the same manner as they were installed on the tested exterior wall assembly.

1509.6.3 Type V construction.
The height of mechanical equipment screens located on the roof decks of buildings of Type V construction, as measured from grade plane to the highest point on the mechanical equipment screen, shall be permitted to exceed the maximum building height allowed for the building by other provisions of this code where complying with any one of the following limitations, provided the fire separation distance is greater than 5 feet (1524 mm):

1. Where the fire separation distance is not less than 20 feet (6096 mm), the height above grade plane of the mechanical equipment screen shall not exceed 4 feet (1219 mm) more than the maximum building height allowed;

2. The mechanical equipment screen shall be constructed of noncombustible materials;

3. The mechanical equipment screen shall be constructed of fire-retardant-treated wood complying with Section 2303.2 for exterior installation; or

4. Where the fire separation distance is not less than 20 feet (6096 mm), the mechanical equipment screen shall be constructed of materials having a flame spread index of 25 or less when tested in the minimum and maximum thicknesses intended for use with each face tested independently in accordance with ASTM E 84 or UL 723.

1509.6.4 Equipment and appliances on roofs or elevated structures.

Where equipment and appliances requiring access are installed on roofs or elevated structures at a height exceeding 16 feet (4877 mm), such access shall be provided by a permanent approved means of access, the extent of which shall be from grade or floor level to the equipment and appliances' level service space. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) high or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope).

Permanent ladders installed to provide the required access shall comply with the following minimum design criteria:

1. The side railing shall extend above the parapet or roof edge not less than 30 inches (762 mm).

2. Ladders shall have rung spacing not to exceed 14 inches (356 mm) on center.

3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.

4. There shall be a minimum of 18 inches (457 mm) between rails.

5. Rungs shall have a minimum 0.75-inch (19 mm) diameter and be capable of withstanding a 300-pound (136.1 kg) load.

6. Ladders over 30 feet (9144 mm) in height shall be provided with offset sections and landings capable of withstanding 100 pounds (488.2 kg/m^2) per square foot.

7. Ladders shall be protected against corrosion by approved means. Catwalks installed to provide the required access shall be not less than 24 inches (610 mm) wide and shall have railings as required for service platforms.

Exception: This section shall not apply to Group R-3 occupancies.

1509.6.5 Mechanical units.

Roof mounted mechanical units shall be mounted on curbs raised a minimum of 8 inches (203 mm) above the roof surface, or where roofing materials extend beneath the unit, on raised equipment supports providing a minimum clearance height in accordance with Table 1509.7.

TABLE 1509.6.5 CLEARANCE BELOW RAISED ROOF MOUNTED MECHANICAL UNITS

WIDTH OF MECHANICAL UNIT (inches)	MINIMUM CLEARANCE ABOVE SURFACES (inches)
< 24	14
24 < 36	18
36 < 48	24
48 < 60	30
> 60	48

For SI: 1 inch = 25.4 mm.

Exception: In buildings where the existing rooftop equipment, in the opinion of the building official, provides sufficient clearance to repair, recover, replace and/or maintain the roofing system or any of its components, such existing equipment need not comply with Table 1509.6.5

1509.7 Photovoltaic systems.
Rooftop mounted photovoltaic systems shall be designed in accordance with this section.

1509.7.1 Wind resistance.
Rooftop mounted photovoltaic systems shall be designed for wind loads for component and cladding in accordance with Chapter 16 using an effective wind area based on the dimensions of a single unit frame.

1509.7.2 Fire classification.
Rooftop mounted photovoltaic systems shall have the same fire classification as the roof assembly required by Section 1505.

1509.7.3 Installation.
Rooftop mounted photovoltaic systems shall be installed in accordance with the manufacturer's installation instructions.

1509.7.4 Photovoltaic panels and modules.
Photovoltaic panels and modules mounted on top of a roof shall be listed and labeled in accordance with UL 1703 and shall be installed in accordance with the manufacturer's installation instructions.

1509.8 Other rooftop structures.
Rooftop structures not regulated by Sections 1509.2 through 1509.7 shall comply with Sections 1509.8.1 through 1509.8.5 as applicable.

1509.8.1 Aerial supports.
Aerial supports shall be constructed of noncombustible materials.

Exception: Aerial supports not greater than 12 feet (3658 mm) in height as measured from the roof deck to the highest point on the aerial supports shall be permitted to be constructed of combustible materials.

1509.8.2 Bulkheads.
Bulkheads used for the shelter of mechanical or electrical equipment or vertical shaft openings in the roof assembly shall comply with Section 1509.2 as penthouses. Bulkheads used for any other purpose shall be considered as an additional story of the building.

1509.8.3 Dormers.
Dormers shall be of the same type of construction as required for the roof in which such dormers are located or the exterior walls of the building.

1509.8.4 Fences.
Fences and similar structures shall comply with Section 1509.6 as mechanical equipment screens.

1509.8.5 Flagpoles.
Flagpoles and similar structures shall not be required to be constructed of noncombustible materials and shall not be limited in height or number.

R5413

Date Submitted	7/19/2012	**Section**	1510.3 Recovering versus replace	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1510.3 Recovering versus replacement.
New roof coverings shall not be installed without first removing all existing layers of roof coverings down to the roof deck where any of the following conditions occur:

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.

2. Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.

3. Where the existing roof has two or more applications of any type of roof covering.

4. When blisters exist in any roofing, unless blisters are cut or scraped open and remaining materials secured down before applying additional roofing.

5. Where the existing roof is to be used for attachment for a new roof system and compliance with the securement provisions of Section 1504.1 cannot be met.

Exceptions:

1. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.

2. ~~Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs when applied in accordance with Section 1510.4.~~ Reserved.

3. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.

4. Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section 1507.

R5291

Date Submitted	7/18/2012	**Section**	1510	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION 1510 REROOFING

1510.1 General.
Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15.

Exception: Reroofing shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section 1507 for roofs that provide positive roof drainage.

1510.2 Structural and construction loads.
Structural roof components shall be capable of supporting the roof-covering system and the material and equipment loads that will be encountered during installation of the system.

1510.3 Recovering versus replacement.
New roof coverings shall not be installed without first removing all existing layers of roof coverings down to the roof deck where any of the following conditions occur:

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.

2. Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.

3. Where the existing roof has two or more applications of any type of roof covering.

4. When blisters exist in any roofing, unless blisters are cut or scraped open and remaining materials secured down before applying additional roofing.

5. Where the existing roof is to be used for attachment for a new roof system and compliance with the securement provisions of Section 1504.1 cannot be met.

Exceptions:

1. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.

2. ~~Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs when applied in accordance with Section 1510.4.Reserved.~~

3. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.

4. Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section 1507.

1510.4 Roof recovering.
Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other approved materials securely fastened in place.

1510.5 Reinstallation of materials.
Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Existing vent flashing, metal edgings, drain outlets, collars and metal counterflashings shall not be reinstalled where rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled.

1510.6 Flashings.
Flashings shall be reconstructed in accordance with approved manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.

Date Submitted	7/29/2012	**Section**	1510	**Proponent**	Katherine Cleary
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

1510.3 Recovering versus replacement.

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofigng.

Summary of Modification

Vague code language. Set forth an allowable moistre by weight content roof membrane and insulation will give determine the suitabilty of the existing roof to receive a re-roof or a re-cover.

Rationale

Excessive moisture in roof membrane and roof insulation can lead to following:

1. accelerate corrosion of steel deck
2. cause roof system to blister
3. High moisture reduces Thermal Resistance Ration Percentage (TRR) performance
4. High moisture increases decay of roof system over time and reduces (TRR)

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Language is no longer vague. The TAS 126 Roof Moisture Survey, reference document 2.3 refers to research conducted to set forth a benchmark for "wet".

Impact to building and property owners relative to cost of compliance with code

Setting a benchmark for "wet" in roof membrane and insulation. Will set guidelin for unaccapetable membrane and insulation due to loss of insulalting ability and material decay.

Impact to industry relative to the cost of compliance with code

Set a guideline for contractors to follow a benchmark for "wet".

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes, Accepatable roof area that can be repaired/replaced.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Roof Moisture Survey benchmark for "wet" in roof membrane and roof insulation as be set for in Section 1521 High-Velocity Hurricane Zones-Reroofing, 1521.12 and 1521.4

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

Section 1510 Reroofing

1510.3 Recovering versus replacement. New roof coverings shall not be installed without first removing all existing layers of roof coverings down to the roof deck where any of the following condtions occur:

~~1.Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.~~

1. Moisture content of the existing roofing assembly to be covered by a new roofing system shall not exceed 5 percent by weight in the roofing membrane and 8 percent by weight in commercially manufactured rigid board roof insulation as verified by moisture survey performed in accordance with TAS 126. Test results shall be submitted with the Uniform Roofing Permit Application. Testing for moisture content shall not be required for existing lightweight insulating concrete, gypsum, and **cementitious** wood fiber roof decks. All existing lightweight insulating concrete, gypsum and **cementitious** wood fiber roof decks shall be tested per Section 1521.7 to confirm compliance with wind load requirements of Chapter 16 (High-Velocity Hurricane Zones). 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 in any 12-month period unless the entire existing roofing system or roof section is replaced to conform to requirements of this code.

Date Submitted	8/1/2012	**Section**	1512	**Proponent**	Craig Chown
Chapter	15	**Affects HVHZ**	Yes	**Attachments**	Yes
General Comments	No				
Alternate Language	No				

Related Modifications

Chapter 35 - Reference Standards

Summary of Modification

Existing codes are not germane to new technology EPOX-Z roof coatings. Standards needed for "real world" conditions to protect the public include ASTM D5894 (weatherability); ASTM D1635 (permeability); ASTM D714 (blistering); ASTM D1654 (corrosion resistance); ASTM D4214 (chalking).

Rationale

Existing code standards are not sufficient to address real world weather and other conditions in Florida. Use of U.S. Energy Star standards, and recommended ASTM standards will enhance consumer protection and satisfaction. The recommended standards include ASTM D5894 (weatherability); ASTM D1635 (permeability); ASTM D714 (blistering); ASTM D1654 (corrosion resistance); and ASTM D4214 (chalking). Use of approved national ASTM labs and testing facilities will ensure that cool roof coating products are evaluated and tested properly to maximize consumer protection and satisfaction.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Proposed code changes will enhance consumer protection and documented enhanced performance standards will facilitate code enforcement activities.

Impact to building and property owners relative to cost of compliance with code

Consumer protection and cool roof performance will be enhanced. Cost savings will be realized through reduced energy bills, roof preventative maintence, and reduced instances of expensive water and mold damage resulting from leaks. Utility companies offer customer rebates and other incentives.

Impact to industry relative to the cost of compliance with code

The enhanced standards will reduce issues related to cool roof coating use and failures in Florida. Use of nationally approved ASTM labs to certify cool roof coating products meet enhanced performance standards will speed up the process and get rid of duplicate testing requirements in Florida.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes. EPOX-Z NRG cool roof coating products have zero VOC's (Volitile Organic Compounds). Elimination of roof leaks will reduce water infiltration and mold issues.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Proposed standards address "real world" weather and other conditions in Florida, and will ensure products meet meaningful tougher standards to protect the public.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

The proposed ASTM standards are nationally recognized and utilized by the Cool Roof Rating Council for cool roof coating products.

Does not degrade the effectiveness of the code

The proposed nationally recognized ASTM standards for cool roof performance will enhance the code and protection of the public.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1512.5 Cool Roof Coating Products

1512.51 Cool roof coatings shall be listed with and approved by the Cool Roof Rating Council (CRRC), and shall meet U.S. Energy Star standards.

1512.52 Cool roof coatings shall be evaluated based on real world conditions in Florida based on the following ASTM standards:

ASTM D5894 (weatherability);

ASTM D1635 (permeability);

ASTM D714 (blistering);

ASTM D1654 (corrosion resistance); and

ASTM D4214 (chalking).

1512.53 Cool roof coatings shall be eligible for Florida product approval if they meet U.S. Energy Star requirements, and the aforementioned ASTM standards as evaluated and determined by approved national ASTM labs and testing facilities.

Accelerated Weathering Methodology for Cool Roof Coating Materials

Anthony S. Camarota
President & CEO
EPOX-Z Corporation

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology

Lack of an accelerated aging methodology for rating and listing Cool Roof Coatings has slowed the introduction of new advanced materials into the cool roof coating market. To be a good Cool Roof Coating the coating first has to be able to withstand the weathering conditions present on roofs.

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology

Coating Failures

For cool roof coatings to deliver on the promise of long term energy savings and reduction of Urban Heat Island Effect they must first be a good coating and provide long term environmental service along with TSR and Emissivity. To this end it will be instructive to examine the causes of coating failures.

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Coating Failures

Coating Failures can generally be categorized into four main categories:

- Coating manufacturer related or caused
- Owner/specifier related or caused
- Coating applicator related or caused
- Environmental services related or caused

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Coating Failures

Service Environment failures are due to:

- Exposure to excessive moisture (such as ponding water), or temperatures (hot and cold) than anticipated.
- Exposure to different or more concentrated chemicals than anticipated.
- Exposure to abrasion, impact or mechanical damage.
- Combinations of the above.

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Coating Failures

Unanticipated exposure conditions -- may stress the coating system beyond its ability to perform in a given environment.

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Coating Failures

Normal environmental effects that cause or contribute to coating deterioration are:

- Internal stresses-coating drying and curing.
- External stresses-Vibration, flexing, mechanical damage.
- Solar energy.
- Heat.
- Permeation (water, chemicals, oxygen).

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Coating Failures

EPOX-Z Corporation | epox-z.com

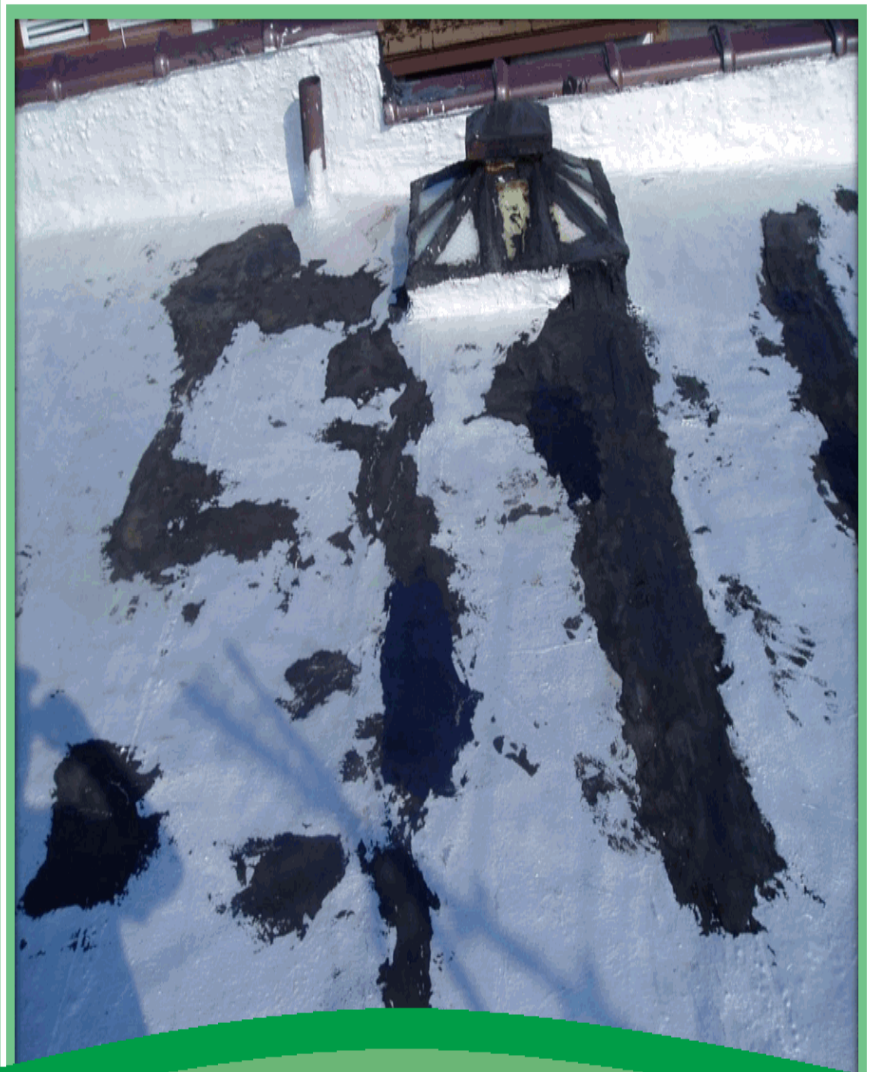
EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Coating Failures

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Coating Failures



EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Coating Failures

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Coating Failures

Permeation of a coating by moisture and chemicals in a service environment is a major factor in the deterioration of the coating. Coatings are specifically formulated and tested to resist certain environments in immersion or atmospheric conditions.

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

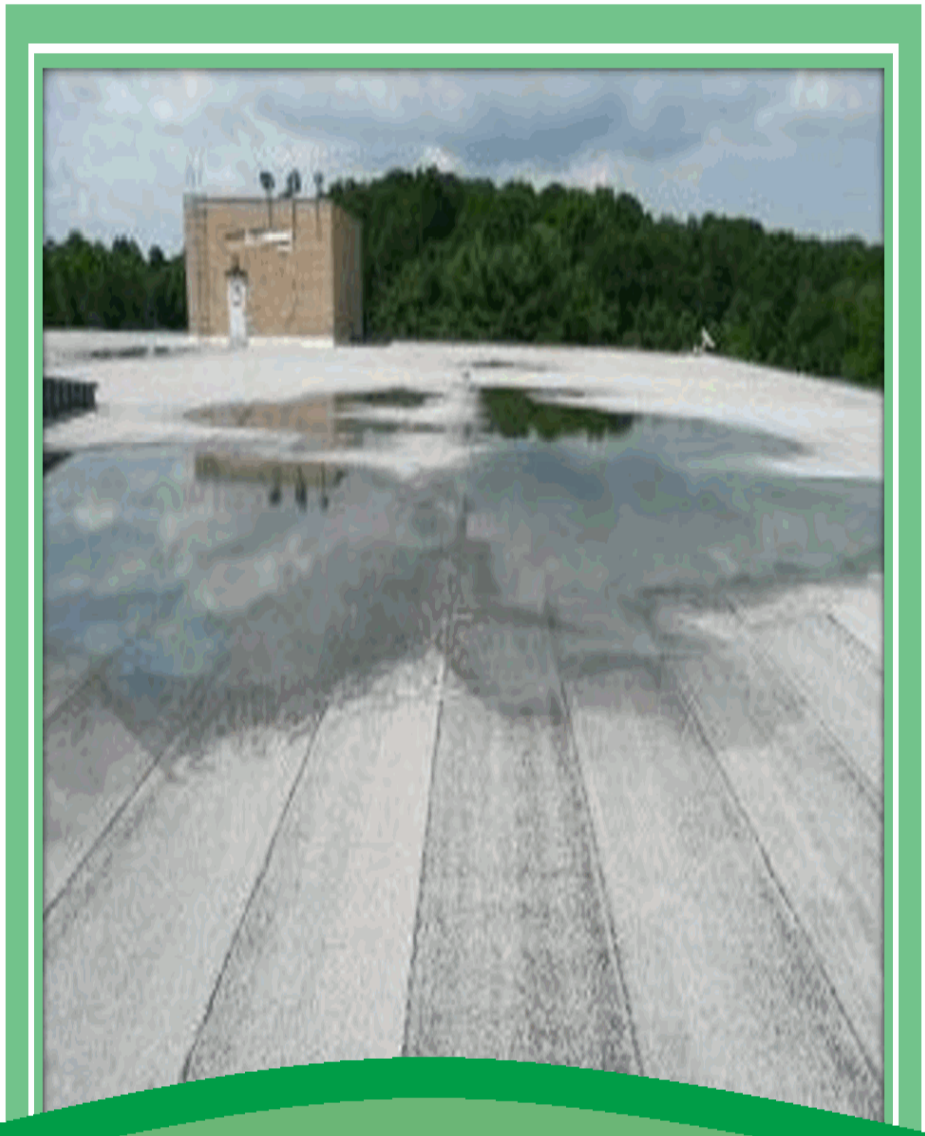
Accelerated Weathering Methodology
Coating Failures

Once water enters the coating film, it may force resin covalent bonds further apart, and adhesive bonds to the substrate may be swelled and/or broken. The volume of the coating may increase as much as 20-50% when in contact with water.

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Coating Failures



EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Coating Failures

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology

Coating Failures

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology

Coating Failures

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology

Coating Failures

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Relevant ASTM Protocols

- **ASTM D5894 - 10** Standard Practice for Cyclic Salt Fog/UV Exposure of Painted Metal
- **ASTM D1653 - 03(2008)** Standard Test Methods for Water Vapor Transmission of Organic Coating Films
- **ASTM C1549 - 09** Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer
- **ASTM C1371 - 04a(2010)e1** Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers

EPOX-Z Corporation | epox-z.com

Accelerated Weathering Methodology

Accelerated Testing

Architectural and maintenance coating companies have utilized accelerated weathering tests for a number of years to help predict in service coating performance.

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Cyclic Corrosion Testing

Actual atmospheric exposures usually include both wet and dry conditions; therefore, it makes sense to pattern accelerated laboratory tests after these natural cyclic conditions.

EPOX-Z Corporation | epox-z.com

Accelerated Weathering Methodology
Cyclic Corrosion Testing

Cyclic tests usually give better correlation to outdoors than conventional salt spray tests. They are effective for evaluating a variety of corrosion mechanisms.

Cyclic corrosion testing is intended to produce failures representative of the type found in outdoor corrosive environments.

EPOX-Z Corporation | epox-z.com

Accelerated Weathering Methodology
Corrosion Testing

Test Method	Conditions Rated	Latex	Epoxy
Cyclic wet/dry corrosion test (2,000 hours)	➢Blistering (size, frequency)	10/10	10/10
	➢Rust-through	10	10
	➢Undercutting	7	7
	Overall	37	37
Exterior exposure industrial site (12 months)	➢Blistering (size, frequency)	10/10	10/10
	➢Rust-through	10	10
	➢Undercutting	10	8
	Overall	40	38

EPOX-Z Corporation | epox-z.com

EPOX-Z
High Performance Coatings

Accelerated Weathering Methodology
Conclusion

The adoption of the suite of existing ASTM protocols discussed in this paper can make the difference between selecting a cool roof coating system that affords effective protection and selecting one that fails.

EPOX-Z Corporation | epox-z.com

Accelerated Weathering Methodology
Questions

Anthony S. Camarota
President & CEO
EPOX-Z Corporation
tony@epox-z.com

EPOX-Z Corporation | epox-z.com

CCRICS

Creative Cool Roof & Industrial Coatings Solutions, LLC
215 W. College Avenue, Suite 603
Tallahassee, Florida 32301
Telephone: (850) 210-6284
E-Mail: craigchown@gmail.com
www.ccrics.com

July 30, 2012

Florida Building Commission (FBC)
Attn: Mr. Jim Richmond, Executive Director
Department of Business & Professional Regulation
1940 North Monroe Street
Tallahassee, FL 32399

Dear Jim:

Per our previous discussions with you and your staff, you advised me that the Florida Building Commission (FBC) was in the process of accepting input and feedback for updates and revisions to the rules and guidelines governing cool roof coatings and product approval . I would like to thank the FBC and you for providing us the opportunity to provide our input and feedback relating to these important issues. As you know, CCRICS is a Florida company that markets and sells EPOX-Z NRG cool roof coating products. Our input and feedback consists of 3 general areas of concern and recommendations:

- Existing FBC rules and guidelines for cool roof coating products are not germane to EPOX-Z NRG cool roof coating products;
- Nationally recognized cool roof coating performance standards should be included in FBC standards and guidelines governing cool roof coating products (including EPOX-Z NRG); and
- FBC should accept certified test results from nationally accredited and reliable testing organizations based on nationally accepted standards approved by the FBC.

Background information on EPOX-Z NRG cool roof coating products, and each of the three aforementioned issues will be provided and addressed below.

Background Information: EPOX-Z NRG Cool Roof Coatings

EPOX-Z NRG is a cool roof coating product that is applied onto approved roofs in a single coat at approximately 12 mils (about the thickness of a matchbook cover). EPOX-Z NRG is a two part thermoset resin product specially engineered as a cool roof coating product. Part A is mixed with Part B and either rolled or sprayed onto roofs which are appropriate for cool roof coating products.

EPOX-Z began as a materials science consulting group specializing in the design and implementation of high performance solutions for the construction, transportation, aerospace and polymer industries. EPOX-Z coatings are based upon a completely unique polymer chemistry and cutting-edge technology. The proprietary polymer utilized in the coating system improves the environmental impact of the coating and thus eliminates the inclusion of toxic solvents. EPOX-Z NRG cool roof coating products have **Zero Volatile Organic Compounds (VOC's)**, which is a benefit environmentally. Furthermore, the revolutionary and proprietary curing agents used in the EPOX-Z NRG coating enables it to outperform other coatings available in the market. Most of the coatings available in the market (such as elastomerics) are part of a multi-coat system that consists of a primer coat, an intermediate coat, and a topcoat. EPOX-Z NRG cool roof coatings are applied in single coat, which significantly reduces the total quantity of coating material needed to accomplish a particular project. The efficiency of the EPOX-Z NRG single coat product vs. multiple coat products results in significant cost savings for the end users.

The U.S Department of Energy (USDOE) strongly recommends use of cool roof coatings to enhance our environment. According to USDOE, cool roofs reduce air conditioning and utility costs; reduce "heat island" effects in urban areas due to the energy and heat absorption from the sun; reduce carbon emission impacts due to reduced energy consumption, etc. For further information on USDOE support of cool roof coating products, refer to our website home page at www.ccrics.com (see U.S. Department of Energy video on our home page) .

CCRICS Input, Feedback & Recommendations Regarding FBC Rules & Guidelines Governing Cool Roof Coating Products & FBC Product Approval.

1. Existing FBC rules and guidelines for cool roof coating products are not germane to EPOX-Z NRG cool roof coating products.

   The existing Florida code standards used to evaluate roof coatings do not apply to EPOX-Z NRG cool roof coatings. Under 1507.15, all roof coatings must comply with the provisions of Section 1507 and section 1507 requires compliance with a series of ASTM standards. The current FBC ASTM standards that coatings must comply with are:

   836 – only applies to elastomerics
   957 – only applies to elastomerics
   1227 – only applies to asphaltic emulsions
   3468 – only applies to Neoprene
   6083 – only applies to acrylic
   6694 – only applies to silicone
   6947 – only applies to polyurethane

2. Nationally recognized cool roof coating performance standards should be included in FBC standards and guidelines governing cool roof coating products (including EPOX-Z NRG).

As noted above, existing FBC standards used to evaluate roof coatings are not germane to EPOX-Z cool roof coating products. EPOX-Z NRG cool roof and other roof coating products should be evaluated based on practical real world conditions and standards including:

ASTM D5894 (weatherability);
ASTM D1635 (permeability - for issues such as ponding water on flat roofs);
ASTM D714 (blistering);
ASTM D1654 (corrosion resistance); and
ASTM D4214 (chalking).

Additionally, the roof coating should be environmentally compliment have a permeability rating of less than 1 as defined by the Roof Consultants International directory of terms; exhibit a minimum pull off strength of 1200 psi as measured by ASTM D 4551 and be a listed product by the Cool Roof Rating Council.

The best way to determine if a coating will be effective for exterior applications such as a roof is to rely upon a standard published by a recognized third party entity. The ASTM developed and published a standard in 1998 for this exact purpose ASTM D 5894. This protocol replicates real world conditions and has the added value of allowing consumers to compare the relative performance of various coatings to aid in the buying decision.

3. FBC should accept certified test results from nationally accredited and reliable testing organizations based on nationally accepted standards approved by the FBC. The key test for a thermoset resin roof coating is weatherability also known as accelerated exposure testing.

Accelerated exposure tests are fundamental to the specification and development of organic coatings for atmospheric service. For these tests to be useful, they must incorporate important destructive factors found in atmospheric service that cause the degradation of coatings and corrosion of substrates. These destructive factors include corrosive atmospheres, rain, condensation, sunlight, wet/dry cycling, and temperature cycling. Frequently, these destructive factors have a synergistic effect on one another. If one of the critical factors is absent from a test, real-life conditions will not be simulated, and the test will have little meaning. While no single accelerated exposure test can duplicate all atmospheric conditions, a recently adopted ASTM standard on accelerated testing offers an improved technique for simulating natural conditions to compare the relative durability of protective coatings. This method, ASTM D5894, is titled Standard Practice for Cyclic Salt Fog/UV Exposure of Painted Metal.

The Testing Procedure

ASTM D5894 is a comprehensive accelerated coating test method expected to replace the long-standing salt fog method (ASTM B117) for testing of coatings. The important distinctions of ASTM D5894 are threefold.

First, controlled wet/dry cycles ensure the dryness of the test specimens at the end of each dry cycle. Second, the test uses a relatively low-concentration electrolyte that incorporates ammonium sulphate and sodium chloride. Third, and most significant, UV/condensation cycles are integrated into the test. ASTM D5894 is more involved than ASTM B117, but it is still rather simple and inexpensive to perform. As with most accelerated tests, the composition, size, and preparation of test specimens used in ASTM D5894 can be determined by the coating specifier. However, basic guidelines are provided in the standard (e.g., 75- by 150-mm flat specimens can be used). At least one, and preferably two, control products (one of high durability and one of low durability) should be included in every test. It also suggests testing no fewer than three replicates of each product used to compensate for variations within the chambers and among specimens.

The importance of incorporating the principal stresses on a coating when designing a laboratory test is well accepted. For years the coatings industry used ASTM B117 to evaluate the corrosion-resistant properties of coatings. Research conducted during the last 15 years has shown that this method does not correlate with actual atmospheric exposures. Today, with the reformulation of many protective coatings to comply with regulations on volatile organic compounds, an accurate corrosion acceleration test method that correlates with actual atmospheric exposures is needed more than ever. ASTM D5894 addresses this need. Its use can make the difference between selecting a coating system that affords effective protection and selecting one that fails.

Since various ASTM protocols are relied upon throughout the FBC, any laboratory which is approved by ASTM to perform any stated protocol would streamline the evaluation process and provide the FBC with accurate data. Companies would benefit from a reduction of time and expense for the duplication of tests that have already been completed by a recognized ASTM laboratory.

Again, we appreciate the opportunity to provide continued input and feedback for the FBC rules and guidelines governing EPOX-Z NRG and other cool roof coating products. If you have any questions or need additional information, please contact Craig Chown via e-mail at craigchown@gmail.com, or by telephone at (850) 210-6284.

Additionally, Mr. Tony Camarota, CEO / President, EPOX-Z Corporation, is willing to provide feedback and answer questions as necessary. Mr. Camarota's impressive background includes:

- the founder, President and Chief Executive Officer of the EPOX-Z Corporation;
- a national leader in the field of polymer science.
- holds multiple patents in resin technologies and is the inventor of EPOX-Z's high performance coatings;
- member of the Society of Plastic Engineers and the Society for the Advancement of Material and Process Engineering;
- a much sought after speaker, who has addressed the Advanced Energy Conference, the Sustainability Institute and the International Workshop on Advances in Cool Roof Research;

- two time recipient of the prestigious Frost and Sullivan product innovation award for resin technologies;
- former Massachusetts "Businessman of the Year"; and
- testified as an expert witness in small business development before the United States Congress.

With Kind Regards,

Craig Chown
CEO / President
CCRICS

cc: Mo Madani, FBC
Tony Camarota, CEO, President, EPOX-Z Corporation
Jeff Cooper, CFO, COO, EPOX-Z Corporation
Fred Dudley, Holland & Knight

Date Submitted	7/20/2012	**Section**	1514.4	**Proponent**	Michael Goolsby
Chapter	15	**Affects HVHZ**	Yes	**Attachments**	Yes
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Section Formatting

Rationale

Separate mods delete section 1617 HVHZ and adopt base Code section 1611. This mod corrects the reference to reflect the relevant code section for roof drainage issues.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Deletes a code section which will no longer exists, formatting only.

Impact to building and property owners relative to cost of compliance with code

None. Deletes a code section which will no longer exists, formatting only.

Impact to industry relative to the cost of compliance with code

None. Code provisions are now found in the base code, formatting only.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

N/A. Deletes a code section which no longer exists, formatting only and provides guidance to relevant base code provision.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

N/A. Deletes a code section which no longer exists, and provides reference to relevant base code provision, formatting only.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate, establishes relevant base code section.

Does not degrade the effectiveness of the code

N/A. Deletes a code section which no longer exists, formatting only.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1514.4 Roof drainage. Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Where required for roof drainage, scuppers shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the roof slope and contributing roof area. Scuppers shall be sized in accordance with the provisions contained in ASCE 7, Section 8 with commentary and shall comply with Section 1617~~7~~1herein.

The code modification does not add a Florida specific code provision; instead, it provides guidance to the relevant base code provision, formatting only.

Date Submitted	7/6/2012	**Section**	1515.2.2.1	**Proponent**	Michael Goolsby
Chapter	15	**Affects HVHZ**	Yes	**Attachments**	Yes
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Establish minimum roof slopes consistent with base code

Rationale

The requirement appears in many base code sections. For simplicity and to avoid repetitive code modifications, a single HVHZ reference is proposed in order to provide overall consistency with the base code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Has been an FBC requirement since its original implementation.

Impact to building and property owners relative to cost of compliance with code

None. Has been an FBC requirement since its original implementation.

Impact to industry relative to the cost of compliance with code

None. Has been an FBC requirement since its original implementation.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Provides necessary consistency between the base code requirement and the HVHZ.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Provides necessary consistency between the base code requirement and the HVHZ.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Provides necessary consistency between the base code requirement and the HVHZ.

Does not degrade the effectiveness of the code

Provides necessary consistency between the base code requirement and the HVHZ.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1515.2.2.1 In new construction the minimum deck slope shall be not less than 1/4:12.

The modification is not adding a new code requirement; instead, the modification is intended to ensure the current base code provision is applicable in the HVHZ.

Date Submitted	7/6/2012	**Section**	1516	**Proponent**	Michael Goolsby
Chapter	15	**Affects HVHZ**	Yes	**Attachments**	Yes
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Roof Fire Classification

Rationale

Establish criteria relating to fire resistance ratings for roof assemblies, intended to minimized the likelihood of fires spreading from the roof of one structure to the roofs of nearby adjacent structures.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Has been an FBC requirement since its original implementation.

Impact to building and property owners relative to cost of compliance with code

None. Has been an FBC requirement since its original implementation.

Impact to industry relative to the cost of compliance with code

None. Has been an FBC requirement since its original implementation.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Provides minimum life safety requirements regarding the fire resistance of roof assemblies for building and structures.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Provides minimum life safety requirements regarding the fire resistance of roof assemblies for building and structures.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Provides minimum life safety requirements regarding the fire resistance of roof assemblies for building and structures.

Does not degrade the effectiveness of the code

Provides minimum life safety requirements regarding the fire resistance of roof assemblies for building and structures.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R4959-G1

Proponent	Jack Glenn	**Submitted**	9/23/2012	**Attachments**	No

Comment:

Creates a new section in the code for the HVHZ that is not wind related and doesnot demonstrate a Florida specific need. (roofing fire requirements)

SECTION 1516

HIGH-VELOCITY HURRICANE ZONES-FIRE CLASSIFICATION

1516.1 General. Roof assemblies shall be divided into the classes defined below. Class A, B and C roof assemblies and roof coverings required to be listed by this section shall be tested in accordance with ASTM E 108 or UL 790. In addition, fire retardant treated wood roof coverings shall be tested in accordance with ASTM D 2898.

1516.2 Fire resistant roofing assemblies and coverings shall be provided on all structures. Fire classification of roofing assemblies and coverings shall be based on the exposure hazard as follows:

1516.2.1 Class A. Zero feet to 20 feet (0 to 6.1 m) distance separation measured horizontally from the closest point of any building edge to the nearest point to an adjoining structure, and all buildings with occupation greater than 300 persons.

Exception: Brick, masonry, slate, clay or concrete roof tile and exposed concrete roof deck are considered to meet Class A roof covering provisions without testing.

1516.2.2 Class B. All other structures, except as noted below

1516.2.3 Class C. Structures not occupied by humans.

1516.2.4 All roofing assemblies shall be installed at a slope no greater than the maximum allowed for the required fire classification.

1516.2.5 Waterproofing assembly must possess a Class A, Class B or Class C fire rating as required herein.

The modification addresses the local lack of sufficient water delivery resources necessary to combat fires leaping from one the roof of one structure to the roof of the next.

R5742

Date Submitted	7/31/2012	**Section**	1517.3 through 1517.6	**Proponent**	Deborah Lawson
Chapter	15	**Affects HVHZ**	No	**Attachments**	Yes
General Comments	No				
Alternate Language	No				

Related Modifications

Former sections 1917.1 through 1917.4
Also, Proposed Code Modifications 5738 and 5739

Summary of Modification

Existing section 1917 is a Florida-specific code not in the base code. It is of importance to Florida including HVHZs. FRDA believes LWIC is more appropriate to address in the Roofing Insulation Code since it is a roofing insulation material.

Rationale

Lightweight Insulating Concrete Roof Deck provisions were part of the South Florida Building Code and were incorporated into the Uniform Florida Building Code when originally adopted. The provisions are unique to the Florida code and are relied upon for important guidance by contractors, applicators, manufacturers, code officials and design professionals.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. There could be negative impact if the code provisions are not readopted.

Impact to building and property owners relative to cost of compliance with code

None. There could be negative impact if the code provisions are not readopted.

Impact to industry relative to the cost of compliance with code

None. There could be negative impact if the code provisions are not readopted.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Proper application, testing and inspection of Lightweight Insulating Concrete Roof Decks is critical to the roofing process and the integrity of the building envelope.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Readoption of these code provisions will ensure continued consistency in the application, testing and regulation of Lightweight Insulating Concrete Roof Decks.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate against any materials, products, methods or systems.

Does not degrade the effectiveness of the code

Improves the effectiveness of the code. Failure to readopt these provisions will degrade the effectiveness of the code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1508.3 Lightweight insulating concrete.

Material produced with or without aggregate additions to portland cement, water and air to form a hardened material possessing insulating qualities, which, when oven dried shall have a unit weight no greater than 50 pcf (801 kg/m^3).

1508.3.1 Aggregate lightweight insulating concrete.

Insulating concrete formulated predominantly with perlite or vermiculite aggregate having a minimum compressive strength of 125 psi (861.8 kPa) when tested in compliance with ASTM C 495.

1508.3.2 Cellular lightweight insulating concrete.

Insulating concrete formulated by mixing a hydrated cementitious matrix around non-interconnecting air cells created by the addition of preformed foam formed from hydrolyzed proteins or synthetic surfactants. The cured cellular lightweight insulating concrete shall have minimum compressive strength of 160 psi (1103 kPa) when tested in compliance with ASTM C 495 and C 796.

1508.3.3 Cellular/aggregate (hybrid) lightweight insulating concrete.

Insulated concrete formulated by combining preformed foam with low density aggregates to impart properties of both aggregate and cellular lightweight insulating concrete. It shall have a minimum compressive strength of 200 psi (1379 kPa) when tested in compliance with ASTM C 495 and C 796.

1508.4 Inspection.

1508.4.1

Application of all lightweight insulating concrete roof decks shall be by applicators approved by the lightweight insulating concrete deck manufacturer. Product Approval shall be required for all lightweight insulating concrete systems.

1508.4.2

The permit holder shall notify the building official 48 hours prior to the pouring of lightweight insulating concrete.

1508.4.3

The permit holder shall make available to the building official a job log with the following minimum items.

1. Cast density recordings/hour.

2. Product evaluation for application.

3. Date and job locations identified.

4. Results of any field test conducted.

1508.4.4

Once the roof deck system can support foot traffic, the building official shall have clear access and clear path at his option for inspection of lightweight insulating concrete.

1508.5 Testing.

The building official may require tests of the lightweight insulating concrete to confirm the fastener withdrawal resistance, compressive strength or drainage ability.

1508.5.1

Existing roof assemblies to receive lightweight insulating concrete other than galvanized G-90 steel deck or structural concrete deck shall be tested for uplift for adhesion to the substrate to confirm compliance with design pressure.

1508.6 Materials and limitations of use.

Lightweight insulating concrete, in conjunction with galvanized formed steel sheets, shall not be used as a roof deck in areas where highly corrosive chemicals are used or stored.

1508.6.1

Lightweight insulating concrete shall be poured over bottom slotted galvanized (G-90) steel decking as follows; cellular, 0.5 percent open; hybrid, 0.75 percent open, aggregate 1.5 percent open. No lightweight insulating concrete shall be poured over a painted or non-galvanized steel deck.

1. Lightweight insulating concrete over structural concrete slabs, twin tees, precast units or other non-venting substrates shall be vented to allow the escape of excess moisture.

1508.6.2

Minimum thickness of lightweight insulating concrete shall be 2 inches (51 mm) over the top plane of the substrate unless otherwise specified in the Product Approval. Lightweight insulating concrete shall be of sufficient thickness to receive the specified base ply fastener length.

1508.6.3

Galvanized coatings of formed steel sheets shall be in accordance with ASTM A 525 with a minimum coating designation of G-90. Base steel shall conform to ASTM A 446, Grade A, B, C, D or greater and ASTM A 611 C, D or E.

1508.6.4

Chemical admixtures shall be in compliance with ASTM C 494. Calcium chloride or any admixture containing chloride salts shall not be used in insulating concrete. Fiber reinforcement may be used to control cracking. Mineral admixtures shall conform to ASTM C 618.

1508.6.5

Vermiculite or perlite shall be in compliance with ASTM C 332, Group I. Foam concentrates shall be in compliance with ASTM C 796 and ASTM C 869.

1508.6.6

Mixing, placing and finishing shall be in compliance with the deck system Product Approval. Slurry coating, two-density casting and double casting shall be acceptable per the specific manufacturer's recommendations.

1508.6.7

If the lightweight insulating concrete deck is to receive Product Approval for a direct-adhered roofing system, the deck surface shall be prepared to the requirements set forth in the roof system Product Approval.

1508.6.8

All base ply fasteners for use in lightweight insulating concrete roof decks shall have a Product Approval for use with the specific lightweight insulating concrete roof system in compliance with manufacturer's recommendations and the design pressure of Section 1609.

1508.6.9

The lightweight insulating concrete fastener withdrawal shall have a minimum resistance for new pours of

1. 60 pounds (267 N) in 28 days when the fastener is installed and allowed to age in the concrete.

2. 40 pounds (178 N) at time of roofing.

1508.6.10
Insulation board with lightweight insulating concrete shall conform to Type I expanded polystyrene insulation as defined in ASTM C 578.

1. Packaged insulation board delivered to the job site shall comply with the provisions of Section 2603.2 or Section 2613.1.3.

2. Installation of insulating board in conjunction with lightweight insulating concrete shall comply with uplift requirements set forth in Section 1609. Insulation panels shall be placed in a minimum $^{1}/_{8}$-inch (3.2 mm) slurry of insulating concrete while the material is still in a plastic state. The insulating concrete shall be cast over the insulation boards according to the insulating concrete manufacturer's Product Approval. Insulation panels shall be provided with holes and/or slots for keying and venting.

1508.6.11

Reinforcing mesh shall be provided as required to meet fire-rating and/or special structural design requirements. Refer to a specific Product Approval for the specific requirements applicable to the product being installed.

2013 Florida Building Code Development – Rationale for Inclusion of Florida-Specific Provisions for Lightweight Insulating Concrete Roof Decks

Although Lightweight Insulating Concrete (LWIC) Roof Decks are utilized throughout the world, Florida is by far the most substantial market for the material with proven performance of this roofing insulation product in Florida's climactic conditions due to its ability to wick moisture and fully adhere, providing excellent performance in High Wind Velocity Zones. The origin of Florida's existing LWIC code provisions is the former South Florida Building Code. The provisions were incorporated when the uniform Florida Building Code was created and are heavily relied upon by contractors, applicators, manufacturers, code officials and design professionals in Florida. Lightweight Insulating Concrete Roof Decks are not currently addressed in the International Building Code and to our knowledge, are not contained in any other state codes. Consequently, even other states look to Florida's provisions for guidance.

R5746

Date Submitted	7/31/2012	**Section**	1519.5.3 Lightweight insulating co	**Proponent**	Deborah Lawson
Chapter	15	**Affects HVHZ**	Yes	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

#5748 and #5749

Summary of Modification

Technical correction to terminology.

Rationale

Provides consistency of terminology used in the code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None - this is a technical change to correct inconsistent terminology.

Impact to building and property owners relative to cost of compliance with code

None - this is a technical change to correct inconsistent terminology.

Impact to industry relative to the cost of compliance with code

None - this is a technical change to correct inconsistent terminology.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Improves clarity of the code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves clarity of the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate - purely a technical change to create consistent terminology.

Does not degrade the effectiveness of the code

Improves the code.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1519.5.3 Lightweight insulating concrete.

All lightweight insulating ~~insulated~~ concrete shall be vented per roofing system manufacturer recommendations.

1519.5.3.1

Lightweight concrete shall not be applied over an existing roof deck unless the supporting structure has been approved as adequate to sustain the added weight. Calculations verifying the adequacy of the existing structure to sustain the added weight shall be prepared, signed, sealed and dated by a Florida-registered architect or engineer, who is proficient in structural design, and submitted with the uniform roofing permit application.

R5925

Date Submitted	7/31/2012	**Section**	1519.5.3 Lightweight insulating co	**Proponent**	Deborah Lawson
Chapter	15	**Affects HVHZ**	Yes	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

#5748 and #5749

Summary of Modification

Technical correction to terminology.

Rationale

Provides consistency of terminology used in the code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None - this is a technical change to correct inconsistent terminology.

Impact to building and property owners relative to cost of compliance with code

None - this is a technical change to correct inconsistent terminology.

Impact to industry relative to the cost of compliance with code

None - this is a technical change to correct inconsistent terminology.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Improves clarity of the code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves clarity of the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate - purely a technical change to create consistent terminology.

Does not degrade the effectiveness of the code

Improves the code.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1519.5.3 Lightweight insulating concrete.

All lightweight insulating ~~insulated~~ concrete shall be vented per roofing system manufacturer recommendations.

1519.5.3.1

Lightweight concrete shall not be applied over an existing roof deck unless the supporting structure has been approved as adequate to sustain the added weight. Calculations verifying the adequacy of the existing structure to sustain the added weight shall be prepared, signed, sealed and dated by a Florida-registered architect or engineer, who is proficient in structural design, and submitted with the uniform roofing permit application.

R5749

Date Submitted	7/31/2012	**Section**	1521.20	**Proponent**	Deborah Lawson
Chapter	15	**Affects HVHZ**	Yes	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

5746 and #5748

Summary of Modification

Technical correction to terminology.

Rationale

Provides consistency of terminology used in the code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None - this is a technical change to correct inconsistent terminology.

Impact to building and property owners relative to cost of compliance with code

None - this is a technical change to correct inconsistent terminology.

Impact to industry relative to the cost of compliance with code

None - this is a technical change to correct inconsistent terminology.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Improves clarity of the code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves clarity of the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate - purely a technical change to create consistent terminology.

Does not degrade the effectiveness of the code

Improves the code.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1521.20

Lightweight insulating ~~insulated~~ concrete shall not be applied over an existing roofing system unless the existing roofing assembly is verified to be adequate to accept the new lightweight insulating concrete and is in compliance with the testing required herein.

R5748

Date Submitted	7/31/2012	**Section**	1521.7	**Proponent**	Deborah Lawson
Chapter	15	**Affects HVHZ**	Yes	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

#5746 and # 5749

Summary of Modification

Technical correction to terminology.

Rationale

Provides consistency of terminology used in the code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None - this is a technical change to correct inconsistent terminology.

Impact to building and property owners relative to cost of compliance with code

None - this is a technical change to correct inconsistent terminology.

Impact to industry relative to the cost of compliance with code

None - this is a technical change to correct inconsistent terminology.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Improves clarity of the code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves clarity of the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate - purely a technical change to create consistent terminology.

Does not degrade the effectiveness of the code

Improves the code.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1521.7

On lightweight insulating concrete, gypsum and cementitious wood fiber roof decks a field fastener withdrawal resistance test, in compliance with TAS 105, shall be carried out to confirm compliance with wind load requirements of Chapter 16 (High-Velocity Hurricane Zones).

R4960

Date Submitted	7/6/2012	**Section**	1522	**Proponent**	Michael Goolsby
Chapter	15	**Affects HVHZ**	Yes	**Attachments**	Yes
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Elevation of rooftop equipment

Rationale

The modification is intended to require that permanently mounted rooftop equipment have the prescribed clearances which will eliminate disruption and delay of service for occupants, by having to disconnect equipment, require other trades participation, and will ensure the removal of the potential cause of unhealthy or life threatening conditions for building occupants.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Has been an FBC requirement since its original implementation.

Impact to building and property owners relative to cost of compliance with code

Not having to remove permanently mounted equipment to repair or re-roof saves costs. Further, when moving the equipment due to lack of clearance, requiring that the re-installation meet the prescribed clearances mitigates the future costs.

Impact to industry relative to the cost of compliance with code

The roofing industry would be spared from additional costs by not having to remove the permanently mounted equipment.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This modification works towards minimizing disruption to systems and equipments servicing a structure when roofing is being repaired or replaced. Therefore, helps protect the health and welfare of the public.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This modification improves the code by acknowledging and mitigating future costs. It also helps simplify the work.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Provides minimum life safety requirements regarding the fire resistance of roof assemblies for building and structures.

Does not degrade the effectiveness of the code

This modification enhances the code by acknowledging and establishing parameters that mitigate costs and simplify the work.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1522.3 Machinery, piping, conduit, ductwork, signs and similar equipment may be mounted on roofs in compliance with the following:

1522.3.1 Permanently mounted rooftop equipment shall be installed to provide clearances, in accordance with Table 1522.3, to permit repairs, replacement and/or maintenance of the roofing system or any of its components.

TABLE 1522.3

ROOF MOUNTED EQUIPMENT HEIGHT REQUIREMENTS

WIDTH OF EQUIPMENT (in.)	HEIGHT OF LEGS (in.)
Up to 24	14
25 to 36	18
37 to 48	24
49 to 60	30
61 and wider	48

For SI: 1 inch = 25.4 mm.

1522.3.2 When reroofing, recovering, performing repair or roof maintenance, and where the roof top equipment is moved to properly execute such work, the minimum clearances of the said equipment support shall be in accordance with Table 1522.3.

1522.3.3 In buildings where the existing rooftop equipment, in the opinion of the building official, provides sufficient clearance to repair, recover, replace and/or maintain the roofing system or any of its components, such existing equipment need not comply with Table 1522.3.

1522.3.4 Electrical conduit, mechanical piping or any other service lines running on the roof shall be raised not less than 8 inches (203 mm) above the finished roof surface.

1522.3.5 Condensate lines shall not drain on the roofing system or any of its components. Condensate lines need not comply with the minimum clearance requirements.

HVAC systems are an essential building component providing environmental control on a year-round basis for buildings and structures in Florida. Cooling equipment not meeting elevation requirements necessary for repairs and reroofing would need to be disconnected from service in order to conduct such work, in many cases for extended periods. Disconnection of equipment not only creates discomfort for building occupants, but will often adversely affect life safety. This situation is exacerbated by the ambient temperatures experienced in Florida and the reliance on HVAC for moderation of interior building temperatures.

R5612

Date Submitted	7/24/2012	**Section**	Table 1503.2	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

1503.2

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

TABLE 1503.2 METAL FLASHING MATERIAL

MATERIAL	MINIMUM THICKNESS (INCHES)	GAGE	WEIGHT (LBS PER SQ FT)
Copper	1 (16 oz)		
Aluminum	0.024		
Stainless Steel	28		
Galvanized Steel	0.0179	26 (zinc coated G90)	
Aluminum Zinc Coated Steel	0.0179	26 (AZ50 Alum Zinc)	
Zinc Alloy	0.027		
Lead	2.5 (40 oz)		
Painted Terne	-	1.25 (20 oz)	

R5414

Date Submitted	7/19/2012	**Section**	TABLE 1507.4.3(1) METAL ROOF	**Proponent**	Mark Zehnal
Chapter	15	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 Florida Building Code specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

TABLE 1507.4.3(1) METAL ROOF COVERINGS

~~ROOF COVERING TYPE~~	~~STANDARD APPLICATION RATE/THICKNESS~~
~~Aluminum~~	~~ASTM B 209, 0.024 inch minimum thickness for roll-formed panels and 0.019 inch minimum thickness for press-formed shingles.~~
~~Aluminum-zinc alloy coated steel~~	~~ASTM A 792 AZ 50~~
~~Cold-rolled copper~~	~~ASTM B 370 minimum 16 oz./sq. ft. and 12 oz./sq. ft. high yield copper for metal-sheet roof covering systems; 12 oz./sq. ft. for preformed metal shingle systems.~~
~~Copper~~	~~16 oz./sq. ft. for metal-sheet roof-covering systems; 12 oz./sq. ft. for preformed metal shingle systems.~~
~~Galvanized steel~~	~~ASTM A 653 G-90 zinc-coated[a].~~
~~Hard lead~~	~~2 lbs./sq. ft.~~
~~Lead-coated copper~~	~~ASTM B 101~~
~~Prepainted steel~~	~~ASTM A 755~~
~~Soft lead~~	~~3 lbs./sq. ft.~~
~~Stainless steel~~	~~ASTM A 240, 300 Series Alloys~~
~~Steel~~	~~ASTM A 924~~
~~Terne and terne-coated stainless~~	~~Terne coating of 40 lbs. per double base box, field painted where applicable in accordance with manufacturer's installation instructions.~~
~~Zinc~~	~~0.027 inch minimum thickness; 99.995% electrolytic high grade zinc with alloy additives of copper (0.08% – 0.20%), titanium (0.07% – 0.12%) and aluminum (0.015%).~~

ROOF COVERING TYPE	STANDARD	STANDARD APPLICATION RATE/THICKNESS
Aluminum	ASTM B 209	0.024 inch minimum thickness for roll-formed panels and 0.019 inch minimum thickness for press-formed shingles.
Aluminum-zinc coated steel	ASTM A 792	0.013 inch minimum thickness, AZ 50 (coated minimum application rate)
Cold-rolled copper	ASTM B 370	Minimum 16 oz/sq. ft. and 12 oz./sq. ft. high yield copper for metal-sheet roof covering systems: 12 oz/sq. ft. for preformed metal shingle systems.
Copper	ASTM B 370	16 oz./sq. ft. for metal-sheet roof-covering systems; 12 oz./sq. ft. for preformed metal shingle systems.
Galvanized steel	ASTM A 653	0.013 inch minimum thickness, G-90 zinc-coated[a].
Hard lead	2 lbs./sq. ft.	
Lead-coated copper	ASTM B 101	
Prepainted steel	ASTM A 755	

Soft lead	3 lbs./sq. ft.	
Stainless steel	ASTM A 240	300 Series Alloys
Steel	ASTM A 924/ ASTM A 924M	
Terne and terne-coated stainless	Terne coating of 40 lbs. per double base box, field painted where applicable in accordance with manufacturer's installation instructions.	
Zinc	0.027 inch minimum thickness; 99.995% electrolytic high grade zinc with alloy additives of copper (0.08% - 0.20%), titanium (0.07% - 0.12%) and aluminum (0.015%).	

For SI: 1 ounce per square foot = 0.0026 kg/m^2,
1 pound per square foot = 4.882 kg/m^2,
1 inch = 25.4 mm, 1 pound = 0.454 kg.
a. For Group U buildings, the minimum coating thickness for ASTM A 653 galvanized steel roofing shall be G-60.

Date Submitted	8/2/2012	**Section**	ASTM	**Proponent**	Craig Chown
Chapter	35	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Section 1512.5

Summary of Modification

Includes ASTM reference standards for cool roof coating products as a supplement to proposals under Section 1512.5 in a related modification.

Rationale

The referenced code standards are a companion to a proposed modification under 1512.5.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Referenced standards are a companion to a proposed modification under Section 1512.5.

Impact to building and property owners relative to cost of compliance with code

Referenced standards are a companion to a proposed modification under Section 1512.5.

Impact to industry relative to the cost of compliance with code

Referenced standards are a companion to a proposed modification under Section 1512.5.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Referenced standards are a companion to a proposed modification under Section 1512.5.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Referenced standards are a companion to a proposed modification under Section 1512.5.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Referenced standards are a companion to a proposed modification under Section 1512.5.

Does not degrade the effectiveness of the code

Referenced standards are a companion to a proposed modification under Section 1512.5.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

CHAPTER 35

REFERENCED STANDARDS

Standard Reference Number Title	Referenced in code section number
ASTM D5894-10 Standard Practice for Cyclic Salt Fog/UV Exposure of Painted Metal	1512.5
ASTM D1653-03 Standard Test Methods for Water Vapor Transmission of Organic Coating Films	1512.5
ASTM D714-02 Standard Test Method for Evaluating Degree of Blistering of Paints	1512.5
ASTM D1654-08 Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments	1512.5
ASTM D4214-07 Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films	1512.5

Date Submitted	7/23/2012	**Section**	SECTION - REFERENCED STAN	**Proponent**	Mark Zehnal
Chapter	35	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides update to previous Commission approved code referenced standard.

Rationale

To carry forward the updated version of a previous Commission approved code standard designed with ASCE 7-10 to provide for the proper installation of tile roofing systems and components connected to Florida's unique environmental conditions including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

Impact to industry relative to the cost of compliance with code

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

FRSA

Florida Roofing, Sheet Metal and Air Conditioning Contractors Association

4111 Metric Drive

Winter Park, Florida 32792

Standard reference number

FRSA/TRI ~~07320/8—05~~ April 2012 (04-12)

Title

Florida High Wind Concrete and Clay Roof Tile Installation Manual, ~~Fourth~~ Fifth Edition

Referenced in code section number

1507.3.2, 1507.3.3, 1507.3.3.1, 1507.3.6, 1507.3.7, 1507.3.8, 1507.3.9

R5140

Date Submitted	7/16/2012	**Section**	101	**Proponent**	Ken Cureton
Chapter	1	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

None

Summary of Modification

Modify SECTION 101.6 ADD SECTION 101.8

Rationale

To comply with s. 553.73(7)(a) Florida Statutes, the proposed modification will supplement the most current version of the International Existing Building Code (IEBC) base code with Florida specific requirements in accordance with the Commission's approved code change process for the update to the 2013 Florida Building Code. The proposed modification is necessary in order to maintain compliance with Florida Statutes.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

Impact to building and property owners relative to cost of compliance with code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

Impact to industry relative to the cost of compliance with code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

It does not. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Does not degrade the effectiveness of the code

It does not. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

The proposed code change was submitted in accordance with the Commission's update process for the 2013 FBC in order to maintain compliance with Florida Statutes.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5140-G1

Proponent	BOAF CDC	**Submitted**	9/17/2012	**Attachments**	No

Comment:

The section 101.6 Appendices should not be reserved. The choice of adopting appendices should be left to the AHJ and indivual jurisdictions.

This code requirement should not be removed per the Commission' 2013 FBC update process. "IBC requirements not applicable to Florida (i.e.; snow and seismic requirements) remain in the Code for purposes of formatting consistency with the Foundation Codes."

R5140-G2

General Comment - 08/09/2012 - 09/23/2012

Proponent Ken Cureton **Submitted** 9/21/2012 **Attachments** No

Comment:
The proposal provides for provisions for existing mechanical equipment on roof as per 553.73(15) FS.

R5140-G3

General Comment - 08/09/2012 - 09/23/2012

Proponent BOAF CDC **Submitted** 9/23/2012 **Attachments** No

Comment:
Changing 101.6 is unnecessary; the decision to utilize the Appendices should remain with the local jurisdiction and AHJ. 101.8 is a statutory issue FS 553.73 (15) and a referance to that would be sufficient.

Modify **SECTION 101.6** as follows:

101.6 Appendices. ~~The *code official* is authorized to require rehabilitation and retrofit of buildings, structures or individual structural members in accordance with the appendices of this code if such appendices have been individually adopted.~~ Reserved.

Add SECTION 101.8 as follows:

101.8 Existing mechanical equipment. An agency or local government may not require that existing mechanical equipment on the surface of a roof be installed in compliance with the requirements of the Florida Building Code until the equipment is required to be removed or replaced.

Date Submitted	8/1/2012	**Section**	202	**Proponent**	Ken Cureton
Chapter	2	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

None

Summary of Modification

Modify SECTION 202 (Roofing TAC)

Rationale

To comply with s. 553.73(7)(a) Florida Statutes, the proposed modification will supplement the most current version of the International Existing Building Code (IEBC) base code with Florida specific requirements in accordance with the Commission's approved code change process for the update to the 2013 Florida Building Code. The proposed modification is necessary in order to maintain compliance with Florida Statutes.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

Impact to building and property owners relative to cost of compliance with code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

Impact to industry relative to the cost of compliance with code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

It does not. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Does not degrade the effectiveness of the code

It does not. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

The proposed code change was submitted in accordance with the Commission's update process for the 2013 FBC in order to maintain compliance with Florida Statutes.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5937-G1

Proponent	Ken Cureton	**Submitted**	9/21/2012	**Attachments**	No

Comment:

The proposal provides for provisions with regard to wind mitigation as per 553.844 FS.

General Comment - 08/09/2012 - 09/23/2012

R5937-G2

Proponent BOAF CDC **Submitted** 9/23/2012 **Attachments** No

Comment:

1. The definition of Roof Section is unnecessary.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

2. The definition of Site built single- family residential structures. This is part of the “Wind Mitigation”. However the amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

No Statute or data was supplied.

Modify **SECTION 202** as follows:

ROOF SECTION. A separating or division of a roof area by existing expansion joints, parapet walls, flashing (excluding valley), 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.

Site built single- family residential structures. This term shall mean site built single family detached residential structures.

R5940

Date Submitted	8/1/2012	**Section**	412	**Proponent**	Ken Cureton
Chapter	4	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

None

Summary of Modification

Add SECTION 412

Rationale

To comply with s. 553.73(7)(a) Florida Statutes, the proposed modification will supplement the most current version of the International Existing Building Code (IEBC) base code with Florida specific requirements in accordance with the Commission's approved code change process for the update to the 2013 Florida Building Code. The proposed modification is necessary in order to provide correlations with other Sub-Codes and / or other chapters of the Florida Building Code – Existing Building

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

Impact to building and property owners relative to cost of compliance with code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

Impact to industry relative to the cost of compliance with code

None. Proposed language is currently adopted by the 2010 Florida Building Code.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

It does not. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Does not degrade the effectiveness of the code

It does not. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

The proposed code change was submitted in accordance with the Commission's update process for the 2013 FBC in order to provide correlations with other Sub-Codes and / or other chapters of the Florida Building Code – Existing Building

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5940-G1

Proponent BOAF CDC **Submitted** 9/23/2012 **Attachments** No

Comment:

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC.

The section numbering is inconsistent.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

ADD - **SECTION 412 - RE-ROOFING** as follows:

SECTION 412

REROOFING

411.1 General. The provisions of Section 711 – Reroofing of this code, shall govern requirements of all reroofing work performed under this code.

Date Submitted	7/6/2012	**Section**	[B]706.1	**Proponent**	Michael Goolsby
Chapter	7	**Affects HVHZ**	No	**Attachments**	Yes
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Section formatting

Rationale

This proposed modification is intended to reinstate a wind related reference to the relevant HVHZ sections which was deleted as a consequence of the removal of the underlying Florida specific sections as contained in the 2010 edition of the FBC. Replacement of this direction to appropriate sections of the HVHZ is consistent with the legislative intent to maintain wind related HVHZ requirements.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. The result of this proposed modification is a continuation of the applicability of building code requirements for HVHZ structures that has existed in all previous editions of the FBC, Existing.

Impact to building and property owners relative to cost of compliance with code

None. The result of this proposed modification is a continuation of the applicability of building code requirements for HVHZ structures that has existed in all previous editions of the FBC, Existing.

Impact to industry relative to the cost of compliance with code

None. The result of this proposed modification is a continuation of the applicability of building code requirements for HVHZ structures that has existed in all previous editions of the FBC, Existing.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This modification reinstates HVHZ provisions that were not to subject to the sunset provisions of the legislature. Therefore, helps protect the health and welfare of the public by having the wind related provisions for roof installations remain in the base code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This modification enhances the code by reinstating specific wind provisions for HVHZ roof systems that were not carried forward in establishing the base code for the 2013 FBC. Reinstatement of these provisions helps bring uniformity to the design and installation of these products.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This modification does not curtail the use of any material, products, methods or systems of construction already deemed acceptable by the Florida Building Code or any alternate materials, design and methods of construction and equipment acceptable to the code official.

Does not degrade the effectiveness of the code

This modification does not degrade the effectiveness of the code; instead, it enhances the code by maintaining the applicability of relevant base code requirements as has been the case since the first edition of the FBC, Existing.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

[B] 706.1 General. Where alteration work includes replacement of equipment that is supported by the building or where a reroofing permit is required, the provisions of this section shall apply.

Exception: Buildings and structures located within the High Velocity Hurricane Zone shall comply with Sections 1512-1525 of the *Florida Building Code, Building*.

This proposed modification does not add new Florida specific provisions; instead, it only adds direction to the applicable and equivalent HVHZ code sections. Additionally, these wind provisions were acknowledged to be unique to Florida by the Florida Legislature, and were not intended to sunset since they are structurally wind related and applicable in the HVHZ.

Date Submitted	7/17/2012	**Section**	711.7.2	**Proponent**	Mark Zehnal
Chapter	7	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Include ASTM D 4869 Type II & Type IV as underlayment option to correlate with underlayment's available in Chapter 9 of the Florida Residential Code and clarify fastening installation language.

Rationale

To carry forward previous Commission approved code language and standards found in Chapter 9 of the Florida Residential Code and correlate with Chapter 6 of the Florida Existing Building Code. Unify shingle underlayment's and fastening requirements.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5244-G1

Proponent	BOAF CDC	**Submitted**	9/23/2012	**Attachments**	No

Comment:

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.
The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

711.7.2 Roof secondary water barrier for site-built single family residential structures.

A secondary water barrier shall be installed using one of the following methods when roof covering is removed and replaced:

-

1. In either HVHZ or Non-HVHZ regions:

a) All joints in structural panel roof sheathing or decking shall be covered with a minimum 4 inch (102 mm) 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.

b) 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. (No additional underlayment shall be required over the top of this sheet.) The synthetic underlayment shall be fastened in accordance with the manufacturer's recommendations.

2. Outside the High Velocity Hurricane Zone:

a) 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. No additional underlayment shall be required on top of this sheet for new installations.

b) An underlayment system approved for the particular roof covering shall be applied with the following modification:

(1) For roof slopes that require one layer of underlayment, a layer of approved asphalt impregnated ASTM D 226 Type I or Type II, ASTM D 4869, Type II or Type IV underlayment or approved synthetic underlayment shall be installed. The felt is to be fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

(2) For roof slopes that require two layers of underlayment, an approved asphalt impregnated ASTM D 226 Type I or Type II, ASTM D 4869, Type II or Type IV underlayment shall be installed in a shingle–fashion and lapped 19 inch (483 mm) and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs, attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). An approved synthetic underlayment shall be installed in accordance with this section and the manufacturer's installation instruction. (No additional underlayment shall be required over the top of this sheet.)

Exceptions:

1. Roof slopes < 2:12 having a continuous roof system shall be deemed to comply with Section 711.7.2 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 711.7.2 for Secondary Water Barriers.

Date Submitted	7/17/2012	**Section**	711	**Proponent**	Mark Zehnal
Chapter	7	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Move current Florida-specific criteria to Residential Code.

Rationale

Currently the only Foundation Code references that provide guidance specific to residential reroofing are found in the Foundation Residential Code. Chapter 6 of the Florida Existing Building Code contains supplementary regulatory requirements exclusive to residential reroofing not contained within in the Foundation Code. However, these supplementary regulatory requirements must be combined with the materials and installation procedures of the Residential Code “611.1- Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15 of the Florida Building Code, Building or Chapter 9 of the Florida Building Code, Residential”.

The purpose of this code modification is to create uniformity by following the Foundation Code model through the consolidation of all the associated roofing/reroofing code sections into one volume providing a single location for contractors, design professionals and code officials to find all code information related to the evaluation and installation of residential reroofing including the mitigation requirements specific to site-built single family residential structures in the Residential Code volume.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5239-G1

Proponent BOAF CDC **Submitted** 9/23/2012 **Attachments** No

Comment:

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.
The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

SECTION 711 REROOFING

711.1 General.

Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15 of the Florida Building Code, Building or Chapter 9 of the Florida Building Code, Residential. Roof repairs to existing roofs and roof coverings shall comply with the provisions of ~~this code~~ Chapter 15 of the Florida Building Code, Building or Chapter 9 of the Florida Building Code, Residential.

~~Exception: Reroofing shall not be required to meet the minimum design slope requirement of 1/4:12 in Section 1507 of the Florida Building Code, Building for roofs that provide positive roof drainage (high-velocity hurricane zones shall comply with Sections 1515.2.2.1 and 1515.2.2.2 of the Florida Building Code, Building).~~

-

~~711.1.1~~

-

~~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 in any 12 month period unless the entire roofing system or roof section conforms to requirements of this code.~~

-

~~711.2 Structural and construction loads.~~

-

~~The structural roof components shall be capable of supporting the roof covering system and the material and equipment loads that will be encountered during installation of the roof covering system.~~

-

~~711.3 Recovering versus replacement.~~

-

~~New roof coverings shall not be installed without first removing all existing layers of roof coverings where any of the following conditions occur:~~

~~1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.~~

~~2. Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.~~

~~3. Where the existing roof has two or more applications of any type of roof covering.~~

~~4. When blisters exist in any roofing, unless blisters are cut or scraped open and remaining materials secured down before applying additional roofing.~~

~~5. Where the existing roof is to be used for attachment for a new roof system and compliance with the securement provisions of Section 1504.1 can not be met.~~

-

~~Exceptions:~~

~~1. Building and structures located within the High-Velocity Hurricane Zone shall comply with the provisions of Sections 1512 through 1525 of the Florida Building Code, Building.~~

~~2. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.~~

~~3. Reserved.~~

~~4. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.~~

~~5. Roof Coating. Application of elastomeric and or maintenance coating systems over existing asphalt shingles shall be in accordance with the shingle manufacturer's approved installation instructions.~~

-

~~711.4 Roof recovering.~~

-

~~Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other approved materials securely fastened in place.~~

-

~~711.5 Reinstallation of materials.~~

-

~~Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Existing vent flashing, metal edgings, drain outlets, collars and metal counter flashings shall not be reinstalled where rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled (high-velocity hurricane zones shall comply with Sections 1512 through 1525 of the Florida Building Code, Building).~~

-

~~711.6 Flashings.~~

-

~~Flashings shall be reconstructed in accordance with roof covering manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation (high-velocity hurricane zones shall comply with Sections 1512 through 1525 of the Florida Building Code, Building).~~

~~711.7~~

-

~~When a roof covering on an existing site-built single- family residential structure is removed and replaced, the following procedures shall be permitted to be performed by the roofing contractor:~~

~~(a) Roof-decking attachment shall be as required by Section 711.7.1.~~

~~(b) A secondary water barrier shall be provided as required by Section 711.7.2.~~

-

~~Exception: Single family residential structures permitted subject to the Florida Building Code are not required to comply with this section.~~

-

~~711.7.1 Roof-decking attachment for site-built single- family residential structures.~~

-

~~For site-built single-family residential structures the fastening shall be in accordance with Section 711.7.1.1 or 711.7.1.2 as appropriate for the existing construction. 8d nails shall be a minimum of 0.113 inch (2.9 mm) in diameter and shall be a minimum of 21/4 inch (57 mm) long to qualify for the provisions of this section for existing nails regardless of head shape or head diameter.~~

-

~~711.7.1.1~~

-

~~Roof decking consisting of sawn lumber or wood planks up to 12" wide and secured with at least two nails (minimum size 8d) to each roof framing member it crosses shall be deemed to be sufficiently connected. Sawn lumber or wood plank decking secured with smaller fasteners than 8d nails or with fewer than two nails (minimum size 8d) to each framing member it crosses shall be deemed sufficiently connected if fasteners are added such that two clipped head, round head, or ring shank nails (minimum size 8d) are in place on each framing member it crosses.~~

-

~~711.7.1.2~~

-

~~For roof decking consisting of wood structural panels, fasteners and spacing required in columns 3 and 4 of Table 711.7.1.2 are deemed to comply with the requirements of Section 706.3, Florida Building Code, Existing Building for the indicated design wind speed range. Wood structural panel connections retrofitted with a two-part urethane based closed cell adhesive sprayed onto the joint between the sheathing and framing members are deemed to comply with the requirements of Section 706.3, Florida Building Code, Existing Building, provided testing using the manufacturer's recommended application on panels connected with 6d smooth shank nails at no more than a 6-inch edge and 12-inch field spacing demonstrate an uplift resistance of a minimum of 200 psf.~~

-

~~Supplemental fasteners as required by Table 711.7.1.2 shall be 8d ring shank nails with round heads and the following minimum dimensions:~~

~~1. 0.113-inch nominal shank diameter.~~

~~2. Ring diameter a minimum of 0.012-inch greater than shank diameter.~~

~~3. 16 to 20 rings per inch.~~

~~4. A minimum 0.280-inch full round head diameter.~~

~~5. Ring shank to extend a minimum of 11/2 inches from the tip of the nail.~~

~~6. Minimum 2-1/4 inch nail length.~~

-

~~TABLE 711.7.1.2 SUPPLEMENT FASTENERS AT PANEL EDGES AND INTERMEDIATE FRAMING~~

~~EXISTING FASTENERS~~	~~EXISTING SPACING~~	~~V_{asd} 110 MPH OR LESS SUPPLEMENTAL FASTENER SPACING SHALL BE NO GREATER THAN~~	~~V_{asd} GREATER THAN 110 MPH SUPPLEMENTAL FASTENER SPACING SHALL BE NO GREATER THAN~~
~~Staples or 6d~~	~~Any~~	~~6" o.c.[b]~~	~~6" o.c.[b]~~
~~8d clipped head, round head, smooth or ring shank~~	~~6? o.c. or less~~	~~None necessary~~	~~None necessary~~
~~8d clipped head, round head, smooth or ring shank~~	~~Greater than 6? o.c.~~	~~6" o.c.[a]~~	~~6" o.c.[a]~~

-

~~For SI: 1 inch = 25.4 mm.~~

~~a. Maximum spacing determined based on existing fasteners and supplemental fasteners.~~

~~b. Maximum spacing determined based on supplemental fasteners only.~~

~~c. Vasd shall be determined in accordance with Section 1609.3.1 of the Florida Building Code, Building or Section R301.2.1.3 of the Florida Building Code, Residential.~~

-

~~711.7.2 Roof secondary water barrier for site-built single family residential structures.~~

-

~~A secondary water barrier shall be installed using one of the following methods when roof covering is removed and replaced:~~

-

~~1. In either HVHZ or Non-HVHZ regions:~~

~~a) All joints in structural panel roof sheathing or decking shall be covered with a minimum 4 inch (102 mm) 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.~~

~~b) 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. (No additional underlayment shall be required over the top of this sheet.) The synthetic underlayment shall be fastened in accordance with the manufacturer's recommendations.~~

-

~~2. Outside the High Velocity Hurricane Zone:~~

~~a) 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. No additional underlayment shall be required on top of this sheet for new installations.~~

~~b) An underlayment system approved for the particular roof covering shall be applied with the following modification:~~

~~(1) 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 inch (25 mm) 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 recommendations.~~

~~(2) For roof 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 inch (483 mm) and fastened as~~

~~described above. An approved synthetic underlayment shall be installed in accordance with the manufacturer's installation instruction. (No additional underlayment shall be required over the top of this sheet.)~~

-

~~Exceptions:~~

~~1. Roof slopes < 2:12 having a continuous roof system shall be deemed to comply with Section 711.7.2 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 711.7.2 for Secondary Water Barriers.~~

-

~~711.8~~

-

~~When a roof covering on an existing site-built single-family residential structure is removed and replaced on a building that is located in the wind-borne debris region as defined in the Florida Building Code, Building and that has an insured value of $300,000 or more or, if the building is uninsured or for which documentation of insured value is not presented, has a just valuation for the structure for purposes of ad valorem taxation of $300,000 or more:~~

~~(a) Roof to wall connections shall be improved as required by Section 711.8.1~~

~~(b) Mandated retrofits of the roof-to-wall connection shall not be required beyond a 15 percent increase in the cost of re-roofing.~~

-

~~Exception: Single-family residential structures permitted subject to the Florida Building Code are not required to comply with this section.~~

~~711.8.1 Roof-to-wall connections for site-built single-family residential structures.~~

-

~~Where required by Section 711.8, the intersection of roof framing with the wall below shall provide sufficient resistance to meet the uplift loads specified in Table 711.8.1 either because of existing conditions or through retrofit measures. As an alternative to an engineered design, the prescriptive retrofit solutions provided in Sections 711.8.1.1 through 711.8.1.7 shall be accepted as meeting the mandated roof-to-wall retrofit requirements.~~

-

~~Exceptions:~~

~~1. Where it can be demonstrated (by code adoption date documentation and permit issuance date) that roof-to-wall connections and/or roof-to-foundation continuous load path requirements were required at the time of original construction.~~

~~2. Roof-to-wall connections shall not be required unless evaluation and installation of connections at gable ends or all corners can be completed for 15 percent of the cost of roof replacement.~~

-

~~TABLE 711.8.1 REQUIRED UPLIFT CAPACITIES FOR ROOF-TO-WALL CONNECTIONSa, b (POUNDS PER LINEAR FOOT)~~

-

~~ULTIMATE DESIGN WIND SPEED, V_{ult}~~	~~ROOF SPAN (feet)~~							~~OVERHANGS~~	
	~~12~~	~~20~~	~~24~~	~~28~~	~~32~~	~~36~~	~~40~~		
~~Within 6 feet of building corner~~	~~85~~	~~69.85~~	~~116.42~~	~~139.70~~	~~162.99~~	~~186.27~~	~~209.55~~	~~232.84~~	~~27~~
	~~90~~	~~82.67~~	~~137.78~~	~~165.34~~	~~192.90~~	~~220.45~~	~~248.01~~	~~275.57~~	~~30.3~~
	~~100~~	~~110.51~~	~~184.18~~	~~221.01~~	~~257.85~~	~~294.68~~	~~331.52~~	~~368.36~~	~~37.4~~
	~~110~~	~~141.27~~	~~235.45~~	~~282.55~~	~~329.64~~	~~376.73~~	~~423.82~~	~~470.91~~	~~45.3~~
	~~120~~	~~174.97~~	~~291.62~~	~~349.94~~	~~408.26~~	~~466.59~~	~~524.91~~	~~583.23~~	~~53.9~~
	~~130~~	~~211.60~~	~~352.66~~	~~423.19~~	~~493.72~~	~~564.26~~	~~634.79~~	~~705.32~~	~~63.2~~
	~~140~~	~~251.15~~	~~418.59~~	~~502.31~~	~~586.02~~	~~669.74~~	~~753.46~~	~~837.18~~	~~73.3~~
	~~150~~	~~293.64~~	~~489.40~~	~~587.28~~	~~685.16~~	~~783.04~~	~~880.92~~	~~978.80~~	~~84.2~~
	~~170~~	~~387.40~~	~~645.67~~	~~774.81~~	~~903.94~~	~~1033.08~~	~~1162.21~~	~~1291.35~~	~~108~~
~~Greater than 6 feet from building corner~~	~~85~~	~~39.10~~	~~65.17~~	~~78.20~~	~~91.24~~	~~104.27~~	~~117.30~~	~~130.34~~	~~27~~
	~~90~~	~~48.20~~	~~80.33~~	~~96.39~~	~~112.46~~	~~128.52~~	~~144.59~~	~~160.66~~	~~30.3~~
	~~100~~	~~67.95~~	~~113.24~~	~~135.89~~	~~158.54~~	~~181.19~~	~~203.84~~	~~226.49~~	~~37.4~~
	~~110~~	~~89.78~~	~~149.63~~	~~179.55~~	~~209.48~~	~~239.40~~	~~269.33~~	~~299.25~~	~~45.3~~
	~~120~~	~~113.68~~	~~189.47~~	~~227.37~~	~~265.26~~	~~303.16~~	~~341.05~~	~~378.94~~	~~53.9~~
	~~130~~	~~139.67~~	~~232.78~~	~~279.34~~	~~325.90~~	~~372.45~~	~~419.01~~	~~465.57~~	~~63.2~~
	~~140~~	~~167.74~~	~~279.56~~	~~335.47~~	~~391.38~~	~~447.29~~	~~503.21~~	~~559.12~~	~~73.3~~
	~~150~~	~~197.88~~	~~329.80~~	~~395.76~~	~~461.72~~	~~527.68~~	~~593.64~~	~~659.60~~	~~84.2~~
	~~170~~	~~264.41~~	~~440.68~~	~~528.81~~	~~616.95~~	~~705.08~~	~~793.22~~	~~881.35~~	~~108~~

-

-

~~For SI: 1 foot = 304.8 mm; 1 pound per linear foot = 1.488 kg/m; 1 mile per hour = 0.305 m/s.~~

~~a. The uplift loads are pounds per lineal foot of building length. For roof uplift connections multiply by 1.33 for framing spaced 16 inches on center and multiply by 2 for framing spaced 24 inches on center.~~

~~b. The uplift loads do not account for the effects of overhangs. The magnitude of the above loads shall be increased by adding the overhang loads found in the table. The overhang loads are also based on framing spaced 12 inches on center. The overhang loads given shall be multiplied by the overhang projection and added to the roof uplift value in the table.~~

~~c. For Ultimate design wind speeds, Vult, greater than 170 mph, wind uplift forces shall be determined in accordance with Florida Building Code, Residential, Section R802.3 or ASCE 7.~~

~~d. Ultimate Design Wind Speeds determined from Figure 1609A in the Florida Building Code,Building or Figure R301.2(4) in the Florida Building Code, Residential.~~

-

~~711.8.1.1 Access for Retrofitting Roof to Wall Connections.~~

-

~~These provisions are not intended to limit the means for gaining access to the structural elements of the roof and wall for the purposes of retrofitting the connection. The retrofit of roof to wall connections can be made by access through the area under the eave, from above through the roof, or from the interior of the house. Methods for above access include removal of roof panels or sections thereof or removal of portions of roof paneling at selected locations large enough for access, viewing, and installing the retrofit connectors and fasteners.~~

-

~~Where panels or sections are removed, the removed portions shall not be reused. New paneling shall be used and fastened as in new construction.~~

-

~~Holes shall be deemed adequately repaired if a patch of paneling is installed with no gap greater than 1/2 inch (13 mm) between the patch and the existing sheathing and if the patch is supported using one of the following methods.~~

~~a) Solid 11/2 inch lumber shall fully support the patch and shall be secured to the existing sheathing with #8 by 11/4 inch screws spaced a minimum of 3 inches (76 mm) around the perimeter with screws a minimum of 3/4 inch from the near edge of the hole. The patch shall be secured to the lumber with #8 × 1-1/4 inch screws spaced on a grid no greater than 6 inches by 6 inches (152 mm × 152 mm) with no fewer than 2 screws.~~

~~b) Holes that extend horizontally from roof framing member to adjacent roofing framing member that are less than or equal to 7 inches (178 mm) wide along the slope of the roof shall be supported by minimum of 2 × 4 lumber whose face is attached to each roofing framing members using a minimum of 2 each 3-inch (76 mm) long fasteners (#8 screws or 10d common nails) connecting the two. The patch shall have attached to its bottom, running horizontally, a minimum 2 × 4 either flat wise or on edge secured with #8 × 11/4 inch screws a maximum of 4 inches (102 mm) on center and no more distant from the end of the added lumber than 3 inches (76 mm). The patch shall be secured with two #8 × 1 11/4 inch screws to each support member.~~

-

~~711.8.1.2 Partially inaccessible straps.~~

-

~~Where part of a strap is inaccessible, if the portion of the strap that is observed is fastened in compliance with these requirements, the inaccessible portion of the strap shall be presumed to comply with these requirements.~~

-

~~711.8.1.3 Prescriptive method for gable roofs on a wood frame wall.~~

-

~~The anchorage of each of the exposed rafters or truss within 6 feet (1829 mm) of the corner along the exterior wall on each side of each gable end shall be inspected. Wherever a strap is missing or an existing strap has fewer than four fasteners on each end, approved straps, ties or right angle brackets with a minimum uplift capacity of 500 lbs (740 kg) shall be installed that connect each rafter or truss to the top plate below. Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. Wherever access makes it possible (without damage of the wall or soffit finishes), both top plate members shall be connected to the stud below using a stud to plate connector with a minimum uplift capacity of 500 lbs (740 kg). Use of straps that connect directly from the rafter or truss to the wall stud below shall be allowed as an alternate provided the two members align with no more than 11/2 inches (38 mm) offset.~~

-

~~711.8.1.4 Prescriptive method for gable roofs on a masonry wall.~~

-

~~The anchorage of each of the exposed rafters or truss within 6 feet (1829 mm) of the corner along the exterior wall on each side of each gable end shall be inspected. Wherever a strap is missing or an existing strap has fewer than four fasteners on each end, approved straps, ties or right angle gusset brackets with a minimum uplift capacity of 500 lbs (740 kg) shall be installed that connect each rafter or truss to the top plate below or directly to the masonry wall using approved masonry screws of a length and diameter recommended by the manufacturer. In the absence of manufacturer's recommendations, screws shall provide at least a 21/2 inch (64 mm) embedment into the concrete or masonry. When the straps or right angle gusset brackets are attached to a wood sill plate, the sill plate shall be anchored to the concrete masonry wall below. This anchorage shall be accomplished by installing 1/4-inch diameter masonry screws, each with supplementary 1/4-inch washer, having sufficient length to develop a 21/2 inch (64 mm) embedment into the concrete and masonry. These screws shall be installed within 4 inches (102 mm) of the truss or rafter on both sides of each interior rafter or truss and on the accessible wall side of the gable end truss or rafter.~~

-

~~711.8.1.5 Prescriptive method for hip roofs on a wood frame wall.~~

-

~~Unless it is possible to verify through non-destructive inspection or from plans prepared by a design professional that the roof structure is anchored at least as well as outlined below, access shall be provided at a minimum to the hip rafter (commonly known as a "king jack"), to the hip girder and at each corner of the hip roof. The hip rafter (commonly known as a "king jack"), the hip girder and the rafters/trusses adjacent to the hip girder that are not anchored with a strap having at least four fasteners on each end, shall be connected to the top plate below using a strap or a right angle gusset bracket having a minimum uplift capacity of 500 lbs (740 kg). Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. Wherever access makes it possible (without damage of the wall or soffit finishes), both top plate members shall be connected to the stud below using a stud to plate connector with a minimum uplift capacity of 500 lbs (740 kg). Use of straps that connect directly from the hip rafter, hip girder or adjacent rafters/trusses to the wall stud below shall be allowed as an alternate provided the two members align with no more than 11/2 inch (38 mm) offset.~~

-

~~711.8.1.6 Prescriptive method for hip roofs on a masonry wall.~~

-

~~Unless it is possible to verify through non-destructive inspection or from plans prepared by a design professional that the roof structure is anchored at least as well as outlined below, access shall be provided at a minimum to the hip rafter (commonly known as a "king jack"), to the hip girder and at each corner of the hip roof. The hip rafter (commonly known as a "king jack"), the hip girder and the rafters/trusses adjacent to the hip girder that are not anchored with a strap having at least four fasteners on each end, shall be connected to the concrete masonry wall below using approved straps or right angle gusset brackets with a minimum uplift capacity of 500 lbs (740 kg). Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. The straps or right angle gusset brackets shall be installed such that they connect each rafter or truss to the top plate below or directly to the masonry wall using approved masonry screws of a length and diameter recommended by the manufacturer. In the absence of manufacturer's recommendations, screws shall provide at least 21/2 inches (64 mm) embedment into the concrete or masonry. When the straps or right angle gusset brackets are attached to a wood sill plate, the sill plate shall be anchored to the concrete masonry wall below. This anchorage shall be accomplished by installing 1/4-inch (6 mm) diameter masonry screws, each with supplementary 1/4-inch (6 mm) washer, with sufficient length to develop a 21/2 inch (64 mm) embedment into the concrete and masonry. These screws shall be installed within 4 inches (102 mm) of the truss or rafter on both sides of each interior rafter or truss and on the accessible wall side of the gable end truss or rafter.~~

-

~~711.8.1.7 Priorities for mandated roof-to-wall retrofit expenditures.~~

-

~~Priority shall be given to connecting the exterior corners of roofs to walls where the spans of the roofing members are greatest. For houses with both hip and gable roof ends, the priority shall be to retrofit the gable end roof-to-wall connections unless the width of the hip end is more than 1.5 times greater than the width of the gable end. When considering priorities for houses with both hip and gable roof ends, and the fifteen percent of the cost of roof replacement is sufficient to complete all of the prioritized elements pursuant to this section, but is not sufficient to complete all of the non-prioritized elements, then no portion of complete retrofit of the non-prioritized element is required.~~

~~611.8.1.6 Prescriptive method for hip roofs on a masonry wall.~~

-

~~Unless it is possible to verify through non-destructive inspection or from plans prepared by a design professional that the roof structure is anchored at least as well as outlined below, access shall be provided at a minimum to the hip rafter (commonly known as a "king jack"), to the hip girder and at each corner of the hip roof. The hip rafter (commonly known as a "king jack"), the hip girder and the rafters/trusses adjacent to the hip girder that are not anchored with a strap having at least four fasteners on each end, shall be connected to the concrete masonry wall below using approved straps or right angle gusset brackets with a minimum uplift capacity of 500 lbs (740 kg). Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. The straps or right angle gusset brackets shall be installed such that they connect each rafter or truss to the top plate below or directly to the masonry wall using approved masonry screws of a length and diameter recommended by the manufacturer. In the absence of manufacturer's recommendations, screws shall provide at least 21/2 inches (64 mm) embedment into the concrete or masonry. When the straps or right angle gusset brackets are attached to a wood sill plate, the sill plate shall be anchored to the concrete masonry wall below. This anchorage shall be accomplished by installing 1/4-inch (6 mm) diameter masonry screws, each with supplementary 1/4-inch (6 mm) washer, with sufficient length to develop a 21/2 inch (64 mm) embedment into the concrete and masonry. These screws shall be installed within 4 inches (102 mm) of the truss or rafter on both sides of each interior rafter or truss and on the accessible wall side of the gable end truss or rafter.~~

-

~~611.8.1.7 Priorities for mandated roof-to-wall retrofit expenditures.~~

-

~~Priority shall be given to connecting the exterior corners of roofs to walls where the spans of the roofing members are greatest. For houses with both hip and gable roof ends, the priority shall be to retrofit the gable end roof-to-wall connections unless the width of the hip end is more than 1.5 times greater than the width of the gable end. When considering priorities for houses with both hip and gable roof ends, and the fifteen percent of the cost of roof replacement is sufficient to complete all of the prioritized elements pursuant to this section, but is not sufficient to complete all of the non-prioritized elements, then no portion of complete retrofit of the non-prioritized element is required.~~

R5241

Date Submitted	7/17/2012	**Section**	711	**Proponent**	Mark Zehnal
Chapter	7	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.No impact.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.No impact.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5241-G1

Proponent	BOAF CDC	**Submitted**	9/23/2012	**Attachments**	No

Comment:

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

SECTION 711 REROOFING

-

711.1 General.

-

Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15 of the Florida Building Code, Building or Chapter 9 of the Florida Building Code, Residential. Roof repairs to existing roofs and roof coverings shall comply with the provisions of this code.

-

Exception: Reroofing shall not be required to meet the minimum design slope requirement of 1/4:12 in Section 1507 of the Florida Building Code, Building for roofs that provide positive roof drainage (high-velocity hurricane zones shall comply with Sections 1515.2.2.1 and 1515.2.2.2 of the Florida Building Code, Building).

-

711.1.1

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 in any 12 month period unless the entire roofing system or roof section conforms to requirements of this code.

-

711.2 Structural and construction loads.

-

The structural roof components shall be capable of supporting the roof covering system and the material and equipment loads that will be encountered during installation of the roof covering system.

-

711.3 Recovering versus replacement.

-

New roof coverings shall not be installed without first removing all existing layers of roof coverings where any of the following conditions occur:

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.

2. Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.

3. Where the existing roof has two or more applications of any type of roof covering.

4. When blisters exist in any roofing, unless blisters are cut or scraped open and remaining materials secured down before applying additional roofing.

5. Where the existing roof is to be used for attachment for a new roof system and compliance with the securement provisions of Section 1504.1 can not be met.

-

Exceptions:

1. Building and structures located within the High-Velocity Hurricane Zone shall comply with the provisions of Sections 1512 through 1525 of the Florida Building Code, Building.

2. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.

3. Reserved.

4. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.

5. Roof Coating. Application of elastomeric and or maintenance coating systems over existing asphalt shingles shall be in accordance with the shingle manufacturer's approved installation instructions.

-

711.4 Roof recovering.

-

Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other approved materials securely fastened in place.

-

711.5 Reinstallation of materials.

-

Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Existing vent flashing, metal edgings, drain outlets, collars and metal counter flashings shall not be reinstalled where rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled (high-velocity hurricane zones shall comply with Sections 1512 through 1525 of the Florida Building Code, Building).

-

711.6 Flashings.

-

Flashings shall be reconstructed in accordance with roof covering manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation (high-velocity hurricane zones shall comply with Sections 1512 through 1525 of the Florida Building Code, Building).

-

711.7

When a roof covering on an existing site-built single- family residential structure is removed and replaced, the following procedures shall be permitted to be performed by the roofing contractor:

(a) Roof-decking attachment shall be as required by Section 711.7.1.

(b) A secondary water barrier shall be provided as required by Section 711.7.2.

-

Exception: Single family residential structures permitted subject to the Florida Building Code are not required to comply with this section.

-

711.7.1 Roof decking attachment for site-built single- family residential structures.

-

For site-built single-family residential structures the fastening shall be in accordance with Section 711.7.1.1 or 711.7.1.2 as appropriate for the existing construction. 8d nails shall be a minimum of 0.113 inch (2.9 mm) in diameter and shall be a minimum of 21/4 inch (57 mm) long to qualify for the provisions of this section for existing nails regardless of head shape or head diameter.

-

711.7.1.1

-

Roof decking consisting of sawn lumber or wood planks up to 12" wide and secured with at least two nails (minimum size 8d) to each roof framing member it crosses shall be deemed to be sufficiently connected. Sawn lumber or wood plank decking secured with smaller fasteners than 8d nails or with fewer than two nails (minimum size 8d) to each framing member it crosses shall be deemed sufficiently connected if fasteners are added such that two clipped head, round head, or ring shank nails (minimum size 8d) are in place on each framing member it crosses.

-

711.7.1.2

-

For roof decking consisting of wood structural panels, fasteners and spacing required in columns 3 and 4 of Table 711.7.1.2 are deemed to comply with the requirements of Section 706.3, Florida Building Code, Existing Building for the indicated design wind speed range. Wood structural panel connections retrofitted with a two part urethane based closed cell adhesive sprayed onto the joint between the sheathing and framing members are deemed to comply with the requirements of Section 606.3, Florida Building Code, Existing Building, provided testing using the manufacturer's recommended application on panels connected with 6d smooth shank nails at no more than a 6-inch edge and 12-inch field spacing demonstrate an uplift resistance of a minimum of 200 psf.

-

Supplemental fasteners as required by Table 711.7.1.2 shall be 8d ring shank nails with round heads and the following minimum dimensions:

1. 0.113-inch nominal shank diameter.

2. Ring diameter a minimum of 0.012-inch greater than shank diameter.

3. 16 to 20 rings per inch.

4. A minimum 0.280-inch full round head diameter.

5. Ring shank to extend a minimum of 11/2 inches from the tip of the nail.

6. Minimum 2-1/4 inch nail length.

-

TABLE 711.7.1.2 SUPPLEMENT FASTENERS AT PANEL EDGES AND INTERMEDIATE FRAMING

EXISTING FASTENERS	EXISTING SPACING	V_{asd} 110 MPH OR LESS SUPPLEMENTAL FASTENER SPACING SHALL BE NO GREATER THAN	V_{asd} GREATER THAN 110 MPH SUPPLEMENTAL FASTENER SPACING SHALL BE NO GREATER THAN
Staples or 6d	Any	6" o.c.[b]	6" o.c.[b]
8d clipped head, round head, smooth or ring shank	6? o.c. or less	None necessary	None necessary
8d clipped head, round head, smooth or ring shank	Greater than 6? o.c.	6" o.c.[a]	6" o.c.[a]

-

For SI: 1 inch = 25.4 mm.

a. Maximum spacing determined based on existing fasteners and supplemental fasteners.

b. Maximum spacing determined based on supplemental fasteners only.

c. Vasd shall be determined in accordance with Section 1609.3.1 of the Florida Building Code, Building or Section R301.2.1.3 of the Florida Building Code, Residential.

-

711.7.2 Roof secondary water barrier for site-built single family residential structures.

-

A secondary water barrier shall be installed using one of the following methods when roof covering is removed and replaced:

-

1. In either HVHZ or Non-HVHZ regions:

a) All joints in structural panel roof sheathing or decking shall be covered with a minimum 4 inch (102 mm) 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.

b) 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. (No additional underlayment shall be required over the top of this sheet.) The synthetic underlayment shall be fastened in accordance with the manufacturer's recommendations.

-

2. Outside the High Velocity Hurricane Zone:

a) 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. No additional underlayment shall be required on top of this sheet for new installations.

b) An underlayment system approved for the particular roof covering shall be applied with the following modification:

(1) 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 inch (25 mm) 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 recommendations.

(2) For roof 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 inch (483 mm) and fastened as described above. An approved synthetic underlayment shall be installed in accordance with the manufacturer's installation instruction. (No additional underlayment shall be required over the top of this sheet.)

-

Exceptions:

1. Roof slopes < 2:12 having a continuous roof system shall be deemed to comply with Section 711.7.2 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 711.7.2 for Secondary Water Barriers.

-

711.8

-

When a roof covering on an existing site-built-single-family residential structure is removed and replaced on a building that is located in the wind-borne debris region as defined in the Florida Building Code, Building and that has an insured value of $300,000 or more or, if the building is uninsured or for which documentation of insured value is not presented, has a just valuation for the structure for purposes of ad valorem taxation of $300,000 or more:

(a) Roof to wall connections shall be improved as required by Section 711.8.1

(b) Mandated retrofits of the roof-to-wall connection shall not be required beyond a 15 percent increase in the cost of re-roofing.

-

Exception: Single-family residential structures permitted subject to the Florida Building Code are not required to comply with this section.

-

711.8.1 Roof-to-wall connections for site-built single-family residential structures.

-

Where required by Section 711.8, the intersection of roof framing with the wall below shall provide sufficient resistance to meet the uplift loads specified in Table 711.8.1 either because of existing conditions or through retrofit measures. As an alternative to an engineered design, the prescriptive retrofit solutions provided in Sections 711.8.1.1 through 711.8.1.7 shall be accepted as meeting the mandated roof-to-wall retrofit requirements.

-

Exceptions:

1. Where it can be demonstrated (by code adoption date documentation and permit issuance date) that roof-to-wall connections and/or roof-to-foundation continuous load path requirements were required at the time of original construction.

2. Roof-to-wall connections shall not be required unless evaluation and installation of connections at gable ends or all corners can be completed for 15 percent of the cost of roof replacement.

-

TABLE 711.8.1 REQUIRED UPLIFT CAPACITIES FOR ROOF-TO-WALL CONNECTIONSa, b (POUNDS PER LINEAR FOOT)

-

-

-

ULTIMATE DESIGN WIND SPEED, V_{ult}	ROOF SPAN (feet)							OVERHANGS	
	12	20	24	28	32	36	40		
Within 6 feet of building corner	85	-69.85	-116.42	-139.70	-162.99	-186.27	-209.55	-232.84	-27
	90	-82.67	-137.78	-165.34	-192.90	-220.45	-248.01	-275.57	-30.3
	100	-110.51	-184.18	-221.01	-257.85	-294.68	-331.52	-368.36	-37.4
	110	-141.27	-235.45	-282.55	-329.64	-376.73	-423.82	-470.91	-45.3
	120	-174.97	-291.62	-349.94	-408.26	-466.59	-524.91	-583.23	-53.9
	130	-211.60	-352.66	-423.19	-493.72	-564.26	-634.79	-705.32	-63.2
	140	-251.15	-418.59	-502.31	-586.02	-669.74	-753.46	-837.18	-73.3
	150	293.64	489.40	-587.28	685.16	783.04	880.92	978.80	-84.2
	170	-387.40	-645.67	-774.81	-903.94	-1033.08	-1162.21	-1291.35	-108
Greater than 6 feet from building corner	85	-39.10	-65.17	-78.20	-91.24	-104.27	-117.30	-130.34	-27
	90	-48.20	-80.33	-96.39	-112.46	-128.52	-144.59	-160.66	-30.3
	100	-67.95	-113.24	-135.89	-158.54	-181.19	-203.84	-226.49	-37.4
	110	-89.78	-149.63	-179.55	-209.48	-239.40	-269.33	-299.25	-45.3
	120	-113.68	-189.47	-227.37	-265.26	-303.16	-341.05	-378.94	-53.9
	130	-139.67	-232.78	-279.34	-325.90	-372.45	-419.01	-465.57	-63.2
	140	-167.74	-279.56	-335.47	-391.38	-447.29	-503.21	-559.12	-73.3
	150	-197.88	-329.80	-395.76	-461.72	-527.68	-593.64	-659.60	-84.2
	170	-264.41	-440.68	-528.81	-616.95	-705.08	-793.22	-881.35	-108

-

-

For SI: 1 foot = 304.8 mm; 1 pound per linear foot = 1.488 kg/m; 1 mile per hour = 0.305 m/s.

a. The uplift loads are pounds per lineal foot of building length. For roof uplift connections multiply by 1.33 for framing spaced 16 inches on center and multiply by 2 for framing spaced 24 inches on center.

b. The uplift loads do not account for the effects of overhangs. The magnitude of the above loads shall be increased by adding the overhang loads found in the table. The overhang loads are also based on framing spaced 12 inches on center. The overhang loads given shall be multiplied by the overhang projection and added to the roof uplift value in the table.

c. For Ultimate design wind speeds, Vult, greater than 170 mph, wind uplift forces shall be determined in accordance with Florida Building Code, Residential, Section R802.3 or ASCE 7.

d. Ultimate Design Wind Speeds determined from Figure 1609A in the Florida Building Code,Building or Figure R301.2(4) in the Florida Building Code, Residential.

-

711.8.1.1 Access for Retrofitting Roof to Wall Connections.

-

These provisions are not intended to limit the means for gaining access to the structural elements of the roof and wall for the purposes of retrofitting the connection. The retrofit of roof to wall connections can be made by access through the area under the eave, from above through the roof, or from the interior of the house. Methods for above access include removal of roof panels or sections thereof or removal of portions of roof paneling at selected locations large enough for access, viewing, and installing the retrofit connectors and fasteners.

-

Where panels or sections are removed, the removed portions shall not be reused. New paneling shall be used and fastened as in new construction.

-

Holes shall be deemed adequately repaired if a patch of paneling is installed with no gap greater than 1/2 inch (13 mm) between the patch and the existing sheathing and if the patch is supported using one of the following methods.

a) Solid 11/2 inch lumber shall fully support the patch and shall be secured to the existing sheathing with #8 by 11/4 inch screws spaced a minimum of 3 inches (76 mm) around the perimeter with screws a minimum of 3/4 inch from the near edge of the hole. The patch shall be secured to the lumber with #8 × 1-1/4 inch screws spaced on a grid no greater than 6 inches by 6 inches (152 mm × 152 mm) with no fewer than 2 screws.

b) Holes that extend horizontally from roof framing member to adjacent roofing framing member that are less than or equal to 7 inches (178 mm) wide along the slope of the roof shall be supported by minimum of 2 × 4 lumber whose face is attached to each roofing framing members using a minimum of 2 each 3-inch (76 mm) long fasteners (#8 screws or 10d common nails) connecting the two. The patch shall have attached to its bottom, running horizontally, a minimum 2 × 4 either flat wise or on edge secured with #8 × 11/4 inch screws a maximum of 4 inches (102 mm) on center and no more distant from the end of the added lumber than 3 inches (76 mm). The patch shall be secured with two #8 × 1-11/4 inch screws to each support member.

-

711.8.1.2 Partially inaccessible straps.

-

Where part of a strap is inaccessible, if the portion of the strap that is observed is fastened in compliance with these requirements, the inaccessible portion of the strap shall be presumed to comply with these requirements.

-

711.8.1.3 Prescriptive method for gable roofs on a wood frame wall.

-

The anchorage of each of the exposed rafters or truss within 6 feet (1829 mm) of the corner along the exterior wall on each side of each gable end shall be inspected. Wherever a strap is missing or an existing strap has fewer than four fasteners on each end, approved straps, ties or right angle brackets with a minimum uplift capacity of 500 lbs (740 kg) shall be installed that connect each rafter or truss to the top plate below. Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. Wherever access makes it possible (without damage of the wall or soffit finishes), both top plate members shall be connected to the stud below using a stud to plate connector with a minimum uplift capacity of 500 lbs (740 kg). Use of straps that connect directly from the rafter or truss to the wall stud below shall be allowed as an alternate provided the two members align with no more than 11/2 inches (38 mm) offset.

-

711.8.1.4 Prescriptive method for gable roofs on a masonry wall.

-

The anchorage of each of the exposed rafters or truss within 6 feet (1829 mm) of the corner along the exterior wall on each side of each gable end shall be inspected. Wherever a strap is missing or an existing strap has fewer than four fasteners on each end, approved straps, ties or right angle gusset brackets with a minimum uplift capacity of 500 lbs (740 kg) shall be installed that connect each rafter or truss to the top plate below or directly to the masonry wall using approved masonry screws of a length and diameter recommended by the manufacturer. In the absence of manufacturer's recommendations, screws shall provide at least a 21/2 inch (64 mm) embedment into the concrete or masonry. When the straps or right angle gusset brackets are attached to a wood sill plate, the sill plate shall be anchored to the concrete masonry wall below. This anchorage shall be accomplished by installing 1/4-inch diameter masonry screws, each with supplementary 1/4-inch washer, having sufficient length to develop a 21/2 inch (64 mm) embedment into the concrete and masonry. These screws shall be installed within 4 inches (102 mm) of the truss or rafter on both sides of each interior rafter or truss and on the accessible wall side of the gable end truss or rafter.

-

711.8.1.5 Prescriptive method for hip roofs on a wood frame wall.

-

Unless it is possible to verify through non-destructive inspection or from plans prepared by a design professional that the roof structure is anchored at least as well as outlined below, access shall be provided at a minimum to the hip rafter (commonly known as a "king jack"), to the hip girder and at each corner of the hip roof. The hip rafter (commonly known as a "king jack"), the hip girder and the rafters/trusses adjacent to the hip girder that are not anchored with a strap having at least four fasteners on each end, shall be connected to the top plate below using a strap or a right angle gusset bracket having a minimum uplift capacity of 500 lbs (740 kg). Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. Wherever access makes it possible (without damage of the wall or soffit finishes), both top plate members shall be connected to the stud below using a stud to plate connector with a minimum uplift capacity of 500 lbs (740 kg). Use of straps that connect directly from the hip rafter, hip girder or adjacent

rafters/trusses to the wall stud below shall be allowed as an alternate provided the two members align with no more than 11/2 inch (38 mm) offset.

-

711.8.1.6 Prescriptive method for hip roofs on a masonry wall.

-

Unless it is possible to verify through non-destructive inspection or from plans prepared by a design professional that the roof structure is anchored at least as well as outlined below, access shall be provided at a minimum to the hip rafter (commonly known as a "king jack"), to the hip girder and at each corner of the hip roof. The hip rafter (commonly known as a "king jack"), the hip girder and the rafters/trusses adjacent to the hip girder that are not anchored with a strap having at least four fasteners on each end, shall be connected to the concrete masonry wall below using approved straps or right angle gusset brackets with a minimum uplift capacity of 500 lbs (740 kg). Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. The straps or right angle gusset brackets shall be installed such that they connect each rafter or truss to the top plate below or directly to the masonry wall using approved masonry screws of a length and diameter recommended by the manufacturer. In the absence of manufacturer's recommendations, screws shall provide at least 21/2 inches (64 mm) embedment into the concrete or masonry. When the straps or right angle gusset brackets are attached to a wood sill plate, the sill plate shall be anchored to the concrete masonry wall below. This anchorage shall be accomplished by installing 1/4-inch (6 mm) diameter masonry screws, each with supplementary 1/4-inch (6 mm) washer, with sufficient length to develop a 21/2 inch (64 mm) embedment into the concrete and masonry. These screws shall be installed within 4 inches (102 mm) of the truss or rafter on both sides of each interior rafter or truss and on the accessible wall side of the gable end truss or rafter.

-

711.8.1.7 Priorities for mandated roof-to-wall retrofit expenditures.

-

Priority shall be given to connecting the exterior corners of roofs to walls where the spans of the roofing members are greatest. For houses with both hip and gable roof ends, the priority shall be to retrofit the gable end roof-to-wall connections unless the width of the hip end is more than 1.5 times greater than the width of the gable end. When considering priorities for houses with both hip and gable roof ends, and the fifteen percent of the cost of roof replacement is sufficient to complete all of the prioritized elements pursuant to this section, but is not sufficient to complete all of the non-prioritized elements, then no portion of complete retrofit of the non-prioritized element is required.

611.8.1.6 Prescriptive method for hip roofs on a masonry wall.

Unless it is possible to verify through non-destructive inspection or from plans prepared by a design professional that the roof structure is anchored at least as well as outlined below, access shall be provided at a minimum to the hip rafter (commonly known as a "king jack"), to the hip girder and at each corner of the hip roof. The hip rafter (commonly known as a "king jack"), the hip girder and the rafters/trusses adjacent to the hip girder that are not anchored with a strap having at least four fasteners on each end, shall be connected to the concrete masonry wall below using approved straps or right angle gusset brackets with a minimum uplift capacity of 500 lbs (740 kg). Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. The straps or right angle gusset brackets shall be installed such that they connect each rafter or truss to the top plate below or directly to the masonry wall using approved masonry screws of a length and diameter recommended by the manufacturer. In the absence of manufacturer's recommendations, screws shall provide at least 21/2 inches (64 mm) embedment into the concrete or masonry. When the straps or right angle gusset brackets are attached to a wood sill plate, the sill plate shall be anchored to the concrete masonry wall below. This anchorage shall be accomplished by installing 1/4-inch (6 mm) diameter masonry screws, each with supplementary 1/4-inch (6 mm) washer, with sufficient length to develop a 21/2 inch (64 mm) embedment into the concrete and masonry. These screws shall be installed within 4 inches (102 mm) of the truss or rafter on both sides of each interior rafter or truss and on the accessible wall side of the gable end truss or rafter.

611.8.1.7 Priorities for mandated roof-to-wall retrofit expenditures.

Priority shall be given to connecting the exterior corners of roofs to walls where the spans of the roofing members are greatest. For houses with both hip and gable roof ends, the priority shall be to retrofit the gable end roof-to-wall connections unless the width of the hip end is more than 1.5 times greater than the width of the gable end. When considering priorities for houses with both hip and gable roof ends, and the fifteen percent of the cost of roof replacement is sufficient to complete all of the prioritized elements pursuant to this section, but is not sufficient to complete all of the non-prioritized elements, then no portion of complete retrofit of the non-prioritized element is required.

R5631

Date Submitted	7/24/2012	**Section**	R901.1	**Proponent**	Michael Goolsby
Chapter	9	**Affects HVHZ**	Yes	**Attachments**	Yes
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Section formatting

Rationale

The provisions contained in this chapter have unique specifications for application in the HVHZ. The beginning of the chapter needs to refer the reader to Chapter 44 for the applicable HVHZ requirements.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. It provides clarity and direction in the code.

Impact to building and property owners relative to cost of compliance with code

No impact. It provides clarity and direction in the code.

Impact to industry relative to the cost of compliance with code

Cost savings by providing clarity and direction in the code.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

None. The MOD provides direction and clarity for applicable HVHZ requirements.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens the code by providing clarity and direction when working in the HVHZ.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

The modification does not discriminate against materials, products, methods or systems of construction.

Does not degrade the effectiveness of the code

This modification enhances the code by directing users to the proper chapter of the code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5631-G1

Proponent	Jack Glenn	**Submitted**	9/23/2012	**Attachments**	No

Comment:

This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone.

R901.1 Scope. The provisions of this chapter shall govern the design, materials, construction and quality of roof assemblies.

Exception: Buildings and structures located within the High-Velocity Hurricane Zone shall comply with the provisions of Chapter 44.

This proposed modification reinstates guidance to applicable HVHZ sections of the code maintaining consistency with the legislative intent to preserve HVHZ wind provisions.

R5297

Date Submitted	7/18/2012	**Section**	R901	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION R901 GENERAL

R901.1 Scope.
The provisions of this chapter shall govern the design, materials, construction and quality of roof assemblies.

Exception: Buildings and structures located within the High-Velocity Hurricane Zone shall comply with the provisions of Chapter 44.

R5472

Date Submitted	7/21/2012	**Section**	R902.1 Roofing covering materials	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R902.1 Roofing covering materials.

Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B or C roofing shall be installed in areas designated by law as requiring their use or when the edge of the roof is less than 3 feet (914 mm) from a lot line. Classes A, B and C roofing required by this section to be listed shall be tested in accordance with UL 790 or ASTM E 108.

Exceptions:

~~1. Class A roof assemblies include those with coverings of brick, masonry and exposed concrete roof deck.~~

~~2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile, or slate installed on noncombustible decks.~~

~~3. Class A roof assemblies include minimum 16 oz/ft^2 copper sheets installed over combustible decks.~~

Brick, masonry, slate, clay or concrete roof tile; ferrous and copper shingles and shakes; and exposed concrete roof deck are considered to meet Class A roof covering provisions without testing. Metal sheets and shingles are considered to meet Class B roof covering provisions without testing.

R5298

Date Submitted	7/18/2012	**Section**	R902	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R902.1 Roofing covering materials.
Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B or C roofing shall be installed in areas designated by law as requiring their use or when the edge of the roof is less than 3 feet (914 mm) from a lot line. Classes A, B and C roofing required by this section to be listed shall be tested in accordance with UL 790 or ASTM E 108.

Exceptions:

~~1. Class A roof assemblies include those with coverings of brick, masonry and exposed concrete roof deck.~~

~~2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile, or slate installed on noncombustible decks.~~

~~3. Class A roof assemblies include minimum 16 oz/ft^2 copper sheets installed over combustible decks.~~

Brick, masonry, slate, clay or concrete roof tile; ferrous and copper shingles and shakes; and exposed concrete roof deck are considered to meet Class A roof covering provisions without testing. Metal sheets and shingles are considered to meet Class B roof covering provisions without testing.

R902.2 Fire-retardant-treated shingles and shakes.
Fire-retardant-treated wood shakes and shingles shall be treated by impregnation with chemicals by the full-cell vacuum-pressure process, in accordance with AWPA C1. Each bundle shall be marked to identify the manufactured unit and the manufacturer, and shall also be labeled to identify the classification of the material in accordance with the testing required in Section R902.1, the treating company and the quality control agency.

Date Submitted	7/21/2012	**Section**	R903.2.1 Locations.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R903.2.1 Locations.

Flashings shall be installed at wall and roof intersections, wherever there is a change in roof slope or direction and around roof openings~~. A flashing shall be installed to divert the water away from where the eave of a sloped roof intersects a vertical sidewall.~~ Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than ~~0.019 inch (0.5 mm) (No. 26 galvanized sheet)~~ provided in Table R903.2.1.

Exception: Flashing is not required at hip and ridge junctions.

TABLE R903.2.1 METAL FLASHING MATERIAL

MATERIAL	GAGE MINIMUM THICKNESS (INCHES)	GAGE	WEIGHT (lbs per sq ft)
Copper	0.024	1 (16 oz)	
Aluminum	0.024		
Stainless steel	28		
Galvanized steel	0.0179	26 (zinc coated G90)	26 (zinc coated G90)
Aluminum zinc coated steel	0.0179	26 (AZ50 alum zinc)	26 (AZ50 alum zinc)
Zinc alloy	0.027		
Lead	2.5 (40 oz)		
Painted terne	1.25 (20 oz)		

R5474

Date Submitted	7/21/2012	**Section**	R903.2.2 Crickets and saddles.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5474-G1

Proponent Roger LeBrun **Submitted** 9/20/2012 **Attachments** No

Comment:

This modification is not justified as a Florida-specific need. Also, there has been no evidence presented denying the proven effectiveness of flashing saddles designed and provided by the skylight manufacturer as a matched set, and no recognition of skylights that carry warranties against leakage.

The proposal should be disapproved. Also affects R5260 and R5347.

R903.2.2 Crickets and saddles.
A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches (762 mm) wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.

~~**Exception:** Unit skylights installed in accordance with Section R308.6 and flashed in accordance with the manufacturer's instructions shall be permitted to be installed without a cricket or saddle.~~

Date Submitted	7/21/2012	**Section**	R903.2.3 Membrane flashings.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R903.2.3 Membrane flashings.

All membrane flashing shall be installed according to the roof assembly manufacturer's published literature.

Date Submitted	7/21/2012	**Section**	R903.4 Roof drainage.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R903.4 Roof drainage.

Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Where required for roof drainage, scuppers shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the roof slope and contributing roof area.

Date Submitted	7/21/2012	**Section**	R903.4.1	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R903.4.1 ~~Secondary (emergency overflow) drains or scuppers.~~ Overflow drains andscuppers.
~~Where roof drains are required, secondary emergency overflow roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. Overflow drains having the same size as the roof drains shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening height of 4 inches (102 mm) shall be installed in the adjacent parapet walls with the inlet flow located 2 inches (51 mm) above the low point of the roof served. The installation and sizing of overflow drains, leaders and conductors shall comply with Sections 1106 and 1108 as applicable of the International Plumbing Code.~~ When other means of drainage of overflow water is not provided, overflow scuppers shall be placed in walls or parapets not less than 2 inches (51 mm) nor more than 4 inches (102 mm) above the finished roof covering and shall be located as close as practical to required vertical leaders or downspouts or wall and parapet scuppers. An overflow scupper shall be sized in accordance with the Florida Building Code, Plumbing.

Overflow drains shall discharge to an approved location and shall not be connected to roof drain lines.

Date Submitted	7/21/2012	**Section**	R903.4.2 One and two family dwe	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R903.4.2 One and two family dwellings, and private garages.

When gutters and leaders are placed on the outside of buildings, the gutters and leaders shall be constructed of metal or approved plastic for outdoor exposure with lapped, soldered or caulked joints and shall be securely fastened to the building with a corrosion resistant fastening device of similar or compatible material to the gutters and downspouts.

R5299

Date Submitted	7/18/2012	**Section**	R903	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION R903 WEATHER PROTECTION

R903.1 General.
Roof decks shall be covered with approved roof coverings secured to the building or structure in accordance with the provisions of this chapter. Roof assemblies shall be designed and installed in accordance with this code and the approved manufacturer's installation instructions such that the roof assembly shall serve to protect the building or structure.

R903.2 Flashing.
Flashings shall be installed in a manner that prevents moisture from entering the wall and roof through joints in copings, through moisture permeable materials and at intersections with parapet walls and other penetrations through the roof plane.

R903.2.1 Locations.
Flashings shall be installed at wall and roof intersections, wherever there is a change in roof slope or direction and around roof openings~~. A flashing shall be installed to divert the water away from where the eave of a sloped roof intersects a vertical sidewall.~~ Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than ~~0.019 inch (0.5 mm) (No. 26 galvanized sheet)~~ provided in Table R903.2.1.

Exception: Flashing is not required at hip and ridge junctions.

TABLE R903.2.1 METAL FLASHING MATERIAL

MATERIAL	GAGE MINIMUM THICKNESS (INCHES)	GAGE	WEIGHT (lbs per sq ft)
Copper	0.024	1 (16 oz)	
Aluminum	0.024		
Stainless steel	28		
Galvanized steel	0.0179	26 (zinc coated G90)	26 (zinc coated G90)
Aluminum zinc coated steel	0.0179	26 (AZ50 alum zinc)	26 (AZ50 alum zinc)
Zinc alloy	0.027		
Lead	2.5 (40 oz)		
Painted terne	1.25 (20 oz)		

R903.2.2 Crickets and saddles.
A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches (762 mm) wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.

~~**Exception: Unit skylights installed in accordance with Section R308.6 and flashed in accordance with the manufacturer's instructions shall be permitted to be installed without a cricket or saddle.**~~

R903.2.3 Membrane flashings.
All membrane flashing shall be installed according to the roof assembly manufacturer's published literature.

R903.3 Coping.
Parapet walls shall be properly coped with noncombustible, weatherproof materials of a width no less than the thickness of the parapet wall.

R903.4 Roof drainage.
Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Where required for roof drainage, scuppers shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the roof slope and contributing roof area.

R903.4.1 ~~Secondary (emergency overflow) drains or scuppers.~~ Overflow drains and scuppers.
~~Where roof drains are required, secondary emergency overflow roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. Overflow drains having the same size as the roof drains shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening height of 4 inches (102 mm) shall be installed in the adjacent parapet walls with the inlet flow located 2 inches (51 mm) above the low point of the roof served. The installation and sizing of overflow drains, leaders and conductors shall comply with Sections 1106 and 1108 as applicable of the International Plumbing Code.~~ When other means of drainage of overflow water is not provided, overflow scuppers shall be placed in walls or parapets not less than 2 inches (51 mm) nor more than 4 inches (102 mm) above the finished roof covering and shall be located as close as practical to required vertical leaders or downspouts or wall and parapet scuppers. An overflow scupper shall be sized in accordance with the Florida Building Code, Plumbing.

Overflow drains shall discharge to an approved location and shall not be connected to roof drain lines.

R903.4.2 One and two family dwellings, and private garages.
When gutters and leaders are placed on the outside of buildings, the gutters and leaders shall be constructed of metal or approved plastic for outdoor exposure with lapped, soldered or caulked joints and shall be securely fastened to the building with a corrosion resistant fastening device of similar or compatible material to the gutters and downspouts.

R5482

Date Submitted	7/21/2012	**Section**	R904.4 Product identification	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R904.4 ~~Product identification~~ Fasteners.

~~Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels when required. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.~~

R5483

Date Submitted	7/21/2012	**Section**	R904.4 Product identification	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~R904.4~~ R904.5 Product identification.
Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels when required. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.

Date Submitted	7/21/2012	**Section**	R904.4.1 Nails.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R904.4.1 Nails.

Nails shall be corrosion resistant nails conforming to ASTM F 1667. The corrosion resistance shall meet ASTM A 641, Class I or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metal and alloys or other suitable corrosion-resistant material.

R5480

Date Submitted	7/21/2012	**Section**	R904.4.2 Screws.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R904.4.2 Screws.

-

Wood screws shall conform to ANSI/ASME B 18.6.1. Screws shall be corrosion resistant by coating, galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material. The corrosion resistance shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to ASTM A 641, Class 1;

2. Corrosion resistance in accordance with TAS 114, Appendix E;

3. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with ASTM B 117.

R5481

Date Submitted	7/21/2012	**Section**	R904.4.3 Clips.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R904.4.3 Clips.

-

Clips shall be corrosion resistant clips. The corrosion resistance shall meet 0.90 ounce per square foot (0.458 kg/m^2) measured according ASTM A 90/A 90M, TAS 114 Appendix E or an equal corrosion resistance coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metals and alloys or other suitable corrosion resistant material. Stainless steel clips shall conform to ASTM A167, Type 304.

R5300

Date Submitted	7/18/2012	**Section**	R904	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION R904 MATERIALS

R904.1 Scope.
The requirements set forth in this section shall apply to the application of roof covering materials specified herein. Roof assemblies shall be applied in accordance with this chapter and the manufacturer's installation instructions. Installation of roof assemblies shall comply with the applicable provisions of Section R905.

R904.2 Compatibility of materials.
Roof assemblies shall be of materials that are compatible with each other and with the building or structure to which the materials are applied.

R904.3 Material specifications and physical characteristics.
Roof covering materials shall conform to the applicable standards listed in this chapter. In the absence of applicable standards or where materials are of questionable suitability, testing by an approved testing agency shall be required by the building official to determine the character, quality and limitations of application of the materials.

R904.4 ~~Product identification~~ Fasteners.

~~Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels when required. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.~~

R904.4.1 Nails.
Nails shall be corrosion resistant nails conforming to ASTM F 1667. The corrosion resistance shall meet ASTM A 641, Class I or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metal and alloys or other suitable corrosion-resistant material. Metal or plastic cap nails shall have a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal, Metal tin-tabs shall be not less than $1^5/_8$ inches (41 mm) and not more than 2 inches (51 mm) in diameter and of not less than 32 gage (0.010 inch) sheet metal in compliance with the corrosion resistance requirements.

R904.4.2 Screws.
Wood screws shall conform to ANSI/ASME B 18.6.1. Screws shall be corrosion resistant by coating, galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material. The corrosion resistance shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to ASTM A 641, Class 1;

2. Corrosion resistance in accordance with TAS 114, Appendix E;

3. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with ASTM B 117.

R904.4.3 Clips.
Clips shall be corrosion resistant clips. The corrosion resistance shall meet 0.90 ounce per square foot (0.458 kg/m^2) measured according ASTM A 90/A 90M, TAS 114 Appendix E or an equal corrosion resistance coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metals and alloys or other suitable corrosion resistant material. Stainless steel clips shall conform to ASTM A167, Type 304.

~~R904.4~~ R904.5 Product identification.
Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels when required. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.

R5306

Date Submitted	7/18/2012	**Section**	R905.10 Metal roof panels.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.10 Metal roof panels.
The installation of metal roof panels shall comply with the provisions of this section.

R905.10.1 Deck requirements.
Metal roof panel roof coverings shall be applied to solid or spaced sheathing, except where the roof covering is specifically designed to be applied to spaced supports.

R905.10.2 Slope.
Minimum slopes for metal roof panels shall comply with the following:

1. The minimum slope for lapped, nonsoldered-seam metal roofs without applied lap sealant shall be three units vertical in 12 units horizontal (25-percent slope).

2. The minimum slope for lapped, nonsoldered-seam metal roofs with applied lap sealant shall be one-half vertical unit in 12 units horizontal (4-percent slope). Lap sealants shall be applied in accordance with the approved manufacturer's installation instructions.

3. The minimum slope for standing-seam roof systems shall be one-quarter unit vertical in 12 units horizontal (2-percent slope).

R905.10.2.1 Underlayment
Underlayment shall be installed as per manufacturer's installation guidelines

R905.10.3 Material standards.
Metal-sheet roof covering systems that incorporate supporting structural members shall be designed in accordance with the ~~International Building Code~~ Florida Building Code, Building. Metal-sheet roof coverings installed over structural decking shall comply with Table R905.~~10.3(1)~~ 4.4. The materials used for metal-sheet roof coverings shall be naturally corrosion resistant or provided with corrosion resistance in accordance with the standards and minimum thicknesses shown in Table R905.~~10.3(2)~~ 4.4.

TABLE R905.10.3(1) METAL ROOF COVERING STANDARDS

~~ROOF COVERING TYPE~~	~~STANDARD APPLICATION RATE/THICKNESS~~
~~Galvanized steel~~	~~ASTM A 653 G90 Zinc coated~~
~~Stainless steel~~	~~ASTM A 240, 300 Series alloys~~
~~Steel~~	~~ASTM A 924~~
~~Lead-coated copper~~	~~ASTM B 101~~
~~Cold-rolled copper~~	~~ASTM B 370 minimum 16 oz/sq ft and 12 oz/sq ft high-yield copper for metal-sheet roof covering systems; 12 oz/sq ft for preformed metal shingle systems.~~
~~Hard lead~~	~~2 lb/sq ft~~
~~Soft lead~~	~~3 lb/sq ft~~
~~Aluminum~~	~~ASTM B 209, 0.024 minimum thickness for roll-formed panels and 0.019-inch minimum thickness for pressformed shingles.~~

~~Terne (tin) and terne-coated stainless~~	~~Terne coating of 40 lb per double base box, field painted where applicable in accordance with manufacturer's installation instructions.~~
~~Zinc~~	~~0.027 inch minimum thickness: 99.995% electrolytic high-grade zinc with alloy additives of copper (0.08—0.20%), titanium (0.07%—0.12%) and aluminum (0.015%).~~

~~For SI: 1 ounce per square foot = 0.305 kg/m^2, 1 pound per square foot = 4.214 kg/m^2, 1 inch = 25.4 mm, 1 pound = 0.454 kg.~~ **Reserved**.

TABLE R905.10.3(2) MINIMUM CORROSION RESISTANCE

~~55% aluminum-zinc alloy coated steel~~	~~ASTM A 792 AZ 50~~
~~5% aluminum alloy-coated steel~~	~~ASTM A 875 GF60~~
~~Aluminum-coated steel~~	~~ASTM A 463 T2 65~~
~~Galvanized steel~~	~~ASTM A 653 G 90~~
~~Prepainted steel~~	~~ASTM A 755[a]~~

~~a. Paint systems in accordance with ASTM A 755 shall be applied over steel products with corrosion-resistant coatings complying with ASTM A 792, ASTM A 875, ASTM A 463, or ASTM A 653.~~ **Reserved**.

R905.10.4 Attachment.
Metal roof panels shall be secured to the supports in accordance with this chapter and the manufacturer's installation instructions. Metal roofing fastened directly to steel framing shall be attached by approved fasteners. ~~In the absence of manufacturer's installation instructions, t~~ The following fasteners shall be used:

1. Galvanized fasteners shall be used for galvanized roofs.

2. Hard ~~C~~ copper ~~,brass, bronze,~~ or copper alloy or 300 series stainless steel fasteners shall be used for copper roofs.

3. Stainless steel fasteners are acceptable for all types of metal roofs.

4. Aluminum-zinc coated fasteners are acceptable for aluminum-zinc coated roofs.

R905.10.5 ~~Underlayment~~ Application.
~~Underlayment shall be installed in accordance with the manufacturer's installation instructions~~ Metal roof panels shall be installed in accordance with this chapter and the manufacturer's installation instructions. The installation's instruction shall state the allowable uplift resistance for the attachment system. The installation of metal roof panels shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

R905.10.5.1 Underlayment and high winds.
~~**Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.**~~

~~**Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.**~~

~~**Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.**~~
Reserved. -

R5541

Date Submitted	7/21/2012	**Section**	R905.10.2.1 Underlayment	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.10.2.1 Underlayment

Underlayment shall be installed as per manufacturer's installation guidelines.

Date Submitted	7/21/2012	**Section**	R905.10.3 Material standards.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.10.3 Material standards.
Metal-sheet roof covering systems that incorporate supporting structural members shall be designed in accordance with the ~~International Building Code~~ Florida Building Code, Building. Metal-sheet roof coverings installed over structural decking shall comply with Table R905.~~10.3(1)~~ 4.4. The materials used for metal-sheet roof coverings shall be naturally corrosion resistant or provided with corrosion resistance in accordance with the standards and minimum thicknesses shown in Table R905.~~10.3(2)~~ 4.4.

TABLE R905.10.3(1) METAL ROOF COVERING STANDARDS

~~ROOF COVERING TYPE~~	~~STANDARD APPLICATION RATE/THICKNESS~~
~~Galvanized steel~~	~~ASTM A 653 G90 Zinc-coated~~
~~Stainless steel~~	~~ASTM A 240, 300 Series alloys~~
~~Steel~~	~~ASTM A 924~~
~~Lead-coated copper~~	~~ASTM B 101~~
~~Cold-rolled copper~~	~~ASTM B 370 minimum 16 oz/sq ft and 12 oz/sq ft high-yield copper for metal-sheet roof-covering systems; 12 oz/sq ft for preformed metal shingle systems.~~
~~Hard lead~~	~~2 lb/sq ft~~
~~Soft lead~~	~~3 lb/sq ft~~
~~Aluminum~~	~~ASTM B 209, 0.024 minimum thickness for roll-formed panels and 0.019-inch minimum thickness for pressformed shingles.~~
~~Terne (tin) and terne-coated stainless~~	~~Terne coating of 40 lb per double base box, field painted where applicable in accordance with manufacturer's installation instructions.~~
~~Zinc~~	~~0.027 inch minimum thickness: 99.995% electrolytic high-grade zinc with alloy additives of copper (0.08—0.20%), titanium (0.07%—0.12%) and aluminum (0.015%).~~

~~For SI: 1 ounce per square foot = 0.305 kg/m^2, 1 pound per square foot = 4.214 kg/m^2, 1 inch = 25.4 mm, 1 pound = 0.454 kg.~~ **Reserved**.

TABLE R905.10.3(2) MINIMUM CORROSION RESISTANCE

~~55% aluminum-zinc alloy-coated steel~~	~~ASTM A 792 AZ 50~~
~~5% aluminum alloy-coated steel~~	~~ASTM A 875 GF60~~
~~Aluminum-coated steel~~	~~ASTM A 463 T2 65~~
~~Galvanized steel~~	~~ASTM A 653 G 90~~
~~Prepainted steel~~	~~ASTM A 755*~~

~~a. Paint systems in accordance with ASTM A 755 shall be applied over steel products with corrosion-resistant coatings complying with ASTM A 792, ASTM~~

~~A 875, ASTM A 463, or ASTM A 653.~~ **Reserved**.

Date Submitted	7/21/2012	**Section**	R905.10.4 Attachment.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.10.4 Attachment.

Metal roof panels shall be secured to the supports in accordance with this chapter and the manufacturer's installation instructions. Metal roofing fastened directly to steel framing shall be attached by approved fasteners. ~~In the absence of manufacturer's installation instructions, t~~ The following fasteners shall be used:

1. Galvanized fasteners shall be used for galvanized roofs.

2. Hard ~~C~~ copper ~~,brass, bronze,~~ or copper alloy or 300 series stainless steel fasteners shall be used for copper roofs.

3. Stainless steel fasteners are acceptable for all types of metal roofs.

4. Aluminum-zinc coated fasteners are acceptable for aluminum-zinc coated roofs.

Date Submitted	7/21/2012	**Section**	R905.10.4.1 Application.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.10.4.1 Application.
Metal roof panels shall be installed in accordance with this chapter and the manufacturer's installation instructions. The installation's instruction shall state the allowable uplift resistance for the attachment system. The installation of metal roof panels shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

R5561

Date Submitted	7/21/2012	**Section**	R905.10.5 Underlayment and high	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~**R905.10.5 Underlayment.**~~
~~Underlayment shall be installed in accordance with the manufacturer's installation instructions.~~

-

R905.10.5 Underlayment

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 1970 or ASTM D 6757.

-

-

-

~~**R905.10.5.1 Underlayment and high winds.**~~

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~

R905.10.5.1 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV or ASTM D 6757: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations End laps shall be offset by 6 feet (1829 mm).

3. As an alternative, 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.

Date Submitted	7/21/2012	**Section**	R905.10.5.1 Underlayment and hi	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.10.5.1 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted~~**. Reserved.** -

R5309

Date Submitted	7/18/2012	**Section**	R905.11 Modified bitumen roofing	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.11 Modified bitumen roofing.
The installation of modified bitumen roofing shall comply with the provisions of this section.

R905.11.1 Slope.
Modified bitumen membrane roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage.

R905.11.2 Material standards.
Modified bitumen roof coverings shall comply with the standards in Table R905.11.2.

TABLE R905.11.2 MODIFIED BITUMEN ROOFING MATERIAL STANDARDS

MATERIAL	STANDARD
Acrylic coating	ASTM D 6083
Asphalt adhesive	ASTM D 3747
Asphalt cement	ASTM D 3019
Asphalt coating	ASTM D 1227; D 2824
Asphalt primer	ASTM D 41
Modified bitumen roof membrane	ASTM D 6162; D 6163; D 6164; D 6222; D 6223; D 6298; **D 6509** CGSB 37â€"GPâ€"56M

R905.11.3 Application.
Modified bitumen roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the modified bitumen roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

Date Submitted	7/21/2012	**Section**	R905.11.3 Application.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.11.3 Application.

Modified bitumen roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the modified bitumen roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

R5310

Date Submitted	7/18/2012	**Section**	R905.12 Thermoset single-ply roof	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.12 Thermoset single-ply roofing.
The installation of thermoset single-ply roofing shall comply with the provisions of this section.

R905.12.1 Slope.
Thermoset single-ply membrane roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage.

R905.12.2 Material standards.
Thermoset single-ply roof coverings shall comply with ASTM D 4637, ASTM D 5019 or CGSB 37-GP-52M.

R905.12.3 Application.
Thermoset single-ply roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the thermoset single-ply membrane roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

Date Submitted	7/21/2012	**Section**	R905.12.3 Application.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.12.3 Application.

Thermoset single-ply roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the thermoset single-ply membrane roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

R5311

Date Submitted	7/18/2012	**Section**	R905.13 Thermoplastic single-ply	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.13 Thermoplastic single-ply roofing.
The installation of thermoplastic single-ply roofing shall comply with the provisions of this section.

R905.13.1 Slope.
Thermoplastic single-ply membrane roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope).

R905.13.2 Material standards.
Thermoplastic single-ply roof coverings shall comply with ASTM D 4434, ASTM D 6754, ASTM D 6878 or CGSB CAN/CGSB 37.54.

R905.13.3 Application.
Thermoplastic single-ply roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the thermoplastic single-ply roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

Date Submitted	7/21/2012	**Section**	R905.13.3 Application.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.13.3 Application.

Thermoplastic single-ply roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the thermoplastic single-ply roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

R5313

Date Submitted	7/18/2012	**Section**	R905.14 Sprayed polyurethane fo	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.14 Sprayed polyurethane foam roofing.
The installation of sprayed polyurethane foam roofing shall comply with the provisions of this section.

R905.14.1 Slope.
Sprayed polyurethane foam roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage.

R905.14.2 Material standards.
Spray-applied polyurethane foam insulation shall comply with ASTM C 1029, Type III or IV.

R905.14.3 Application.
Foamed-in-place roof insulation shall be installed in accordance with this chapter and the manufacturer's installation instructions. A liquid-applied protective coating that complies with ~~Table R905.14.3~~ Section R905.15 shall be applied no less than 2 hours nor more than 72 hours following the application of the foam. The approved allowable uplift resistance for the sprayed polyurethane foam roofing shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

TABLE R905.14.3 PROTECTIVE COATING MATERIAL STANDARDS

MATERIAL	STANDARD
Acrylic coating	ASTM D 6083
Silicone coating	ASTM D 6694
Moisture-cured polyurethane coating	ASTM D 6947

R905.14.4 Foam plastics.
Foam plastic materials and installation shall comply with Section R316.

Date Submitted	7/21/2012	**Section**	R905.14.3 Application.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.14.3 Application.

Foamed-in-place roof insulation shall be installed in accordance with this chapter and the manufacturer's installation instructions. A liquid-applied protective coating that complies with ~~Table R905.14.3~~ Section R905.15 shall be applied no less than 2 hours nor more than 72 hours following the application of the foam. The approved allowable uplift resistance for the sprayed polyurethane foam roofing shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

R5305

Date Submitted	7/18/2012	**Section**	R905.15 Liquid-applied roofing.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.15 Liquid-applied roofing.
The installation of liquid-applied roofing shall comply with the provisions of this section.

R905.15.1 Slope.
Liquid-applied roofing shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope).

R905.15.2 Material standards.
Liquid-applied roofing shall comply with ASTM C 836, C 957, D 1227, D 3468, D 6083, D 6694 or D 6947.

R905.15.3 Application.
Liquid-applied roof coatings shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the liquid-applied coatings shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

Date Submitted	7/21/2012	**Section**	R905.15.3 Application.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.15.3 Application.

Liquid-applied roof coatings shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the liquid-applied coatings shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

R5552

Date Submitted	7/21/2012	**Section**	R905.16 Photovoltaic modules/sh	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.16 Building integrated ~~P~~ photovoltaic roofing modules/shingles.
The installation of building integrated photovoltaic roofing modules/shingles shall comply with the provisions of this section.

R905.16.1 Material standards.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be listed and labeled in accordance with UL 1703.

R905.16.2 Attachment.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be attached in accordance with the manufacturer's installation instructions.

R905.16.3 Wind resistance.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be tested in accordance with procedures and acceptance criteria in ASTM D 3161 or TAS 107. Building integrated ~~P~~ photovoltaic roofing modules/shingles shall comply with the classification requirements of Table R905.2 ~~4.1(2)~~ .6.1 for the appropriate maximum basic wind speed. Building integrated ~~P~~ photovoltaic roofing modules/shingle packaging shall bear a label to indicate compliance with the procedures in ASTM D 3161 or TAS 107 and the required classification from Table R905.2 ~~4.1(2)~~ .6.1.

R5302

Date Submitted	7/18/2012	**Section**	R905.16	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.16 Building integrated ~~P~~ photovoltaic roofing modules/shingles.
The installation of building integrated photovoltaic roofing modules/shingles shall comply with the provisions of this section.

R905.16.1 Material standards.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be listed and labeled in accordance with UL 1703.

R905.16.2 Attachment.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be attached in accordance with the manufacturer's installation instructions.

R905.16.3 Wind resistance.
Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be tested in accordance with procedures and acceptance criteria in ASTM D 3161 or TAS 107. Building integrated ~~P~~ photovoltaic roofing modules/shingles shall comply with the classification requirements of Table R905.2 ~~4.1(2)~~ .6.1 for the appropriate maximum basic wind speed. Building integrated ~~P~~ photovoltaic roofing modules/shingle packaging shall bear a label to indicate compliance with the procedures in ASTM D 3161 or TAS 107 and the required classification from Table R905.2 ~~4.1(2)~~ .6.1.

R5553

Date Submitted	7/21/2012	**Section**	R905.17 SOLAR PHOTOVOLTAI	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides requirements for Photovoltaic Systems not considered with Integrated Roofing Photovoltaic. Incorporates intent of foundation code in chapter 15 of IBC- Section 1511.

Rationale

To incorporate the intent of the foundation code and correlate with Chapter 15.

SECTION 1511 SOLAR PHOTOVOLTAIC PANELS/MODULES

1511.1 Solar photovoltaic panels/modules.
Solar photovoltaic panels/modules installed upon a roof or as an integral part of a roof assembly shall comply with the requirements of this code and the International Fire Code.
1511.1.1 Structural fire resistance.
The structural frame and roof construction supporting the load imposed upon the roof by the photovoltaic panels/modules shall comply with the requirements of Table 601.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens code.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens code.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.17 Photovoltaic systems.
Rooftop mounted photovoltaic systems shall be designed in accordance with this section.

R905.17.1 Wind resistance.
Rooftop mounted photovoltaic systems shall be designed for wind loads for component and cladding in accordance with Chapter 16 using an effective wind area based on the dimensions of a single unit frame.

R905.17.2 Fire classification.
Rooftop mounted photovoltaic systems shall have the same fire classification as the roof assembly required by Section R902.

R905.17.3 Installation.
Rooftop mounted photovoltaic systems shall be installed in accordance with the manufacturer's installation instructions.

R905.17.4 Photovoltaic panels and modules.
Photovoltaic panels and modules mounted on top of a roof shall be listed and labeled in accordance with UL 1703 and shall be installed in accordance with the manufacturer's installation instructions.

Date Submitted	7/21/2012	**Section**	R905.2.2 Slope.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.2.2 Slope.

Asphalt shingles shall be used only on roof slopes of two units vertical in 12 units horizontal (2:12) or greater. For roof slopes from two units vertical in 12 units horizontal (2:12) ~~up to~~ and less than four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section R905.2.7.

Date Submitted	7/21/2012	**Section**	R905.2.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria for shingle underlayment. Provide correct Types for previously approved ASTM D 4869.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events. Provide correct Types for previously approved ASTM D 4869 found in foundation code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.2.3 Underlayment.

Unless otherwise noted, required underlayment shall conform ~~to~~ with ASTM D 226 Type I or Type II, ASTM D 4869, Type ~~I~~ II or Type IV, or ASTM D 6757.

Self-adhering polymer modified bitumen sheet shall comply with ASTM D 1970.

Date Submitted	7/21/2012	**Section**	R905.2.4.1 Wind resistance of asp	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.2.4.1 Wind resistance of asphalt shingles

Asphalt shingles shall be ~~tested in accordance with ASTM D 7158. Asphalt shingles shall meet the classification requirements of Table R905.2.4.1(1) for the appropriate maximum basic wind speed. Asphalt shingle packaging shall bear a label to indicate compliance with ASTM D 7158 and the required classification in Table R905.2.4.1(1)~~ installed in accordance with Section R905.2.6. and R905.2.6.1.

~~Exception: Asphalt shingles not included in the scope of ASTM D 7158 shall be tested and labeled to indicate compliance with ASTM D 3161 and the required classification in Table R905.2.4.1(2).~~

TABLE R905.2.4.1(1) ~~CLASSIFICATION OF ASPHALT ROOF SHINGLES PER ASTM D 7158~~

~~MAXIMUM BASIC WIND SPEED FROM FIGURE 301.2(4)A (mph)~~	~~CLASSIFICATION REQUIREMENT~~
~~85~~	~~D, G or H~~
~~90~~	~~D, G or H~~
~~100~~	~~G or H~~
~~110~~	~~G or H~~
~~120~~	~~G or H~~
~~130~~	~~H~~
~~140~~	~~H~~
~~150~~	~~H~~

~~For SI: 1 mile per hour = 0.447 m/s~~.
Reserved.

TABLE R905.2.4.1(2) ~~CLASSIFICATION OF ASPHALT SHINGLES PER ASTM D 3161~~

~~MAXIMUM BASIC WIND SPEED FROM FIGURE 301.2(4)A (mph)~~	~~CLASSIFICATION REQUIREMENT~~
~~85~~	~~A, D or F~~
~~90~~	~~A, D or F~~
~~100~~	~~A, D or F~~
~~110~~	~~F~~
~~120~~	~~F~~
~~130~~	~~F~~
~~140~~	~~F~~
~~150~~	~~F~~

~~For SI: 1 mile per hour = 0.447 m/s.~~
Reserved.

R5487

Date Submitted	7/21/2012	**Section**	R905.2.6.1 Wind Resistance of As	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.2.6.1 Wind Resistance of Asphalt Shingles.
Asphalt Shingles shall be classified in accordance with ASTM D 3161, TAS 107 or ASTM D 7158 to resist the basic wind speed per Figure R301.2(4). Shingles classified as ASTM D 3161 Class D or classified as ASTM D 7158 Class G are acceptable for use in the 100-mph wind zone. Shingles classified as ASTM D 3161 Class F, TAS107 or ASTM D 7158 Class H are acceptable for use in all wind zones. Asphalt shingle wrappers shall indicate compliance with one of the required classifications as shown in Table R905.2.6.1.

TABLE R905.2.6.1 WIND RESISTANCE OF ASPHALT SHINGLES

Classification of Asphalt Shingles			
Maximum Basic Wind Speed, V_{ult}, From Figure R301.2(4)	**V_{asd} as determined in accordance with Section R301.2.1.3**	**ASTM D 7158**	**ASTM D 3161**
110	85	D, G or H	A, D or F
116	90	D, G or H	A, D or F
129	100	G or H	A, D or F
142	110	G or H	F
155	120	G or H	F
168	130	H	F
181	140	H	F
194	150	H	F

Roofing

Proposed Code Modifications

2013 Florida Building Code - Full Report

This document created by the Florida Department of Business and Professional Regulation - 850-487-1824

TAC: Roofing

Sub Code: Residential

Total Mods for Roofing: 85

R5490

Date Submitted	7/21/2012	**Section**	R905.2.7 Underlayment applicatio	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific slope criteria addressed in DEC Statement DCA08-DEC-331 and removes unnecessary language.

Rationale

To simplify intent and carry forward previous Commission approved DEC Statement DCA08-DEC-331. Remove unnecessary language found in manufacturers specifications. To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.2.7 Underlayment application.
For roof slopes from two units vertical in 12 units horizontal (17-percent slope), ~~up to~~ and less than four units vertical in 12 units horizontal (33-percent slope), two layers of underlayment complying with ASTM D 226 Type I or Type II, ASTM D 4869 Type I or Type II, or ASTM D 6757 shall be ~~two layers~~ applied in the following manner.

1. Apply a 19-inch (483 mm) strip of underlayment felt parallel ~~to~~ with and starting at the eaves~~, fastened sufficiently to hold in place~~.

2. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm)~~, and fastened sufficiently to hold in place~~. ~~Distortions in the underlayment shall not interfere with the ability of the shingles to seal.~~

3. End laps shall be offset by 6 feet (1829 mm).

4. Corrosion resistant fasteners are to be applied along the overlap at a maximum spacing of 36 inches (914 mm) on center.

For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater, one layer of underlayment complying with ASTM D 226 Type I or Type II, ASTM D 4869 Type I or Type II, or ASTM D 6757 shall be ~~one layer~~ applied in the following manner.

1. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm) ~~fastened sufficiently to hold in place. Distortions in the underlayment shall not interfere with the ability of the shingles to seal.~~

2. End laps shall be offset by 6 feet (1829 mm).

3. Corrosion resistant fasteners are to be applied along the overlap at a maximum spacing of 36 inches (914 mm) on center.

Date Submitted	7/21/2012	**Section**	R905.2.7 Underlayment Applicatio	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~R905.2.7 Underlayment application.~~
~~For roof slopes from two units vertical in 12 units horizontal (17-percent slope), up to and less than four units vertical in 12 units horizontal (33-percent slope), two layers of underlayment complying with ASTM D 226 Type I or Type II, ASTM D 4869 Type I or Type II, or ASTM D 6757 shall be two layers applied in the following manner.~~

~~1. Apply a 19-inch (483 mm) strip of underlayment felt parallel to with and starting at the eaves, fastened sufficiently to hold in place.~~

~~2. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened sufficiently to hold in place. Distortions in the underlayment shall not interfere with the ability of the shingles to seal.~~

~~3. End laps shall be offset by 6 feet (1829 mm).~~

~~4. Corrosion resistant fasteners are to be applied along the overlap at a maximum spacing of 36 inches (914 mm) on center.~~

-

~~For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater, one layer of underlayment complying with ASTM D 226 Type I or Type II, ASTM D 4869 Type I or Type II, or ASTM D 6757 shall be one layer applied in the following manner.~~

~~1. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm) fastened sufficiently to hold in place. Distortions in the underlayment shall not interfere with the ability of the shingles to seal.~~

~~2. End laps shall be offset by 6 feet (1829 mm).~~

~~3. Corrosion resistant fasteners are to be applied along the overlap at a maximum spacing of 36 inches (914 mm) on center.~~

-

R905.2.7 Underlayment application.

Underlayment shall be installed using one of the following methods:

1. For roof slopes from two units vertical in 12 units horizontal (17-percent slope), and less than four units vertical in 12 units horizontal (33-percent slope). Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757 and shall be two layers applied in the following manner. Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-

tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

2. For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater. Underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV or ASTM D 6757 and shall be one layer applied in the following manner. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations End laps shall be offset by 6 feet (1829 mm).

3. As an alternative, 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.

Date Submitted	7/21/2012	**Section**	R905.2.7.1 Ice barrier.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.2.7.1 Ice barrier.

~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of a least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet, shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

R5489

Date Submitted	7/21/2012	**Section**	R905.2.7.2 Underlayment and high	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.2.7.2 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 6757. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

R5491

Date Submitted	7/21/2012	**Section**	R905.2.8.1 Base and cap flashing	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.2.8.1 Base and ~~cap~~ counter flashing.
Base and ~~cap~~ counter flashing shall be installed ~~in accordance with manufacturer's installation instructions. Base flashing shall be of either corrosion-resistant metal of minimum nominal 0.019 inch (0.5 mm) thickness or mineral surface roll roofing weighing a minimum of 77 pounds per 100 square feet (4 kg/m^2). Cap flashing shall be corrosion-resistant metal of minimum nominal 0.019 inch (0.5 mm) thickness~~ as follows:

1. In accordance with manufacturer's installation instructions, or

2. A continuous metal minimum 4 inch by 4 inch "L" flashing shall be set in approved flashing cement and set flush to base of wall and over the underlayment. Both horizontal and vertical metal flanges shall be fastened 6 inches (152 mm) on center with approved fasteners. All laps shall be a minimum of 4 inches (102 mm) fully sealed in approved flashing cement. Flashing shall start at the lower portion of roof to ensure water-shedding capabilities of all metal laps. The entire edge of the horizontal flange shall be sealed covering all nail penetrations with approved flashing cement and membrane. Shingles shall overlap the horizontal flange and shall be set in approved flashing cement.

Base flashing shall be of either corrosion-resistant metal provided in Section R905.2.8.1 or mineral surface roll roofing weighing a minimum of 77 pounds per 100 square feet (3.76 kg/m^2). Counter flashing shall be corrosion-resistant metal with a minimum thickness provided in Table R903.2.1.

Date Submitted	7/21/2012	**Section**	R905.2.8.2 Valleys.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.2.8.2 Valleys.

Valley linings shall be installed in accordance with the manufacturer's installation instructions before applying shingles. Valley linings of the following types shall be permitted:

1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be at least ~~24~~ 16 inches (~~610~~ 406 mm) wide and of any of the corrosion-resistant metals in Table ~~R905.2.8.2~~ R903.2.1 .

2. For open valleys, valley lining of two plies of mineral surfaced roll roofing, complying with ASTM D 3909 or ASTM D 6380 Class M, shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer a minimum of 36 inches (914 mm) wide.

3. For closed valleys (valley covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D 6380 Class S and at least 36 inches wide (914 mm) or valley lining as described in Item 1 or 2 above shall be permitted. Self-adhering polymer modified bitumen underlayment complying with ASTM D 1970 shall be permitted in lieu of the lining material

TABLE R905.2.8.2 VALLEY LINING MATERIAL

~~MATERIAL~~	~~MINIMUM THICKNESS (inches)~~	~~GAGE~~	~~WEIGHT (pounds)~~
~~Cold-rolled copper~~	~~0.0216 nominal~~	—	~~ASTM B 370, 16 oz. per square foot~~
~~Lead-coated copper~~	~~0.0216 nominal~~	—	~~ASTM B 101, 16 oz. per square foot~~
~~High-yield copper~~	~~0.0162 nominal~~	—	~~ASTM B 370, 12 oz. per square foot~~
~~Lead-coated high-yield copper~~	~~0.0162 nominal~~	—	~~ASTM B 101, 12 oz. per square foot~~
~~Aluminum~~	~~0.024~~	—	—
~~Stainless steel~~	—	~~28~~	—
~~Galvanized steel~~	~~0.0179~~	~~26 (zinc coated G90)~~	—
~~Zinc alloy~~	~~0.027~~	—	—
~~Lead~~	—	—	~~2 1/2~~
~~Painted terne~~	—	—	~~20~~

~~For SI: 1 inch = 25.4 mm, 1 pound = 0.454 kg.~~ Reserved.

Date Submitted	7/21/2012	**Section**	R905.2.8.3 Sidewall flashing	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.2.8.3 Sidewall flashing.

~~Base f~~ Flashing against a vertical sidewall shall be by the step-flashing method or continuous "L" flashing method. ~~continuous or step flashing and shall be a minimum of 4 inches (102 mm) in height and 4 inches (102 mm) in width and shall direct water away from the vertical sidewall onto the roof and/or into the gutter. Where siding is provided on the vertical sidewall, the vertical leg of the flashing shall be continuous under the siding. Where anchored masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and counterflashing shall be provided in accordance with Section R703.7.2.2. Where exterior plaster or adhered masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and Section R703.6.3~~.

Date Submitted	7/21/2012	**Section**	R905.2.8.5 Drip edge.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.2.8.5 Drip edge.

~~A drip edge shall be provided at eaves and gables of shingle roofs. Adjacent pieces of drip edge shall be overlapped a minimum of 2 inches (51 mm). Drip edges shall extend a minimum of 0.25 inch (6.4 mm) below the roof sheathing and extend up the roof deck a minimum of 2 inches (51 mm). Drip edges shall be mechanically fastened to the roof deck at a maximum of 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5. Underlayment shall be installed over the drip edge along eaves and under the underlayment on gables. Unless specified differently by the shingle manufacturer, shingles are permitted to be flush with the drip edge.~~

Provide drip edge at eaves and gables of shingle roofs. Overlap to be a minimum of 3 inches (76 mm). Eave drip edges shall extend $^{1}/_{2}$ inch (13 mm) below sheathing and extend back on the roof a minimum of 2 inches (51 mm). Drip edge at eaves shall be permitted to be installed either over or under the underlayment. If installed over the underlayment, there shall be a minimum 4 inch (51 mm) width of roof cement installed over the drip edge flange. Drip edge shall be mechanically fastened a maximum of 12 inches (305 mm) on center. Where the V_{asd} as determined in accordance with Section R301.2.1.3 is 110 mph (177 km/h) or greater or the mean roof height exceeds 33 feet (10 058 mm), drip edges shall be mechanically fastened a maximum of 4 inches (102 mm) on center.

R5304

Date Submitted	7/18/2012	**Section**	R905.3 Clay and concrete tile.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3 Clay and concrete tile.
The installation of clay and concrete shall ~~comply with the provisions of this section~~ be in accordance with the manufacturer's installation instructions, or recommendations of FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R905.3.1 Deck requirements.
Concrete and clay tile shall be installed only over solid sheathing ~~or~~, except where the roof covering is specifically designed and tested in accordance with Chapter 16, Florida Building Code, Building to be applied over spaced structural sheathing boards.

R905.3.2 Deck slope.
Clay and concrete roof tile shall be installed on roof slopes ~~of two and one-half units vertical in 12 units horizontal ($2^1/_2$:12) or greater. For roof slopes from two and one-half units vertical in 12 units horizontal ($2^1/_2$:12) to four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section R905.3.3.~~ in accordance with the recommendations of FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R905.3.3 Underlayment.
~~Unless otherwise noted, r~~ Required underlayment shall conform ~~to~~ with ASTM D 226, Type II; ASTM D 2626, Type ~~I~~ II; ASTM D 1970 or ASTM D 6380, Class M mineral surfaced roll roofing and shall be installed in accordance with FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R905.3.3.1 ~~Low s~~ Slope and underlayment requirements ~~roofs~~.
~~For roof slopes from two and one-half units vertical in 12 units horizontal ($2^1/_2$:12), up to four units vertical in 12 units horizontal (4:12), underlayment shall be a minimum of two layers underlayment applied as follows:~~

~~1. Starting at the eave, a 19-inch (483 mm) strip of underlayment shall be applied parallel with the eave and fastened sufficiently in place.~~

~~2. Starting at the eave, 36-inch-wide (914 mm) strips of underlayment felt shall be applied, overlapping successive sheets 19 inches (483 mm), and fastened sufficiently in place.~~ Refer to FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or RAS 118, 119 or 120 for underlayment and slope requirements for specific roof tile systems.

R905.3.3.2 High slope roofs.
~~For roof slopes of four units vertical in 12 units horizontal (4:12) or greater, underlayment shall be a minimum of one layer of underlayment felt applied shingle fashion, parallel to and starting from the eaves and lapped 2 inches (51 mm), fastened sufficiently in place.~~ Reserved

R905.3.3.3 Underlayment and high winds.
~~Underlayment applied in areas subject to high wind [above 110 miles per hour (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$-inch (19 mm) into the roof sheathing.~~

Exception: ~~As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

R905.3.4 Clay tile.
Clay roof tile shall comply with ASTM C 1167.

R905.3.5 Concrete tile.
Concrete roof tile shall comply with ASTM C 1492.

R905.3.6 Fasteners.
Nails shall be corrosion-resistant and not less than 11 gage, $^{5}/_{16}$-inch (7.95 mm) head, and of sufficient length to penetrate the deck a minimum of $^{3}/_{4}$ inch (19.1 mm) or through the thickness of the deck, whichever is less, or in accordance with the FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or in accordance with the recommendations of RAS 118, 119 or 120. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). ~~Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.~~

R905.3.7 Application.
Tile shall be applied in accordance with this chapter and the manufacturer's installation instructions, or recommendations of the FRSA/TRI 07320 based on the following:

Attachment. Clay and concrete roof tiles shall be fastened in accordance with FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3.
~~based on the following:~~

~~1. Climatic conditions.~~

~~2. Roof slope.~~

~~3. Underlayment system.~~

~~4. Type of tile being installed.~~

~~Clay and concrete roof tiles shall be fastened in accordance with this section and the manufacturer's installation instructions. Perimeter tiles shall be fastened with a minimum of one fastener per tile. Tiles with installed weight less than 9 pounds per square foot (0.4 kg/m^2) require a minimum of one fastener per tile regardless of roof slope. Clay and concrete roof tile attachment shall be in accordance with the manufacturer's installation instructions where applied in areas where the wind speed exceeds 100 miles per~~

~~hour (45 m/s) and on buildings where the roof is located more than 40 feet (12 192 mm) above grade. In areas subject to snow, a minimum of two fasteners per tile is required. In all other areas, clay and concrete roof tiles shall be attached in accordance with Table R905.3.7.~~

TABLE R905.3.7 CLAY AND CONCRETE TILE ATTACHMENT

~~SHEATHING~~	~~ROOF SLOPE~~	~~NUMBER OF FASTENERS~~
~~Solid without battens~~	~~All~~	~~One per tile~~
~~Spaced or solid with battens and slope < 5:12~~	~~Fasteners not required~~	—
~~Spaced sheathing without battens~~	~~5:12 = slope < 12:12~~	~~One per tile/every other row~~
	~~12:12 = slope < 24:12~~	~~One per tile~~

Reserved.

R905.3.7.1 Hip and ridge tiles.
Hip and ridge tiles shall be installed in accordance with FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3.

R905.3.8 Flashing.
At the juncture of roof vertical surfaces, flashing and counterflashing shall be provided in accordance with this chapter and the manufacturer's installation instructions ~~and, where of metal, shall not be less than 0.019 inch (0.5 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25-percent slope) and greater, valley flashing shall have a 36-inch-wide (914 mm) underlayment of one layer of Type I underlayment running the full length of the valley, in addition to other required underlayment. In areas where the average daily temperature in January is 25°F (-4°C) or less, metal valley flashing underlayment shall be solid-cemented to the roofing underlayment for slopes less than seven units vertical in 12 units horizontal (58-percent slope) or be of self-adhering polymer modified bitumen sheet.~~ instructions or recommendations of the FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R5505

Date Submitted	7/21/2012	**Section**	R905.3 Clay and concrete tile.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3 Clay and concrete tile.

The installation of clay and concrete shall ~~comply with the provisions of this section~~ be in accordance with the manufacturer's installation instructions, or recommendations of FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R5602

Date Submitted	7/23/2012	**Section**	R905.3 Clay and concrete tile.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

R905.3.2, R905.3.3, R905.3.3.1, R905.3.6, R905.3.7, R905.3.7.1, R905.3.8

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3 Clay and concrete tile.

The installation of clay and concrete shall ~~comply with the provisions of this section~~ be in accordance with the manufacturer's installation instructions, or recommendations of FRSA/TRI ~~07320~~ 04-12where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

Date Submitted	7/21/2012	**Section**	R905.3.1 Deck requirements.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.1 Deck requirements.

Concrete and clay tile shall be installed only over solid sheathing ~~or~~, except where the roof covering is specifically designed and tested in accordance with Chapter 16, Florida Building Code, Building to be applied over spaced structural sheathing boards.

Date Submitted	7/21/2012	**Section**	R905.3.2 Deck slope.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.2 Deck slope.

Clay and concrete roof tile shall be installed on roof slopes ~~of two and one-half units vertical in 12 units horizontal ($2^{1}/_{2}$:12) or greater. For roof slopes from two and one-half units vertical in 12 units horizontal ($2^{1}/_{2}$:12) to four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section R905.3.3.~~ in accordance with the recommendations of FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R5601

Date Submitted	7/23/2012	**Section**	R905.3.2	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

R905.3, R905.3.3, R905.3.3.1, R905.3.6, R905.3.7, R905.3.7.1, R905.3.8

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.2 Deck slope.

Clay and concrete roof tile shall be installed on roof slopes ~~of two and one-half units vertical in 12 units horizontal ($2^{1}/_{2}$:12) or greater. For roof slopes from two and one-half units vertical in 12 units horizontal ($2^{1}/_{2}$:12) to four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section R905.3.3.~~ in accordance with the recommendations of FRSA/TRI ~~07320~~ 04-12where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R5500

Date Submitted	7/21/2012	**Section**	R905.3.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.3 Underlayment.
~~Unless otherwise noted, r~~ Required underlayment shall conform ~~to~~ with ASTM D 226, Type II; ASTM D 2626, Type ~~I~~ II; ASTM D 1970 or ASTM D 6380, Class M mineral surfaced roll roofing and shall be installed in accordance with FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

Date Submitted	7/21/2012	**Section**	R905.3.3.1 Low slope roofs.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.3.1 ~~Low s~~ Slope and underlayment requirements ~~roofs~~.
~~For roof slopes from two and one-half units vertical in 12 units horizontal (2½:12), up to four units vertical in 12 units horizontal (4:12), underlayment shall be a minimum of two layers underlayment applied as follows:~~

~~1. Starting at the eave, a 19-inch (483 mm) strip of underlayment shall be applied parallel with the eave and fastened sufficiently in place.~~

~~2. Starting at the eave, 36-inch-wide (914 mm) strips of underlayment felt shall be applied, overlapping successive sheets 19 inches (483 mm), and fastened sufficiently in place.~~ Refer to FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or RAS 118, 119 or 120 for underlayment and slope requirements for specific roof tile systems.

Date Submitted	7/23/2012	**Section**	R905.3.3.1	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

R905.3, R905.3.2, R905.3.3, R905.3.6, R905.3.7, R905.3.7.1, R905.3.8

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.3.1 ~~Low s~~ Slope and underlayment requirements ~~roofs~~.
~~For roof slopes from two and one-half units vertical in 12 units horizontal (2 1/2:12), up to four units vertical in 12 units horizontal (4:12), underlayment shall be a minimum of two layers underlayment applied as follows:~~

~~1. Starting at the eave, a 19-inch (483 mm) strip of underlayment shall be applied parallel with the eave and fastened sufficiently in place.~~

~~2. Starting at the eave, 36-inch-wide (914 mm) strips of underlayment felt shall be applied, overlapping successive sheets 19 inches (483 mm), and fastened sufficiently in place.~~ Refer to FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3 or RAS 118, 119 or 120 for underlayment and slope requirements for specific roof tile systems.

R5498

Date Submitted	7/21/2012	**Section**	R905.3.3.2 High slope roofs	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.3.2 High slope roofs

-

~~For roof slopes of four units vertical in 12 units horizontal (4:12) or greater, underlayment shall be a minimum of one layer of underlayment felt applied shingle fashion, parallel to and starting from the eaves and lapped 2 inches (51 mm), fastened sufficiently in place.~~ Reserved

.

R5499

Date Submitted	7/21/2012	**Section**	R905.3.3.3 Underlayment and high	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.3.3 Underlayment and high winds.

~~Underlayment applied in areas subject to high wind [above 110 miles per hour (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12-gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.~~

Exception: ~~As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

R5600

Date Submitted	7/23/2012	**Section**	R905.3.3	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

R905.3, R905.3.2, R905.3.3.1, R905.3.6, R905.3.7, R905.3.7.1, R905.3.8

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.3 Underlayment.

~~Unless otherwise noted, r~~ Required underlayment shall conform ~~to~~ with ASTM D 226, Type II; ASTM D 2626, Type ~~I~~ II; ASTM D 1970 or ASTM D 6380, Class M mineral surfaced roll roofing and shall be installed in accordance with FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R5501

Date Submitted	7/21/2012	**Section**	R905.3.6 Fasteners.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.6 Fasteners.
Nails shall be corrosion-resistant and not less than 11 gage, $^{5}/_{16}$-inch (7.95 mm) head, and of sufficient length to penetrate the deck a minimum of $^{3}/_{4}$ inch (19.1 mm) or through the thickness of the deck, whichever is less, or in accordance with the FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or in accordance with the recommendations of RAS 118, 119 or 120. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). ~~Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.~~

Date Submitted	7/23/2012	**Section**	R905.3.6	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

R905.3, R905.3.2, R905.3.3, R905.3.3.1, R905.3.7, R905.3.7.1, R905.3.8

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.6 Fasteners.

Nails shall be corrosion-resistant and not less than 11 gage, $^{5}/_{16}$-inch (7.95 mm) head, and of sufficient length to penetrate the deck a minimum of $^{3}/_{4}$ inch (19.1 mm) or through the thickness of the deck, whichever is less, or in accordance with the FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3 or in accordance with the recommendations of RAS 118, 119 or 120. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). ~~Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.~~

Date Submitted	7/31/2012	**Section**	R905.3.6	**Proponent**	Randall Shackelford
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

FBC 1507.3.6

Summary of Modification

Adds methods for determining corrosion resistance of screws for roof tile.

Rationale

Because so much of Florida is in proximity to the coast, corrosion resistance of roof tile fasteners is critical. This proposal gives guidance on evaluating the corrosion resistance of roof tile screws.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Nearly identical to requirements in 2010 FBC-R.

Impact to building and property owners relative to cost of compliance with code

No impact. Nearly identical to requirements in 2010 FBC-R.

Impact to industry relative to the cost of compliance with code

No impact. Nearly identical to requirements in 2010 FBC-R. Adds an additional option of ASTM A153 so that nails are covered.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This proposal will ensure that roof tile fasteners are adequately corrosion resistant. If roof tile fasteners rust, tiles can become dislodged in wind events and become missiles, damaging nearby structures, and leaving the roof of the structure unprotected.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Improves the base code by giving a way to define what "corrosion resistant" is.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Nearly identical to 2010 FBC. Provides both prescriptive and performance standards so many types of alternate materials can be evaluated.

Does not degrade the effectiveness of the code

Does not degrade. Similar to what was in 2010 FBC.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

OTHER

Explanation of Choice

ICC 600 contains nearly identical requirements for corrosion resistance of fasteners.

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

OTHER

Explanation of Choice

Amendment was successfully submitted to ICC 600-08, see section 304.3.1.

R905.3.6 Fasteners. Nails shall be corrosion resistant andnot less than 11 gage, 5/16-inch (11 mm) head, and of sufficient length to penetrate the deck a minimum of 3/4 inch (19 mm) or through the thickness of the deck, whichever is less. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2 mm). Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes. Screws shall be corrosion resistant. The corrosion resistance of fasteners shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to ASTM A 641, Class 1;

2. Corrosion resistance in accordance with ASTM A153.

3. Corrosion resistance in accordance with TAS114, Appendix E; or

4. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with ASTM B 117.

R5503

Date Submitted	7/21/2012	**Section**	R905.3.7 Application.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.7 Application.

Tile shall be applied in accordance with this chapter and the manufacturer's installation instructions, or recommendations of the FRSA/TRI 07320 based on the following:

Attachment. Clay and concrete roof tiles shall be fastened in accordance with FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3.
~~based on the following:~~

~~1. Climatic conditions.~~

~~2. Roof slope.~~

~~3. Underlayment system.~~

~~4. Type of tile being installed.~~

~~Clay and concrete roof tiles shall be fastened in accordance with this section and the manufacturer's installation instructions. Perimeter tiles shall be fastened with a minimum of one fastener per tile. Tiles with installed weight less than 9 pounds per square foot (0.4 kg/m^2) require a minimum of one fastener per tile regardless of roof slope. Clay and concrete roof tile attachment shall be in accordance with the manufacturer's installation instructions where applied in areas where the wind speed exceeds 100 miles per hour (45 m/s) and on buildings where the roof is located more than 40 feet (12 192 mm) above grade. In areas subject to snow, a minimum of two fasteners per tile is required. In all other areas, clay and concrete roof tiles shall be attached in accordance with Table R905.3.7.~~

. TABLE R905.3.7 CLAY AND CONCRETE TILE ATTACHMENT

~~SHEATHING~~	~~ROOF SLOPE~~	~~NUMBER OF FASTENERS~~
~~Solid without battens~~	~~All~~	~~One per tile~~
~~Spaced or solid with battens and slope < 5:12~~	~~Fasteners not required~~	—
~~Spaced sheathing without battens~~	~~5:12 = slope < 12:12~~	~~One per tile/every other row~~
	~~12:12 = slope < 24:12~~	~~One per tile~~

Reserved.

-

:

R5502

Date Submitted	7/21/2012	**Section**	R905.3.7.1 Hip and ridge tiles	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.7.1 Hip and ridge tiles.
Hip and ridge tiles shall be installed in accordance with FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3.

Date Submitted	7/23/2012	**Section**	R905.3.7.1	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

R905.3, R905.3.2, R905.3.3, R905.3.3.1, R905.3.6, R905.3.7, R905.3.8

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.7.1 Hip and ridge tiles.

Hip and ridge tiles shall be installed in accordance with FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3.

Date Submitted	7/23/2012	**Section**	R905.3.7	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

R905.3, R905.3.2, R905.3.3, R905.3.3.1, R905.3.6, R905.3.7.1, R905.3.8

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.7 Application.
Tile shall be applied in accordance with this chapter and the manufacturer's installation instructions, or recommendations of the FRSA/TRI ~~07320~~ 04-12 based on the following:

Attachment. Clay and concrete roof tiles shall be fastened in accordance with FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3.
~~based on the following:~~

~~1. Climatic conditions.~~

~~2. Roof slope.~~

~~3. Underlayment system.~~

~~4. Type of tile being installed.~~

~~Clay and concrete roof tiles shall be fastened in accordance with this section and the manufacturer's installation instructions. Perimeter tiles shall be fastened with a minimum of one fastener per tile. Tiles with installed weight less than 9 pounds per square foot (0.4 kg/m^2) require a minimum of one fastener per tile regardless of roof slope. Clay and concrete roof tile attachment shall be in accordance with the manufacturer's installation instructions where applied in areas where the wind speed exceeds 100 miles per hour (45 m/s) and on buildings where the roof is located more than 40 feet (12 192 mm) above grade. In areas subject to snow, a minimum of two fasteners per tile is required. In all other areas, clay and concrete roof tiles shall be attached in accordance with Table R905.3.7.~~

TABLE R905.3.7 CLAY AND CONCRETE TILE ATTACHMENT

~~SHEATHING~~	~~ROOF SLOPE~~	~~NUMBER OF FASTENERS~~
~~Solid without battens~~	~~All~~	~~One per tile~~
~~Spaced or solid with battens and slope < 5:12~~	~~Fasteners not required~~	—
~~Spaced sheathing without battens~~	~~5:12 = slope < 12:12~~	~~One per tile/every other row~~
	~~12:12 = slope < 24:12~~	~~One per tile~~

Reserved.

R5504

Date Submitted	7/21/2012	**Section**	R905.3.8 Flashing.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.8 Flashing.

At the juncture of roof vertical surfaces, flashing and counterflashing shall be provided in accordance with this chapter and the manufacturer's installation instructions ~~and, where of metal, shall not be less than 0.019 inch (0.5 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25 percent slope) and greater, valley flashing shall have a 36-inch-wide (914 mm) underlayment of one layer of Type I underlayment running the full length of the valley, in addition to other required underlayment. In areas where the average daily temperature in January is 25°F (-4°C) or less, metal valley flashing underlayment shall be solid-cemented to the roofing underlayment for slopes less than seven units vertical in 12 units horizontal (58 percent slope) or be of self-adhering polymer modified bitumen sheet.~~ instructions or recommendations of the FRSA/TRI 07320 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

Date Submitted	7/23/2012	**Section**	R905.3.8	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

R905.3, R905.3.2, R905.3.3, R905.3.3.1, R905.3.6, R905.3.7, R905.3.7.1

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.3.8 Flashing.

At the juncture of roof vertical surfaces, flashing and counterflashing shall be provided in accordance with this chapter and the manufacturer's installation instructions ~~and, where of metal, shall not be less than 0.019 inch (0.5 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25 percent slope) and greater, valley flashing shall have a 36 inch wide (914 mm) underlayment of one layer of Type I underlayment running the full length of the valley, in addition to other required underlayment. In areas where the average daily temperature in January is 25°F (-4°C) or less, metal valley flashing underlayment shall be solid-cemented to the roofing underlayment for slopes less than seven units vertical in 12 units horizontal (58 percent slope) or be of self-adhering polymer modified bitumen sheet.~~ instructions or recommendations of the FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R5603

Date Submitted	7/23/2012	**Section**	R905.3	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

R905.3, R905.3.2, R905.3.3, R905.3.3.1, R905.3.6, R905.3.7, R905.3.7.1, R905.3.8

Summary of Modification

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

Rationale

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION R905 REQUIREMENTS FOR ROOF COVERINGS

R905.3 Clay and concrete tile.
The installation of clay and concrete shall ~~comply with the provisions of this section~~ be in accordance with the manufacturer's installation instructions, or recommendations of FRSA/TRI ~~07320~~ 04-12where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R905.3.1 Deck requirements.
Concrete and clay tile shall be installed only over solid sheathing ~~or~~, except where the roof covering is specifically designed and tested in accordance with Chapter 16, Florida Building Code, Building to be applied over spaced structural sheathing boards.

R905.3.2 Deck slope.
Clay and concrete roof tile shall be installed on roof slopes ~~of two and one-half units vertical in 12 units horizontal (2½:12) or greater. For roof slopes from two and one-half units vertical in 12 units horizontal (2½:12) to four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section R905.3.3.~~ in accordance with the recommendations of FRSA/TRI ~~07320~~ 04-12where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R905.3.3 Underlayment.
~~Unless otherwise noted, r~~ Required underlayment shall conform ~~to~~ with ASTM D 226, Type II; ASTM D 2626, Type ~~I~~ II; ASTM D 1970 or ASTM D 6380, Class M mineral surfaced roll roofing and shall be installed in accordance with FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R905.3.3.1 ~~Low s~~ Slope and underlayment requirements ~~roofs~~.
~~For roof slopes from two and one-half units vertical in 12 units horizontal (2½:12), up to four units vertical in 12 units horizontal (4:12), underlayment shall be a minimum of two layers underlayment applied as follows:~~

~~1. Starting at the eave, a 19-inch (483 mm) strip of underlayment shall be applied parallel with the eave and fastened sufficiently in place.~~

~~2. Starting at the eave, 36-inch-wide (914 mm) strips of underlayment felt shall be applied, overlapping successive sheets 19 inches (483 mm), and fastened sufficiently in place.~~ Refer to FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3 or RAS 118, 119 or 120 for underlayment and slope requirements for specific roof tile systems.

R905.3.3.2 High slope roofs.
~~For roof slopes of four units vertical in 12 units horizontal (4:12) or greater, underlayment shall be a minimum of one layer of underlayment felt applied shingle fashion, parallel to and starting from the eaves and lapped 2 inches (51 mm), fastened sufficiently in place.~~ Reserved

R905.3.3.3 Underlayment and high winds.
~~Underlayment applied in areas subject to high wind [above 110 miles per hour (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's~~

~~installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$-inch (19 mm) into the roof sheathing.~~
Exception: ~~As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~
Reserved.

R905.3.4 Clay tile.
Clay roof tile shall comply with ASTM C 1167.

R905.3.5 Concrete tile.
Concrete roof tile shall comply with ASTM C 1492.

R905.3.6 Fasteners.
Nails shall be corrosion-resistant and not less than 11 gage, $^{5}/_{16}$-inch (7.95 mm) head, and of sufficient length to penetrate the deck a minimum of $^{3}/_{4}$ inch (19.1 mm) or through the thickness of the deck, whichever is less, or in accordance with the FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3 or in accordance with the recommendations of RAS 118, 119 or 120. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). ~~Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.~~

R905.3.7 Application.
Tile shall be applied in accordance with this chapter and the manufacturer's installation instructions, or recommendations of the FRSA/TRI ~~07320~~ 04-12 based on the following:

Attachment. Clay and concrete roof tiles shall be fastened in accordance with FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3.
~~based on the following:~~

~~1. Climatic conditions.~~

~~2. Roof slope.~~

~~3. Underlayment system.~~

~~4. Type of tile being installed.~~

~~Clay and concrete roof tiles shall be fastened in accordance with this section and the manufacturer's installation instructions. Perimeter tiles shall be fastened with a minimum of one fastener per tile. Tiles with installed weight less than 9 pounds per square foot (0.4 kg/m^2) require a minimum of one fastener per tile~~

~~regardless of roof slope. Clay and concrete roof tile attachment shall be in accordance with the manufacturer's installation instructions where applied in areas where the wind speed exceeds 100 miles per hour (45 m/s) and on buildings where the roof is located more than 40 feet (12 192 mm) above grade. In areas subject to snow, a minimum of two fasteners per tile is required. In all other areas, clay and concrete roof tiles shall be attached in accordance with Table R905.3.7.~~

TABLE R905.3.7 CLAY AND CONCRETE TILE ATTACHMENT

~~SHEATHING~~	~~ROOF SLOPE~~	~~NUMBER OF FASTENERS~~
~~Solid without battens~~	~~All~~	~~One per tile~~
~~Spaced or solid with battens and slope < 5:12~~	~~Fasteners not required~~	—
~~Spaced sheathing without battens~~	~~5:12 = slope < 12:12~~	~~One per tile/every other row~~
	~~12:12 = slope < 24:12~~	~~One per tile~~

Reserved.

R905.3.7.1 Hip and ridge tiles.
Hip and ridge tiles shall be installed in accordance with FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3.

R905.3.8 Flashing.
At the juncture of roof vertical surfaces, flashing and counterflashing shall be provided in accordance with this chapter and the manufacturer's installation instructions ~~and, where of metal, shall not be less than 0.019 inch (0.5 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25-percent slope) and greater, valley flashing shall have a 36-inch-wide (914 mm) underlayment of one layer of Type I underlayment running the full length of the valley, in addition to other required underlayment. In areas where the average daily temperature in January is 25°F (-4°C) or less, metal valley flashing underlayment shall be solid-cemented to the roofing underlayment for slopes less than seven units vertical in 12 units horizontal (58-percent slope) or be of self-adhering polymer modified bitumen sheet.~~ instructions or recommendations of the FRSA/TRI ~~07320~~ 04-12 where the V_{asd} is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

R5307

Date Submitted	7/18/2012	**Section**	R905.4 Metal roof shingles.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.4 Metal roof shingles.
The installation of metal roof shingles shall comply with the provisions of this section.

R905.4.1 Deck requirements.
Metal roof shingles shall be applied to a solid or closely fitted deck, except where the roof covering is specifically designed to be applied to spaced sheathing.

R905.4.2 Deck slope.
Metal roof shingles shall not be installed on roof slopes below three units vertical in 12 units horizontal (25-percent slope).

R905.4.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II, ASTM D 4869, Type I or Type II or ASTM D 1970. Underlayment shall be installed in accordance with the manufacturer's installation instructions

R905.4.3.1 Ice barrier.
~~**In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.**~~

~~**Exception: Detached accessory structures that contain no conditioned floor area.**~~ **Reserved.**

R905.4.3.2 Underlayment and high winds.
~~**Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.**~~

~~**Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 1970. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32 gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19 mm) into the roof sheathing.**~~

~~**Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.**~~
Reserved.

R905.4.4 Material standards.
Metal roof shingle roof coverings shall comply with Table ~~R905.10.3(1)~~ R905.4.4. The materials used for metal roof shingle roof coverings shall be naturally corrosion resistant or ~~be made~~ provided with corrosion ~~resistant~~ resistance in accordance with the standards and minimum thicknesses specified in the standards listed in Table R905.4.4.

TABLE 905.4.4 METAL ROOF COVERINGS

ROOF COVERING TYPE	STANDARD	STANDARD APPLICATION RATE/THICKNESS
Aluminum	ASTM B 209	0.024-inch minimum thickness for roll-formed panels and 0.019-inch minimum thickness for press-formed shingles
Aluminum-zinc coated steel	ASTM A 792	0.013-inch minimum thickness, AZ 50 (coated minimum application rate)
Cold-rolled copper	ASTM B 370	Minimum 16 oz./sq. ft. and 12 oz./sq. ft. high yield copper for metal-sheet roof covering systems: 12 oz./sq. ft. for preformed metal shingle systems
Copper	ASTM B 370	16 oz./sq. ft. for metal-sheet roof-covering systems; 12 oz./sq. ft. for preformed metal shingle systems.
Galvanized steel	ASTM A 653	0.013-inch minimum thickness, G-90 zinc-coated[a]
Hard lead	2 lbs./sq. ft.	
Lead-coated copper	ASTM B 101	
Prepainted steel	ASTM A 755	0.0142 inch minimum thickness
Soft lead	3 lbs./sq. ft.	
Stainless steel	ASTM A 240	300 Series alloys
Steel	ASTM A 924/ ASTM A 924M	
Terne and terne-coated stainless	Terne coating of 40 lbs. per double base box, field painted where applicable in accordance with manufacturer's installation instructions	
Zinc	0.027 inch minimum thickness; 99.995% electrolytic high grade zinc with alloy additives of copper (0.08% - 0.20%), titanium (0.07% - 0.12%) and aluminum (0.015%)	

For SI: 1 ounce per square foot = 0.0026 kg/m^2, 1 pound per square foot = 4.882 kg/m^2, 1 inch = 25.4 mm, 1 pound = 0.454 kg.

a. For Group U buildings, the minimum coating thickness for ASTM A 653

galvanized steel roofing shall be G.

R905.4.5 Application.
Metal roof shingles shall ~~be secured to the roof in accordance with this chapter and the approved manufacturer's installation instructions~~ installed in accordance with the approved manufacturer's installation instructions. The product approval shall state the allowable uplift resistance for the attachment system. The installation of metal roof shingles shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

R905.4.6 Flashing.
Roof valley flashing shall be of corrosion-resistant metal of the same material as the roof covering or shall comply with the standards in Table ~~R905.10.3(1)~~ R905.4.4.. ~~The~~ ~~V~~valley flashing shall extend at least 8 inches (203 mm) from the centerline each way and shall have a splash diverter rib not less than $^{3}/_{4}$ inch (19 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). The metal valley flashing shall have a 36-inch-wide (914 mm) underlayment directly under it consisting of one layer of underlayment running the full length of the valley, in addition to underlayment required for metal roof shingles. ~~In areas where the average daily temperature in January is 25°F (-4°C) or less, the metal valley flashing underlayment shall be solid cemented to the roofing underlayment for roof slopes under seven units vertical in 12 units horizontal (58 percent slope) or self-adhering polymer modified bitumen sheet.~~

Date Submitted	7/21/2012	**Section**	R905.4.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~**R905.4.3 Underlayment.**~~
~~Underlayment shall comply conform with ASTM D 226 Type I or Type II, ASTM D 1970 or ASTM D 4869.~~

R905.4.3 Underlayment

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 1970 or ASTM D 6757.

R905.4.3.1 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~Exception: Detached accessory structures that contain no conditioned floor area.~~ Reserved.

-

-

~~**R905.4.3.2 Underlayment and high winds.**~~

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32- gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~

R905.4.3.2 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV or ASTM D 6757: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations End laps shall be offset by 6 feet (1829 mm).

3. As an alternative, 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.

R5506

Date Submitted	7/21/2012	**Section**	R905.4.3.1 Ice barrier.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.4.3.1 Ice barrier.

~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

R5507

Date Submitted	7/21/2012	**Section**	R905.4.3.2 Underlayment and high	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.4.3.2 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 1970. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32 gauge sheet metal. The cap nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

R5508

Date Submitted	7/21/2012	**Section**	R905.4.4 Material standards	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.4.4 Material standards.

Metal roof shingle roof coverings shall comply with Table ~~R905.10.3(1)~~ R905.4.4. The materials used for metal roof shingle roof coverings shall be naturally corrosion resistant or ~~be made~~ provided with corrosion ~~resistant~~ resistance in accordance with the standards and minimum thicknesses specified in the standards listed in Table R905.4.4.

TABLE 905.4.4 METAL ROOF COVERINGS

ROOF COVERING TYPE	STANDARD	STANDARD APPLICATION RATE/THICKNESS
Aluminum	ASTM B 209	0.024-inch minimum thickness for roll-formed panels and 0.019-inch minimum thickness for press-formed shingles
Aluminum-zinc coated steel	ASTM A 792	0.013-inch minimum thickness, AZ 50 (coated minimum application rate)
Cold-rolled copper	ASTM B 370	Minimum 16 oz./sq. ft. and 12 oz./sq. ft. high yield copper for metal-sheet roof covering systems: 12 oz./sq. ft. for preformed metal shingle systems
Copper	ASTM B 370	16 oz./sq. ft. for metal-sheet roof-covering systems; 12 oz./sq. ft. for preformed metal shingle systems.
Galvanized steel	ASTM A 653	0.013-inch minimum thickness, G-90 zinc-coated[a]
Hard lead	2 lbs./sq. ft.	
Lead-coated copper	ASTM B 101	
Prepainted steel	ASTM A 755	0.0142 inch minimum thickness
Soft lead	3 lbs./sq. ft.	
Stainless steel	ASTM A 240	300 Series alloys
Steel	ASTM A 924/ ASTM A 924M	
Terne and terne-coated stainless	Terne coating of 40 lbs. per double base box, field painted where applicable in accordance with manufacturer's installation instructions	
Zinc	0.027 inch minimum thickness; 99.995% electrolytic high grade zinc with alloy additives of copper (0.08% - 0.20%), titanium (0.07% - 0.12%) and aluminum (0.015%)	

For SI: 1 ounce per square foot = 0.0026

kg/m^2, 1 pound per square foot = 4.882 kg/m^2, 1 inch = 25.4 mm, 1 pound = 0.454 kg.

a. For Group U buildings, the minimum coating thickness for ASTM A 653 galvanized steel roofing shall be G.

R5509

Date Submitted	7/21/2012	**Section**	R905.4.5 Application.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.4.5 Application.

Metal roof shingles shall ~~be secured to the roof in accordance with this chapter and the approved manufacturer's installation instructions~~ installed in accordance with the approved manufacturer's installation instructions. The product approval shall state the allowable uplift resistance for the attachment system. The installation of metal roof shingles shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

R5510

Date Submitted	7/21/2012	**Section**	R905.4.6 Flashing.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.4.6 Flashing.

Roof valley flashing shall be of corrosion-resistant metal of the same material as the roof covering or shall comply with the standards in Table ~~R905.10.3(1)~~ R905.4.4.. ~~The~~ V~~v~~alley flashing shall extend at least 8 inches (203 mm) from the centerline each way and shall have a splash diverter rib not less than $^{3}/_{4}$ inch (19 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). The metal valley flashing shall have a 36-inch-wide (914 mm) underlayment directly under it consisting of one layer of underlayment running the full length of the valley, in addition to underlayment required for metal roof shingles. ~~In areas where the average daily temperature in January is 25°F (-4°C) or less, the metal valley flashing underlayment shall be solid cemented to the roofing underlayment for roof slopes under seven units vertical in 12 units horizontal (58 percent slope) or self-adhering polymer modified bitumen sheet.~~

R5308

Date Submitted	7/18/2012	**Section**	R905.5 Mineral-surfaced roll roofing	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.5 Mineral-surfaced roll roofing.
The installation of mineral-surfaced roll roofing shall comply with this section.

R905.5.1 Deck requirements.
Mineral-surfaced roll roofing shall be fastened to solidly sheathed roofs.

R905.5.2 Deck slope.
Mineral-surfaced roll roofing shall not be applied on roof slopes below one unit vertical in 12 units horizontal (8-percent slope).

R905.5.3 Underlayment.
Underlayment shall comply with ASTM D 226, Type I or Type II, ASTM D 1970 orASTM D 4869, Type I or Type II.

R905.5.3.1 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

R905.5.3.2 Underlayment and high winds.
~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

R905.5.4 Material standards.
Mineral-surfaced roll roofing shall conform to ASTM D 3909 or ASTM D 6380, Class M or Class WS.

R905.5.5 Application.
Mineral-surfaced roll roofing shall be installed in accordance with this chapter and the manufacturer's installation instructions.

R5513

Date Submitted	7/21/2012	**Section**	R905.5.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.Provide correct Types for previously approved ASTM D 4869.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events. Provide correct Types for previously approved ASTM D 4869.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.5.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II, ASTM D 1970 or ASTM D 4869, Type ~~I~~ II or Type ~~II~~ IV.

R5557

Date Submitted	7/21/2012	**Section**	R905.5.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~**R905.5.3 Underlayment.**~~
~~Underlayment shall comply conform with ASTM D 226 Type I or Type II, ASTM D 1970 or ASTM D 4869.~~

R905.5.3 Underlayment

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 1970 or ASTM D 6757.

R905.5.3.1 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~Exception: Detached accessory structures that contain no conditioned floor area.~~ Reserved.

-

-

~~**R905.5.3.2 Underlayment and high winds.**~~

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32- gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~

R905.5.3.2 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV or ASTM D 6757: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations End laps shall be offset by 6 feet (1829 mm).

3. As an alternative, 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.

R5511

Date Submitted	7/21/2012	**Section**	R905.5.3.1 Ice barrier.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.5.3.1 Ice barrier.

~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

R5512

Date Submitted	7/21/2012	**Section**	R905.5.3.2 Underlayment and high	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.5.3.2 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

R5514

Date Submitted	7/21/2012	**Section**	R905.5.4 Material standards	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.5.4 Material standards.

Mineral-surfaced roll roofing shall conform to ASTM D 3909 or ASTM D 6380, Class M or Class WS.

R5312

Date Submitted	7/18/2012	**Section**	R905.6 Slate and slate-type shingles	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.6 Slate and slate-type shingles.
The installation of slate and slate-type shingles shall comply with the provisions of this section.

R905.6.1 Deck requirements.
Slate shingles shall be fastened to solidly sheathed roofs.

R905.6.2 Deck slope.
Slate shingles shall be used only on slopes of four units vertical in 12 units horizontal (33-percent slope) or greater.

R905.6.3 Underlayment

Underlayment shall comply with ASTM D 226, Type I, ASTM D 4869, Type I or Type II. Underlayment shall be installed in accordance with the manufacturer's installation instructions

R905.6.3.1 Ice barrier.
~~**In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.**~~

~~**Exception: Detached accessory structures that contain no conditioned floor area.**~~ **Reserved.**

R905.6.3.2 Underlayment and high winds.
~~**Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.**~~

~~**Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19 mm) into the roof sheathing.**~~

~~**Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.**~~
Reserved.

R905.6.4 Material standards.
Slate shingles shall comply with ASTM C 406.

R905.6.5 Application.
Minimum headlap for slate shingles shall be in accordance with Table R905.6.5. Slate shingles shall be secured to the roof with two fasteners per slate. Slate shingles shall be installed in accordance with this chapter and the manufacturer's installation instructions.

TABLE R905.6.5 SLATE SHINGLE HEADLAP

SLOPE	HEADLAP (inches)
4:12 = slope < 8:12	4
8:12 = slope < 20:12	3
Slope = 20:12	2

For SI: 1 inch = 25.4 mm.

R905.6.6 Flashing.
Flashing and counter flashing shall be made with sheet metal. Valley flashing shall be a minimum of ~~15~~ 16 inches (~~381~~ 406 mm) wide. Valley and flashing metal shall be a minimum ~~uncoated~~ thickness ~~of 0.0179-inch (0.5 mm) zinc coated G90~~ as provided in Table R903.2.1 for nonferrous metal or stainless steel. Chimneys, stucco or brick walls shall have a minimum of two plies of felt for a cap flashing consisting of a 4-inch-wide (102 mm) strip of felt set in plastic cement and extending 1 inch (25 mm) above the first felt and a top coating of plastic cement. The felt shall extend over the base flashing 2 inches (51 mm).

R905.6.7
Slate and slate-type shingles shall be installed in accordance with this chapter and the manufacturer's installation instructions. The product approval shall state the allowable uplift resistance for the attachment system. The installation of slate and slate-type shingles shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

Date Submitted	7/21/2012	**Section**	R905.6.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~**R905.6.3 Underlayment.**~~
~~Underlayment shall comply with ASTM D 226, Type I, or ASTM D 4869, Type I or II. Underlayment shall be installed in accordance with the manufacturer's installation instructions.~~

R905.6.3 Underlayment

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 1970 or ASTM D 6757. Underlayment shall be installed in accordance with the manufacturer's installation instructions.

R905.6.3.1 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~Exception: Detached accessory structures that contain no conditioned floor area.~~ Reserved.

-

-

~~**R905.6.3.2 Underlayment and high winds.**~~

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~

R905.6.3.2 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV or ASTM D 6757: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations End laps shall be offset by 6 feet (1829 mm).

3. As an alternative, 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.

Date Submitted	7/21/2012	**Section**	R905.6.3.1 Ice barrier.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.6.3.1 Ice barrier.

~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

R5516

Date Submitted	7/21/2012	**Section**	R905.6.3.2 Underlayment and high	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.6.3.2 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

R5518

Date Submitted	7/21/2012	**Section**	R905.6.6 Flashing.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.6.6 Flashing.

Flashing and counter flashing shall be made with sheet metal. Valley flashing shall be a minimum of ~~15~~ 16 inches (~~381~~ 406 mm) wide. Valley and flashing metal shall be a minimum ~~uncoated~~ thickness ~~of 0.0179 inch (0.5 mm) zinc coated G90~~ as provided in Table R903.2.1 for nonferrous metal or stainless steel. Chimneys, stucco or brick walls shall have a minimum of two plies of felt for a cap flashing consisting of a 4-inch-wide (102 mm) strip of felt set in plastic cement and extending 1 inch (25 mm) above the first felt and a top coating of plastic cement. The felt shall extend over the base flashing 2 inches (51 mm).

R5519

Date Submitted	7/21/2012	**Section**	R905.6.7	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.6.7

Slate and slate-type shingles shall be installed in accordance with this chapter and the manufacturer's installation instructions. The product approval shall state the allowable uplift resistance for the attachment system. The installation of slate and slate-type shingles shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

Date Submitted	7/18/2012	**Section**	R905.7 Wood shingles.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.7 Wood shingles.
The installation of wood shingles shall comply with the provisions of this section.

R905.7.1 Deck requirements.
Wood shingles shall be installed on solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be less than 1-inch by 4-inch (25.4 mm by 102 mm) nominal dimensions and shall be spaced on centers equal to the weather exposure to coincide with the placement of fasteners.

R905.7.1.1 Solid sheathing required.
~~**In areas where the average daily temperature in January is 25°F (-4°C) or less, solid sheathing is required on that portion of the roof requiring the application of an ice barrier.**~~ **Reserved.**

R905.7.2 Deck slope.
Wood shingles shall be installed on slopes of three units vertical in 12 units horizontal (25-percent slope) or greater.

R905.7.3 Underlayment.
Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869, Type I or II.

R905.7.3.1 Ice barrier.
~~**In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.**~~

~~**Exception: Detached accessory structures that contain no conditioned floor area.**~~ **Reserved.**

R905.7.3.2 Underlayment and high winds.
~~**Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914mm) on center.**~~

~~**Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all Head laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19 mm)**~~

~~into the roof sheathing.~~

~~Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

R905.7.4 Material standards.
Wood shingles shall be of naturally durable wood and comply with the requirements of Table R905.7.4.

TABLE R905.7.4 WOOD SHINGLE MATERIAL REQUIREMENTS

MATERIAL	MINIMUM GRADES	APPLICABLE GRADING RULES
Wood shingles of naturally durable wood	1, 2 or 3	Cedar Shake and Shingle Bureau

R905.7.5 ~~Application~~ Attachment.
Wood shingles shall be installed according to this chapter and the manufacturer's installation instructions. ~~Wood shingles shall be laid with a side lap not less than 1 1/2 inches (38 mm) between joints in courses, and no two joints in any three adjacent courses shall be in direct alignment. Spacing between shingles shall not be less than 1/4 inch to 3/8 inch (6 mm to 10 mm). Weather exposure for wood shingles shall not exceed those set in Table R905.7.5. Fasteners for wood shingles shall be corrosion resistant with a minimum penetration of 1/2 inch (13 mm) into the sheathing. For sheathing less than 1/2 inch (13 mm) in thickness, the fasteners shall extend through the sheathing. Wood shingles shall be attached to the roof with two fasteners per shingle, positioned no more than 3/4 inch (19 mm) from each edge and no more than 1 inch (25 mm) above the exposure line.~~ Attachment in accordance with Table R905.7.5 shall be used for roofs with a mean roof height of 40 feet or less and in regions with a V_{asd} as determined in accordance with Section R301.2.1.3 to be 100 mph or less

TABLE R905.7.5 WOOD SHINGLE ~~WEATHER EXPOSURE AND ROOF SLOPE~~ AND SHAKE INSTALLATION

~~ROOFING MATERIAL~~	~~LENGTH (inches)~~	~~GRADE~~	~~EXPOSURE (inches)~~	
			~~3:12 pitch to~~	~~4:12 pitch or steeper~~
~~Shingles of naturally durable wood~~	~~16~~	~~No. 1~~	~~3 1/4~~	~~5~~
		~~No. 2~~	~~3 1/2~~	~~4~~
		~~No. 3~~	~~3~~	~~3 1/2~~
	~~18~~	~~No. 1~~	~~4 1/4~~	~~5 1/2~~
		~~No. 2~~	~~4~~	~~4 1/2~~
		~~No. 3~~	~~3 1/2~~	~~4~~
	~~24~~	~~No. 1~~	~~5 1/4~~	~~7 1/2~~
		~~No. 2~~	~~5 1/2~~	~~6 1/2~~
		~~No. 3~~	~~5~~	~~5 1/2~~

~~For SI: 1 inch = 25.4 mm.~~

-

-

-

-

-

ROOF ITEM	WOOD SHINGLES	WOOD SHAKES
1. Deck Requirements	Shingles shall be applied to roofs with solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be 4 less than 1?× 4? nominal dimensions and shall be spaced on center equal to the weather exposure to coincide with the placement of fasteners.	Shakes shall be applied to roofs with solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be less than 1? × 4? nominal dimensions and shall be spaced on center equal to the weather exposure to coincide with the placement of fasteners. When 1? × 4? spaced sheathing is installed at 10 inches, boards must be installed between the sheathing boards.
2. Interlayment	No requirements.	Interlayment shall comply with ASTM D 226, Type 1.
3. Underlayment	Underlayment shall comply with ASTM D 226, Type 1.	No requirements.
4. Application	—	—
Attachment	Fasteners for wood shingles shall be corrosion resistant with a minimum penetration of $^3/_4$ inch into the sheathing. For sheathing less than $^1/_2$ inch thick, the fasteners shall extend through the sheathing a minimum of $^3/_8$ inch.	Fasteners for wood shakes shall be corrosion resistant with a minimum penetration of $^3/_4$ inch into the sheathing. For sheathing less than $^1/_2$ inch thick, the fasteners shall extend through the sheathing a minimum of $^3/_8$ inch.
No. of fasteners	Wood shingles shall be attached to the roof with two fasteners per shingle, positioned no more than $^3/_4$ inch (19.1 mm) from each edge and no more than $1^1/_2$ inch (38.1 mm) above the exposure line.	Wood shakes shall be attached to the roof with two fasteners per shake, positioned no more than 1 inch (25.4 mm) from each edge and no more than $1^1/_2$ inches (38.1 mm) above the exposure line.

For SI: 1 inch = 25.4 mm

R905.7.6 ~~Valley flashing~~ Attachment for V_{asd} as determined in accordance with Section R301.2.1.3 greater than 100 mph.

~~Roof flashing shall be not less than No. 26 gage [0.019 inches (0.5 mm)] corrosion-resistant sheet metal and shall extend 10 inches (254 mm) from the centerline each way for roofs having slopes less than 12 units vertical in 12 units horizontal (100-percent slope), and 7 inches (178 mm) from the centerline each way for slopes of 12 units vertical in 12 units horizontal and greater. Sections of flashing shall have an end lap of not less than 4 inches (102 mm).~~ Wood shingles installed in accordance with Table R905.7.5 and the requirements of R905.7.6 have an allowable uplift resistance of 45 psf. The installation of wood shingles shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

-

R905.7.6.1 Fasteners.

R905.7.6.1.1 Nails.
Nails to attach the wood shakes shall be 3d stainless-steel ring-shank nails. The nails shall have sufficient length to penetrate through the wood shakes and shall penetrate through the sheathing.

R905.7.6.1.2 Screws.
Screws to attach the battens to the framing shall be No. 8 by $2^1/_2$ inches (64 mm) long corrosion resistant wood screws. Wood screws shall be corrosion resistant screw s conforming to ANSI/ASME B 18.6.1. The corrosion resistance shall meet ASTM A 641, Class 1 or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material.

R905.7.6.1.3 Wood battens.
1 Ã— 4 wood battens shall be attached to the wood joists with 2 screws per joist. The first batten shall be located 6 inches (152 mm) from the outer edge of the wood joist. Second batten shall be spaced $1\text{-}^1/_4$ inches (32 mm) from the first batten. The remaining battens shall be spaced a maximum 2 inches (51 mm) apart, except the last one which shall be spaced no greater than $^3/_4$ inches (19 mm) from the previous batten.

R905.7.6.1.4 Shingles.
Shingles shall be attached to the battens with 2 nails for each shingle placed $1^1/_2$ inch (38 mm) above the exposure line. The nails shall be $^3/_4$ to 1 inch (19 to 25 mm) from the shingle edges.

R905.7.7 ~~Label required~~ Application
~~Each bundle of shingles shall be identified by a label of an approved grading or inspection bureau or agency.~~ Wood shingles shall be installed according to this chapter and the manufacturer's installation instructions. Weather exposure for wood shingles shall not exceed those set in Table R905.7.7.

TABLE R905.7.7 WOOD SHINGLE WEATHER EXPOSURE AND ROOF SLOPE

ROOFING MATERIAL	LENGTH (inches)	GRADE	EXPOSURE (inches)	
			3:12 pitch to < 4:12	4:12 pitch or steeper
Shingles of naturally durable wood	16	No. 1	$3^3/_4$	5
		No. 2	$3^1/_2$	4
		No. 3	3	$3^1/_2$
	18	No. 1	$4^1/_4$	$5^1/_2$
		No. 2	4	$4^1/_2$
		No. 3	$3^1/_2$	4
	24	No. 1	$5^3/_4$	$7^1/_2$
		No. 2	$5^1/_2$	$6^1/_2$
		No. 3	5	$5^1/_2$

For SI: 1 inch = 25.4 mm.

R905.7.8 Flashing.
At the juncture of the roof and vertical surfaces, flashing and counter flashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, shall not be less than 0.017-inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal.

R905.7.8.1 Valley flashing.
Roof flashing shall be not less than No. 26 gage [0.017 inches (0.48 mm)] corrosion-resistant sheet metal and shall extend 10 inches (254 mm) from the centerline each way for roofs having slopes less than 12 units vertical in 12 units horizontal (100-percent slope), and 7 inches (178 mm) from the centerline each way for slopes of 12 units vertical in 12 units horizontal and greater. Sections of flashing shall have an end lap of not less than 4 inches (102 mm).

R905.7.9 Label required.
Each bundle of shingles shall be identified by a label of an approved grading or inspection bureau or agency.

R5520

Date Submitted	7/21/2012	**Section**	R905.7.1.1 Solid sheathing requir	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.7.1.1 Solid sheathing required.

~~In areas where the average daily temperature in January is 25°F (-4°C) or less, solid sheathing is required on that portion of the roof requiring the application of an ice barrier.~~ Reserved.

Date Submitted	7/21/2012	**Section**	R905.7.3 Underlayment..	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~**R905.7.3 Underlayment.**~~
~~Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869, Type I or II.~~

R905.7.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV.

R905.7.3.1 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~Exception: Detached accessory structures that contain no conditioned floor area.~~ Reserved.

-

-

~~**R905.7.3.2 Underlayment and high winds.**~~

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~

R905.7.3.2 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails

and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm).

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). End laps shall be offset by 6 feet (1829 mm).

R5521

Date Submitted	7/21/2012	**Section**	R905.7.3.1 Ice barrier.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.7.3.1 Ice barrier.

~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

R5522

Date Submitted	7/21/2012	**Section**	R905.7.3.2 Underlayment and high	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.7.3.2 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all Head laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32 gauge sheet metal. The cap nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

.

Date Submitted	7/21/2012	**Section**	R905.7.5 Application.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.7.5 ~~Application~~ Attachment.
Wood shingles shall be installed according to this chapter and the manufacturer's installation instructions. ~~Wood shingles shall be laid with a side lap not less than 1½ inches (38 mm) between joints in courses, and no two joints in any three adjacent courses shall be in direct alignment. Spacing between shingles shall not be less than ¼ inch to ⅜ inch (6 mm to 10 mm). Weather exposure for wood shingles shall not exceed those set in Table R905.7.5. Fasteners for wood shingles shall be corrosion resistant with a minimum penetration of ½ inch (13 mm) into the sheathing. For sheathing less than ½ inch (13 mm) in thickness, the fasteners shall extend through the sheathing. Wood shingles shall be attached to the roof with two fasteners per shingle, positioned no more than ¾ inch (19 mm) from each edge and no more than 1 inch (25 mm) above the exposure line.~~ Attachment in accordance with Table R905.7.5 shall be used for roofs with a mean roof height of 40 feet or less and in regions with a V_{asd} as determined in accordance with Section R301.2.1.3 to be 100 mph or less

TABLE R905.7.5 WOOD SHINGLE ~~WEATHER EXPOSURE AND ROOF SLOPE~~ AND SHAKE INSTALLATION

~~ROOFING MATERIAL~~	~~LENGTH (inches)~~	~~GRADE~~	~~EXPOSURE (inches)~~	
			~~3:12 pitch to~~	~~4:12 pitch or steeper~~
~~Shingles of naturally durable wood~~	~~16~~	~~No. 1~~	~~3¾~~	~~5~~
		~~No. 2~~	~~3½~~	~~4~~
		~~No. 3~~	~~3~~	~~3½~~
	~~18~~	~~No. 1~~	~~4¼~~	~~5½~~
		~~No. 2~~	~~4~~	~~4½~~
		~~No. 3~~	~~3½~~	~~4~~
	~~24~~	~~No. 1~~	~~5¾~~	~~7½~~
		~~No. 2~~	~~5½~~	~~6½~~
		~~No. 3~~	~~5~~	~~5½~~

~~**For SI: 1 inch = 25.4 mm.**~~

-

-
-
-

-

ROOF ITEM	WOOD SHINGLES	WOOD SHAKES
1. Deck Requirements	Shingles shall be applied to roofs with solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be 4 less than 1?× 4?	Shakes shall be applied to roofs with solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be less than 1? × 4? nominal dimensions and shall be spaced on center equal to the weather exposure to

	nominal dimensions and shall be spaced on center equal to the weather exposure to coincide with the placement of fasteners.	coincide with the placement of fasteners. When 1? × 4? spaced sheathing is installed at 10 inches, boards must be installed between the sheathing boards.
2. Interlayment	No requirements.	Interlayment shall comply with ASTM D 226, Type 1.
3. Underlayment	Underlayment shall comply with ASTM D 226, Type 1.	No requirements.
4. Application	—	—
Attachment	Fasteners for wood shingles shall be corrosion resistant with a minimum penetration of $^3/_4$ inch into the sheathing. For sheathing less than $^1/_2$ inch thick, the fasteners shall extend through the sheathing a minimum of $^3/_8$ inch.	Fasteners for wood shakes shall be corrosion resistant with a minimum penetration of $^3/_4$ inch into the sheathing. For sheathing less than $^1/_2$ inch thick, the fasteners shall extend through the sheathing a minimum of $^3/_8$ inch.
No. of fasteners	Wood shingles shall be attached to the roof with two fasteners per shingle, positioned no more than $^3/_4$ inch (19.1 mm) from each edge and no more than $1^1/_2$ inch (38.1 mm) above the exposure line.	Wood shakes shall be attached to the roof with two fasteners per shake, positioned no more than 1 inch (25.4 mm) from each edge and no more than $1^1/_2$ inches (38.1 mm) above the exposure line.

For SI: 1 inch = 25.4 mm

Date Submitted	7/21/2012	**Section**	R905.7.6 Valley flashing	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.7.6 ~~Valley flashing~~ Attachment for V_{asd} as determined in accordance with Section R301.2.1.3 greater than 100 mph.

~~Roof flashing shall be not less than No. 26 gage [0.019 inches (0.5 mm)] corrosion-resistant sheet metal and shall extend 10 inches (254 mm) from the centerline each way for roofs having slopes less than 12 units vertical in 12 units horizontal (100 percent slope), and 7 inches (178 mm) from the centerline each way for slopes of 12 units vertical in 12 units horizontal and greater. Sections of flashing shall have an end lap of not less than 4 inches (102 mm).~~ Wood shingles installed in accordance with Table R905.7.5 and the requirements of R905.7.6 have an allowable uplift resistance of 45 psf. The installation of wood shingles shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

Date Submitted	7/21/2012	**Section**	R905.7.6.1 Fasteners.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.7.6.1 Fasteners.

R905.7.6.1.1 Nails.
Nails to attach the wood shakes shall be 3d stainless-steel ring-shank nails. The nails shall have sufficient length to penetrate through the wood shakes and shall penetrate through the sheathing.

R905.7.6.1.2 Screws.
Screws to attach the battens to the framing shall be No. 8 by $2^1/_2$ inches (64 mm) long corrosion resistant wood screws. Wood screws shall be corrosion resistant screw s conforming to ANSI/ASME B 18.6.1. The corrosion resistance shall meet ASTM A 641, Class 1 or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material.

R905.7.6.1.3 Wood battens.
1 Ã— 4 wood battens shall be attached to the wood joists with 2 screws per joist. The first batten shall be located 6 inches (152 mm) from the outer edge of the wood joist. Second batten shall be spaced $1\text{-}^1/_4$ inches (32 mm) from the first batten. The remaining battens shall be spaced a maximum 2 inches (51 mm) apart, except the last one which shall be spaced no greater than $^3/_4$ inches (19 mm) from the previous batten.

R905.7.6.1.4 Shingles.
Shingles shall be attached to the battens with 2 nails for each shingle placed $1^1/_2$ inch (38 mm) above the exposure line. The nails shall be $^3/_4$ to 1 inch (19 to 25 mm) from the shingle edges.

R5526

Date Submitted	7/21/2012	**Section**	R905.7.7 Label required	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.7.7 ~~Label required~~ Application
~~**Each bundle of shingles shall be identified by a label of an approved grading or inspection bureau or agency.**~~
Wood shingles shall be installed according to this chapter and the manufacturer's installation instructions.
Weather exposure for wood shingles shall not exceed those set in Table R905.7.7.

TABLE R905.7.7 WOOD SHINGLE WEATHER EXPOSURE AND ROOF SLOPE

ROOFING MATERIAL	LENGTH (inches)	GRADE	EXPOSURE (inches)	
			3:12 pitch to < 4:12	4:12 pitch or steeper
Shingles of naturally durable wood	16	No. 1	$3^3/_4$	5
		No. 2	$3^1/_2$	4
		No. 3	3	$3^1/_2$
	18	No. 1	$4^1/_4$	$5^1/_2$
		No. 2	4	$4^1/_2$
		No. 3	$3^1/_2$	4
	24	No. 1	$5^3/_4$	$7^1/_2$
		No. 2	$5^1/_2$	$6^1/_2$
		No. 3	5	$5^1/_2$

For SI: 1 inch = 25.4 mm.

R5527

Date Submitted	7/21/2012	**Section**	R905.7.8 Flashing.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.7.8 Flashing.
At the juncture of the roof and vertical surfaces, flashing and counter flashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, shall not be less than 0.017-inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal.

R905.7.8.1 Valley flashing.
Roof flashing shall be not less than No. 26 gage [0.017 inches (0.48 mm)] corrosion-resistant sheet metal and shall extend 10 inches (254 mm) from the centerline each way for roofs having slopes less than 12 units vertical in 12 units horizontal (100-percent slope), and 7 inches (178 mm) from the centerline each way for slopes of 12 units vertical in 12 units horizontal and greater. Sections of flashing shall have an end lap of not less than 4 inches (102 mm).

R5528

Date Submitted	7/21/2012	**Section**	R905.7.9 Label required	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.7.9 Label required.
Each bundle of shingles shall be identified by a label of an approved grading or inspection bureau or agency.

R5314

Date Submitted	7/18/2012	**Section**	R905.8 Wood shakes.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8 Wood shakes.
The installation of wood shakes shall comply with the provisions of this section.

R905.8.1 Deck requirements.
Wood shakes shall be used only on solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be less than 1-inch by 4-inch (25 mm by 102 mm) nominal dimensions and shall be spaced on centers equal to the weather exposure to coincide with the placement of fasteners. Where 1-inch by 4-inch (25 mm by 102 mm) spaced sheathing is installed at 10 inches (254 mm) on center, additional 1-inch by 4-inch (25 mm by 102 mm) boards shall be installed between the sheathing boards.

R905.8.1.1 Solid sheathing required.
~~In areas where the average daily temperature in January is 25°F (-4°C) or less, solid sheathing is required on that portion of the roof requiring an ice barrier~~ Reserved.

R905.8.2 Deck slope.
Wood shakes shall only be used on slopes of ~~three~~ four (4) units vertical in twelve (12) units horizontal (~~25~~ 33-percent slope) or greater.

R905.8.3 Underlayment.
Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869, Type I or II.

R905.8.3.1 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~Exception: Detached accessory structures that contain no conditioned floor area.~~ Reserved.

R905.8.3.2 Underlayment and high winds.
~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch~~

~~(25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.~~

~~Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~
Reserved.

R905.8.~~4~~ 3.3 Interlayment.
Interlayment shall comply with ASTM D 226, Type I.

R905.8.4 ~~Interlayment~~ Attachment.
~~Interlayment shall comply with ASTM D 226, Type I.~~

Attachment in accordance with Table R905.7.5 shall be used for roofs with a mean roof height of 40 feet or less and in regions with a V_{asd}, as determined in accordance with Section R301.2.1.3, of 100 mph or less.

R905.8.5 Material standards.
Wood shakes shall comply with the requirements of Table R905.8.5.

TABLE R905.8.5 WOOD SHAKE MATERIAL REQUIREMENTS

MATERIAL	MINIMUM GRADES	APPLICABLE GRADING RULES
Wood shakes of naturally durable wood	1	Cedar Shake and Shingle Bureau
Taper sawn shakes of naturally durable wood	1 or 2	Cedar Shake and Shingle Bureau
Preservative-treated shakes and shingles of naturally durable wood	1	Cedar Shake and Shingle Bureau
Fire-retardant-treated shakes and shingles of naturally durable wood	1	Cedar Shake and Shingle Bureau
Preservative-treated taper sawn shakes of Southern pine treated in accordance with AWPA Standard U1 (Commodity Specification A, Use Category 3B and Section 5.6)	1 or 2	Forest Products Laboratory of the Texas Forest Services

R905.8.6 Application.
~~Wood shakes shall be installed according to this chapter and the manufacturer's installation instructions.~~

~~Wood shakes shall be laid with a side lap not less than $1\frac{1}{2}$ inches (38 mm) between joints in adjacent courses. Spacing between shakes in the same course shall be $\frac{3}{8}$ inch to $\frac{5}{8}$ inch (9.5 mm to 15.9 mm) for shakes and tapersawn shakes of naturally durable wood and shall be $\frac{3}{8}$ inch to $\frac{5}{8}$ inch (9.5 mm to 15.9 mm) for preservative-treated taper sawn shakes. Weather exposure for wood shakes shall not exceed those set forth in Table R905.8.6. Fasteners for wood shakes shall be corrosion-resistant, with a minimum penetration of $\frac{1}{2}$ inch (12.7 mm) into the sheathing. For sheathing less than $\frac{1}{2}$ inch (12.7 mm) thick, the fasteners shall extend through the sheathing. Wood shakes shall be attached to the roof with two fasteners per shake, positioned no more than 1 inch (25 mm) from each edge and no more than 2 inches (51 mm) above the exposure line.~~
Reserved.

~~TABLE R905.8.6 WOOD SHAKE WEATHER EXPOSURE AND ROOF SLOPE~~

~~ROOFING MATERIAL~~	~~LENGTH (inches)~~	~~GRADE~~	~~EXPOSURE (inches)~~
			~~4:12 pitch or steeper~~
~~Shakes of naturally durable wood~~	~~18~~	~~No. 1~~	~~$7\frac{1}{2}$~~
	~~24~~	~~No. 1~~	~~10[a]~~
~~Preservative-treated taper sawn shakes of Southern Yellow Pine~~	~~18~~	~~No. 1~~	~~$7\frac{1}{2}$~~
	~~24~~	~~No. 1~~	~~10~~
	~~18~~	~~No. 2~~	~~$5\frac{1}{2}$~~
	~~24~~	~~No. 2~~	~~$7\frac{1}{2}$~~
~~Taper-sawn shakes of naturally durable wood~~	~~18~~	~~No. 1~~	~~$7\frac{1}{2}$~~
	~~24~~	~~No. 1~~	~~10~~
	~~18~~	~~No. 2~~	~~$5\frac{1}{2}$~~
	~~24~~	~~No. 2~~	~~$7\frac{1}{2}$~~

~~For SI: 1 inch = 25.4 mm.~~
~~a. For 24-inch by $\frac{3}{8}$-inch handsplit shakes, the maximum exposure is $7\frac{1}{2}$ inches.~~

R905.8.7 ~~**Shake placement**~~ **Attachment for V_{asd} as determined in accordance with Section R301.2.1.3 greater than 100 mph.**
~~The starter course at the eaves shall be doubled and the bottom layer shall be either 15-inch (381 mm), 18-inch (457 mm) or 24-inch (610 mm) wood shakes or wood shingles. Fifteen-inch (381 mm) or 18-inch (457 mm) wood shakes may be used for the final course at the ridge. Shakes shall be interlaid with 18-inch-wide (457 mm) strips of not less than No. 30 felt shingled between each course in such a manner that no felt is exposed to the weather by positioning the lower edge of each felt strip above the butt end of the shake it covers a distance equal to twice the weather exposure.~~ **Wood shakes installed in accordance with Table R905.7.5 and the requirements of R905.8.7 have an allowable uplift resistance of 90 psf. The installation of wood shakes shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).**

R905.8.7.1 Fasteners.

R905.8.7.1.1 Nails.
Nails to attach the wood shakes shall be 6d stainless-steel ring-shank nails. The nails shall have sufficient length to penetrate through the wood shakes and shall penetrate through the sheathing.

R905.8.7.1.2 Screws.
Screws to attach the battens to the framing shall be No. 8 by 2 $^1/_2$ inches long corrosion resistant wood screws. Wood screws shall be corrosion resistant screws conforming to ANSI/ASME B 18.6.1. The corrosion resistance shall meet ASTM A 641, Class 1 or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material.

R905.8.7.1.3 Wood battens.
1 × 6 wood battens shall be attached to the wood joists with 2 screws per joist. The first batten shall be located 6 inches from the outer edge of the wood joist. The second batten shall be spaced 1-$^1/_4$ inches from the first batten. The remaining battens shall be spaced a maximum 2 inches apart, except the last one, which shall be spaced no greater than $^3/_4$ inches from the previous batten.

R905.8.7.1.4 Shakes.
Shakes shall be attached to the battens with 2 nails for each shake placed 1$^1/_2$ inch above the exposure line. The nails shall be $^3/_4$ to 1 inch from the shake edges.

R905.8.8 ~~Valley flashing~~ Application.
~~Roof valley flashing shall not be less than No. 26 gage [0.019 inch (0.5 mm)] corrosion-resistant sheet metal and shall extend at least 11 inches (279 mm) from the centerline each way. Sections of flashing shall have an end lap of not less than 4 inches (102 mm).~~

Wood shakes shall be laid with a side lap not less than 1$^1/_2$ inches (38 mm) between joints in adjacent courses. Spacing between shakes in the same course shall be $^3/_8$ to $^5/_8$ inches (9.5 to 15.9 mm) for shakes and taper sawn shakes of naturally durable wood and shall be $^1/_4$ to $^3/_8$ inch (6.4 to 9.5 mm) for preservative taper sawn shakes. Weather exposure for wood shakes shall not exceed those set in Table R905.8.8.

TABLE R905.8.8 WOOD SHAKE WEATHER EXPOSURE AND ROOF SLOPE

ROOFING MATERIAL	LENGTH (inches)	GRADE	EXPOSURE (inches) 4:12 pitch or steeper
Shakes of naturally durable wood	18	No. 1	7$^1/_2$
	24	No. 1	10[a]
Preservative-treated taper sawn shakes of Southern Yellow Pine	18	No. 1	7$^1/_2$
	24	No. 1	10
	18	No. 2	5$^1/_2$
	24	No. 2	7$^1/_2$

Taper-sawn shakes of naturally durable wood	18	No. 1	$7^1/_2$
	24	No. 1	10
	18	No. 2	$5^1/_2$
	24	No. 2	$7^1/_2$

For SI: 1 inch = 25.4 mm.
a. For 24-inch by $^3/_8$-inch handsplit shakes, the maximum exposure is $7^1/_2$ inches.

R905.8.9 Label required.
Each bundle of shakes shall be identified by a label of an approved grading or inspection bureau or agency.

R905.8.10 Flashing.
At the juncture of the roof and vertical surfaces, flashing and counter flashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, shall not be less than 0.017-inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal.

R905.8.10.1 Valley flashing.
Valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of four (4) units vertical in twelve (12) units horizontal (33-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) underlayment of one layer of ASTM D 226 Type I underlayment running the full length of the valley, in addition to other required underlayment per Table R903.2.1 Valley flashing and flashing metal shall be a minimum thickness as provided in Table R903.2.1 for nonferrous metal or stainless steel.

R5529

Date Submitted	7/21/2012	**Section**	R905.8.1.1 Solid sheathing requir	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8.1.1 Solid sheathing required.
~~In areas where the average daily temperature in January is 25°F (-4°C) or less, solid sheathing is required on that portion of the roof requiring an ice barrier~~ Reserved.

Date Submitted	7/21/2012	**Section**	R905.8.10 Flashing.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8.10 Flashing.
At the juncture of the roof and vertical surfaces, flashing and counter flashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, shall not be less than 0.017-inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal.

R905.8.10.1 Valley flashing.
Valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of four (4) units vertical in twelve (12) units horizontal (33-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) underlayment of one layer of ASTM D 226 Type I underlayment running the full length of the valley, in addition to other required underlayment per Table R903.2.1 Valley flashing and flashing metal shall be a minimum thickness as provided in Table R903.2.1 for nonferrous metal or stainless steel.

Date Submitted	7/21/2012	**Section**	R905.8.2 Deck slope.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8.2 Deck slope.

Wood shakes shall only be used on slopes of ~~three~~ four (4) units vertical in twelve (12) units horizontal (~~25~~ 33-percent slope) or greater.

Date Submitted	7/21/2012	**Section**	R905.8.3 Underlayment.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Incorporates intent of foundation code for attachment of underlayment in high wind section and unifies installation guidelines of underlayment with current Florida-specific criteria.

Rationale

This code modification unites the intent of the foundation code for enhanced attachment and types of underlayment in the high wind section with the 2010 FBC Florida specific code language. The subsequent foundation code solution for the ASCE 7-10 increased wind speeds to enhance attachment and upgrade types of underlayment is consistent with the 2010 FBC code language and has been performance proven in Florida's unique environment including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to building and property owners relative to cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Impact to industry relative to the cost of compliance with code

No impact. Will incorporate the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC code language.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens and unifies the code by incorporating the intent of the foundation code for enhanced attachment and types of underlayment used in high wind section with current commission approved 2010 FBC performance proven code language.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~**R905.8.3 Underlayment.**~~

~~Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869, Type I or II.~~

R905.8.3 Underlayment

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV.

R905.8.3.1 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~Exception: Detached accessory structures that contain no conditioned floor area.~~ Reserved.

-

-

~~**R905.8.3.2 Underlayment and high winds.**~~

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~

R905.8.3.2 Underlayment Application.

Underlayment shall be installed using one of the following methods:

1. Two layer underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV: Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened

sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm).

2. One layer underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV: Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). End laps shall be offset by 6 feet (1829 mm).

Date Submitted	7/21/2012	**Section**	R905.8.3.1 Ice barrier.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8.3.1 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area.~~ Reserved.

Date Submitted	7/21/2012	**Section**	R905.8.3.2 Underlayment and high	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8.3.2 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of ¾ inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

Date Submitted	7/21/2012	**Section**	R905.8.3.2 Underlayment and high	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8.~~4~~ 3.3 Interlayment.
Interlayment shall comply with ASTM D 226, Type I.

Date Submitted	7/21/2012	**Section**	R905.8.4 Interlayment.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8.4 ~~Interlayment~~ Attachment.
~~Interlayment shall comply with ASTM D 226, Type I.~~

Attachment in accordance with Table R905.7.5 shall be used for roofs with a mean roof height of 40 feet or less and in regions with a V_{asd}, as determined in accordance with Section R301.2.1.3, of 100 mph or less.

Date Submitted	7/21/2012	**Section**	R905.8.6 Application.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8.6 Application.

~~**Wood shakes shall be installed according to this chapter and the manufacturer's installation instructions. Wood shakes shall be laid with a side lap not less than 1½ inches (38 mm) between joints in adjacent courses. Spacing between shakes in the same course shall be ⅜ inch to ⅝ inch (9.5 mm to 15.9 mm) for shakes and tapersawn shakes of naturally durable wood and shall be ⅜ inch to ⅝ inch (9.5 mm to 15.9 mm) for preservative-treated taper sawn shakes. Weather exposure for wood shakes shall not exceed those set forth in Table R905.8.6. Fasteners for wood shakes shall be corrosion-resistant, with a minimum penetration of ½ inch (12.7 mm) into the sheathing. For sheathing less than ½ inch (12.7 mm) thick, the fasteners shall extend through the sheathing. Wood shakes shall be attached to the roof with two fasteners per shake, positioned no more than 1 inch (25 mm) from each edge and no more than 2 inches (51 mm) above the exposure line.**~~

-

~~**TABLE R905.8.6 WOOD SHAKE WEATHER EXPOSURE AND ROOF SLOPE**~~

~~ROOFING MATERIAL~~	~~LENGTH (inches)~~	~~GRADE~~	~~EXPOSURE (inches)~~
			~~4:12 pitch or steeper~~
~~Shakes of naturally durable wood~~	~~18~~	~~No. 1~~	~~7½~~
	~~24~~	~~No. 1~~	~~10[a]~~
~~Preservative-treated taper sawn shakes of Southern Yellow Pine~~	~~18~~	~~No. 1~~	~~7½~~
	~~24~~	~~No. 1~~	~~10~~
	~~18~~	~~No. 2~~	~~5½~~
	~~24~~	~~No. 2~~	~~7½~~
~~Taper-sawn shakes of naturally durable wood~~	~~18~~	~~No. 1~~	~~7½~~
	~~24~~	~~No. 1~~	~~10~~
	~~18~~	~~No. 2~~	~~5½~~
	~~24~~	~~No. 2~~	~~7½~~

~~For SI: 1 inch = 25.4 mm.~~
~~a. For 24-inch by ⅜-inch handsplit shakes, the maximum exposure is 7½ inches.~~
Reserved.

Date Submitted	7/21/2012	**Section**	R905.8.7 Shake placement	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8.7 ~~Shake placement~~ Attachment for V_{asd} as determined in accordance with Section R301.2.1.3 greater than 100 mph.

~~The starter course at the eaves shall be doubled and the bottom layer shall be either 15-inch (381 mm), 18-inch (457 mm) or 24-inch (610 mm) wood shakes or wood shingles. Fifteen-inch (381 mm) or 18-inch (457 mm) wood shakes may be used for the final course at the ridge. Shakes shall be interlaid with 18-inch-wide (457 mm) strips of not less than No. 30 felt shingled between each course in such a manner that no felt is exposed to the weather by positioning the lower edge of each felt strip above the butt end of the shake it covers a distance equal to twice the weather exposure~~. Wood shakes installed in accordance with Table R905.7.5 and the requirements of R905.8.7 have an allowable uplift resistance of 90 psf. The installation of wood shakes shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

Date Submitted	7/21/2012	**Section**	R905.8.7.1 Fasteners.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8.7.1 Fasteners.

R905.8.7.1.1 Nails.
Nails to attach the wood shakes shall be 6d stainless-steel ring-shank nails. The nails shall have sufficient length to penetrate through the wood shakes and shall penetrate through the sheathing.

R905.8.7.1.2 Screws.
Screws to attach the battens to the framing shall be No. 8 by 2 $^{1}/_{2}$ inches long corrosion resistant wood screws. Wood screws shall be corrosion resistant screws conforming to ANSI/ASME B 18.6.1. The corrosion resistance shall meet ASTM A 641, Class 1 or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material.

R905.8.7.1.3 Wood battens.
1 × 6 wood battens shall be attached to the wood joists with 2 screws per joist. The first batten shall be located 6 inches from the outer edge of the wood joist. The second batten shall be spaced 1 -$^{1}/_{4}$ inches from the first batten. The remaining battens shall be spaced a maximum 2 inches apart, except the last one, which shall be spaced no greater than $^{3}/_{4}$ inches from the previous batten.

R905.8.7.1.4 Shakes.
Shakes shall be attached to the battens with 2 nails for each shake placed 1 $^{1}/_{2}$ inch above the exposure line. The nails shall be $^{3}/_{4}$ to 1 inch from the shake edges.

Date Submitted	7/21/2012	**Section**	R905.8.8 Valley flashing.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.8.8 ~~Valley flashing~~ Application.
~~**Roof valley flashing shall not be less than No. 26 gage [0.019 inch (0.5 mm)] corrosion-resistant sheet metal and shall extend at least 11 inches (279 mm) from the centerline each way. Sections of flashing shall have an end lap of not less than 4 inches (102 mm).**~~

Wood shakes shall be laid with a side lap not less than $1^1/_2$ inches (38 mm) between joints in adjacent courses. Spacing between shakes in the same course shall be $^3/_8$ to $^5/_8$ inches (9.5 to 15.9 mm) for shakes and taper sawn shakes of naturally durable wood and shall be $^1/_4$ to $^3/_8$ inch (6.4 to 9.5 mm) for preservative taper sawn shakes. Weather exposure for wood shakes shall not exceed those set in Table R905.8.8.

TABLE R905.8.8 WOOD SHAKE WEATHER EXPOSURE AND ROOF SLOPE

ROOFING MATERIAL	LENGTH (inches)	GRADE	EXPOSURE (inches) 4:12 pitch or steeper
Shakes of naturally durable wood	18	No. 1	$7^1/_2$
	24	No. 1	10[a]
Preservative-treated taper sawn shakes of Southern Yellow Pine	18	No. 1	$7^1/_2$
	24	No. 1	10
	18	No. 2	$5^1/_2$
	24	No. 2	$7^1/_2$
Taper-sawn shakes of naturally durable wood	18	No. 1	$7^1/_2$
	24	No. 1	10
	18	No. 2	$5^1/_2$
	24	No. 2	$7^1/_2$

For SI: 1 inch = 25.4 mm.
a. For 24-inch by $^3/_8$-inch handsplit shakes, the maximum exposure is $7^1/_2$ inches.

R5303

Date Submitted	7/18/2012	**Section**	R905.9 Built-up roofs.	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.9 Built-up roofs.
The installation of built-up roofs shall comply with the provisions of this section.

R905.9.1 Slope.
Built-up roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage, except for coal-tar built-up roofs, which shall have a design slope of a minimum one-eighth unit vertical in 12 units horizontal (1-percent slope).

R905.9.2 Material standards.
Built-up roof covering materials shall comply with the standards in Table R905.9.2 or UL 55A.
R905.9.2.1
Red rosin paper shall be used when the membrane is applied directly to a wood deck or cementitious fiber decks.

TABLE R905.9.2 BUILT-UP ROOFING MATERIAL STANDARDS

MATERIAL STANDARD	STANDARD
Acrylic coatings used in roofing	ASTM D 6083
Aggregate surfacing	ASTM D 1863
Asphalt adhesive used in roofing	ASTM D 3747
Asphalt cements used in roofing	ASTM D 2822; D 3019; D 4586
Asphalt-coated glass fiber base sheet	ASTM D 4601
Asphalt coatings used in roofing	ASTM D 1227; D 2823; D 2824; D 4479
Asphalt glass felt	ASTM D 2178
Asphalt primer used in roofing	ASTM D 41
Asphalt-saturated and asphalt-coated organic felt base sheet	ASTM D 2626
Asphalt-saturated organic felt (perforated)	ASTM D 226
Asphalt used in roofing	ASTM D 312
Coal-tar cements used in roofing	ASTM D 4022; D 5643
Coal-tar primer used in roofing, dampproofing and waterproofing	ASTM D 43
Coal-tar saturated organic felt	ASTM D 227
Coal-tar used in roofing	ASTM D 450, Type I or II
Glass mat, coal tar	ASTM D 4990
Glass mat, venting type	ASTM D 4897
Mineral-surfaced inorganic cap sheet	ASTM D 3909
Thermoplastic fabrics used in roofing	ASTM D 5665; D 5726

R905.9.3 Application.
Built-up roofs shall be installed according to this chapter and the manufacturer's installation instructions.

R5540

Date Submitted	7/21/2012	**Section**	R905.9.2.1	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.9.2.1

Red rosin paper shall be used when the membrane is applied directly to a wood deck or cementitious fiber decks.

R5301

Date Submitted	7/18/2012	**Section**	R905	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION R905 REQUIREMENTS FOR ROOF COVERINGS

R905.1 Roof covering application.
Roof coverings shall be applied in accordance with the applicable provisions of this section and the manufacturer's installation instructions. Unless otherwise specified in this section, roof coverings shall be installed to resist the component and cladding loads specified in Table R301.2(2), adjusted for height and exposure in accordance with Table R301.2(3).

R905.2 Asphalt shingles.
The installation of asphalt shingles shall comply with the provisions of this section.

R905.2.1 Sheathing requirements.
Asphalt shingles shall be fastened to solidly sheathed decks.

R905.2.2 Slope.
Asphalt shingles shall be used only on roof slopes of two units vertical in 12 units horizontal (2:12) or greater. For roof slopes from two units vertical in 12 units horizontal (2:12) up to four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section R905.2.7.

R905.2.3 Underlayment.
Unless otherwise noted, required underlayment shall conform ~~to~~ with ASTM D 226 Type I or Type II, ASTM D 4869, Type I or Type II, or ASTM D 6757.

Self-adhering polymer modified bitumen sheet shall comply with ASTM D 1970.

R905.2.4 Asphalt shingles.
Asphalt shingles shall comply with ASTM D 225 or D 3462.

R905.2.4.1 Wind resistance of asphalt shingles.
Asphalt shingles shall be ~~tested in accordance with ASTM D 7158. Asphalt shingles shall meet the classification requirements of Table R905.2.4.1(1) for the appropriate maximum basic wind speed. Asphalt shingle packaging shall bear a label to indicate compliance with ASTM D 7158 and the required classification in Table R905.2.4.1(1)~~ installed in accordance with Section R905.2.6. and R905.2.6.1.

~~Exception: Asphalt shingles not included in the scope of ASTM D 7158 shall be tested and labeled to indicate compliance with ASTM D 3161 and the required classification in Table R905.2.4.1(2).~~

TABLE R905.2.4.1(1) ~~CLASSIFICATION OF ASPHALT ROOF SHINGLES PER ASTM D 7158~~

~~MAXIMUM BASIC WIND SPEED FROM FIGURE 301.2(4)A (mph)~~	~~CLASSIFICATION REQUIREMENT~~
~~85~~	~~D, G or H~~
~~90~~	~~D, G or H~~
~~100~~	~~G or H~~
~~110~~	~~G or H~~
~~120~~	~~G or H~~

~~130~~	~~H~~
~~140~~	~~H~~
~~150~~	~~H~~

~~For SI: 1 mile per hour = 0.447 m/s~~.
Reserved.

TABLE R905.2.4.1(2) ~~CLASSIFICATION OF ASPHALT SHINGLES PER ASTM D 3161~~

~~MAXIMUM BASIC WIND SPEED FROM FIGURE 301.2(4)A (mph)~~	~~CLASSIFICATION REQUIREMENT~~
~~85~~	~~A, D or F~~
~~90~~	~~A, D or F~~
~~100~~	~~A, D or F~~
~~110~~	~~F~~
~~120~~	~~F~~
~~130~~	~~F~~
~~140~~	~~F~~
~~150~~	~~F~~

~~For SI: 1 mile per hour = 0.447 m/s.~~
Reserved.

R905.2.5 Fasteners.
Fasteners for asphalt shingles shall be galvanized steel, stainless steel, aluminum or copper roofing nails, minimum 12 gage [0.105 inch (3 mm)] shank with a minimum $^3/_8$ -inch-diameter (10 mm) head, ASTM F 1667, of a length to penetrate through the roofing materials and a minimum of $^3/_4$ inch (19 mm) into the roof sheathing. Where the roof sheathing is less than $^3/_4$ inch (19 mm) thick, the fasteners shall penetrate through the sheathing. Fasteners shall comply with ASTM F 1667.

R905.2.6 Attachment.
Asphalt shingles shall have the minimum number of fasteners required by the manufacturer, but not less than four fasteners per strip shingle or two fasteners per individual shingle. Where the roof slope exceeds 21 units vertical in 12 units horizontal (21:12, 175-percent slope), shingles shall be installed as required by the manufacturer.

R905.2.6.1 Wind Resistance of Asphalt Shingles.
Asphalt Shingles shall be classified in accordance with ASTM D 3161, TAS 107 or ASTM D 7158 to resist the basic wind speed per Figure R301.2(4). Shingles classified as ASTM D 3161 Class D or classified as ASTM D

7158 Class G are acceptable for use in the 100-mph wind zone. Shingles classified as ASTM D 3161 Class F, TAS107 or ASTM D 7158 Class H are acceptable for use in all wind zones. Asphalt shingle wrappers shall indicate compliance with one of the required classifications as shown in Table R905.2.6.1.

TABLE R905.2.6.1 WIND RESISTANCE OF ASPHALT SHINGLES

Classification of Asphalt Shingles			
Maximum Basic Wind Speed, V_{ult}, From Figure R301.2(4)	**V_{asd} as determined in accordance with Section R301.2.1.3**	**ASTM D 7158**	**ASTM D 3161**
110	85	D, G or H	A, D or F
116	90	D, G or H	A, D or F
129	100	G or H	A, D or F
142	110	G or H	F
155	120	G or H	F
168	130	H	F
181	140	H	F
194	150	H	F

R905.2.7 Underlayment application.
For roof slopes from two units vertical in 12 units horizontal (17-percent slope), up to four units vertical in 12 units horizontal (33-percent slope), two layers of underlayment complying with ASTM D 226 Type I or Type II, ASTM D 4869 Type I or Type II, or ASTM D 6757 shall be ~~two layers~~ applied in the following manner.

1. Apply a 19-inch (483 mm) strip of underlayment felt parallel ~~to~~ with and starting at the eaves~~, fastened sufficiently to hold in place~~.

2. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm)~~, and fastened sufficiently to hold in place~~. ~~Distortions in the underlayment shall not interfere with the ability of the shingles to seal.~~

3. End laps shall be offset by 6 feet (1829 mm).

4. Corrosion resistant fasteners are to be applied along the overlap at a maximum spacing of 36 inches (914 mm) on center.

For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater, one layer of underlayment complying with ASTM D 226 Type I or Type II, ASTM D 4869 Type I or Type II, or ASTM D 6757 shall be ~~one layer~~ applied in the following manner.

1. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm) ~~fastened sufficiently to hold in place. Distortions in the underlayment shall not interfere with the ability of the shingles to seal.~~

2. End laps shall be offset by 6 feet (1829 mm).

3. Corrosion resistant fasteners are to be applied along the overlap at a maximum spacing of 36 inches (914 mm) on center.

R905.2.7.1 Ice barrier.
~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of a least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet, shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~Exception: Detached accessory structures that contain no conditioned floor area.~~ Reserved.

R905.2.7.2 Underlayment and high winds.
~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 6757. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of $^{3}/_{4}$ inch (19 mm) into the roof sheathing.~~

~~Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~
Reserved.

R905.2.8 Flashing.
Flashing for asphalt shingles shall comply with this section.

R905.2.8.1 Base and ~~cap~~ counter flashing.
Base and ~~cap~~ counter flashing shall be installed ~~in accordance with manufacturer's installation instructions. Base flashing shall be of either corrosion-resistant metal of minimum nominal 0.019-inch (0.5 mm) thickness or mineral surface roll roofing weighing a minimum of 77 pounds per 100 square feet (4 kg/m^2). Cap flashing shall be corrosion-resistant metal of minimum nominal 0.019-inch (0.5 mm) thickness~~ as follows:

1. In accordance with manufacturer's installation instructions, or

2. A continuous metal minimum 4 inch by 4 inch "L" flashing shall be set in approved flashing cement and set flush to base of wall and over the underlayment. Both horizontal and vertical metal flanges shall be fastened 6

inches (152 mm) on center with approved fasteners. All laps shall be a minimum of 4 inches (102 mm) fully sealed in approved flashing cement. Flashing shall start at the lower portion of roof to ensure water-shedding capabilities of all metal laps. The entire edge of the horizontal flange shall be sealed covering all nail penetrations with approved flashing cement and membrane. Shingles shall overlap the horizontal flange and shall be set in approved flashing cement.

Base flashing shall be of either corrosion-resistant metal provided in Section R905.2.8.1 or mineral surface roll roofing weighing a minimum of 77 pounds per 100 square feet (3.76 kg/m^2). Counter flashing shall be corrosion-resistant metal with a minimum thickness provided in Table R903.2.1.

R905.2.8.2 Valleys.
Valley linings shall be installed in accordance with the manufacturer's installation instructions before applying shingles. Valley linings of the following types shall be permitted:

1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be at least ~~24~~ 16 inches (~~610~~ 406 mm) wide and of any of the corrosion-resistant metals in Table ~~R905.2.8.2~~ R903.2.1 .

2. For open valleys, valley lining of two plies of mineral surfaced roll roofing, complying with ASTM D 3909 or ASTM D 6380 Class M, shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer a minimum of 36 inches (914 mm) wide.

3. For closed valleys (valley covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D 6380 Class S and at least 36 inches wide (914 mm) or valley lining as described in Item 1 or 2 above shall be permitted. Self-adhering polymer modified bitumen underlayment complying with ASTM D 1970 shall be permitted in lieu of the lining material.

TABLE R905.2.8.2 VALLEY LINING MATERIAL

~~MATERIAL~~	~~MINIMUM THICKNESS (inches)~~	~~GAGE~~	~~WEIGHT (pounds)~~
~~Cold-rolled copper~~	~~0.0216 nominal~~	—	~~ASTM B 370, 16 oz. per square foot~~
~~Lead-coated copper~~	~~0.0216 nominal~~	—	~~ASTM B 101, 16 oz. per square foot~~
~~High-yield copper~~	~~0.0162 nominal~~	—	~~ASTM B 370, 12 oz. per square foot~~
~~Lead-coated high-yield copper~~	~~0.0162 nominal~~	—	~~ASTM B 101, 12 oz. per square foot~~
~~Aluminum~~	~~0.024~~	—	—
~~Stainless steel~~	—	~~28~~	—
~~Galvanized steel~~	~~0.0179~~	~~26 (zinc coated G90)~~	—
~~Zinc alloy~~	~~0.027~~	—	—
~~Lead~~	—	—	~~2 1/2~~
~~Painted terne~~	—	—	~~20~~

~~For SI: 1 inch = 25.4 mm, 1 pound = 0.454 kg.~~ Reserved.

R905.2.8.3 Sidewall flashing.
~~Base f~~ Flashing against a vertical sidewall shall be by the step-flashing method or continuous "L" flashing method. ~~continuous or step flashing and shall be a minimum of 4 inches (102 mm) in height and 4 inches (102 mm) in width and shall direct water away from the vertical sidewall onto the roof and/or into the gutter. Where siding is provided on the vertical sidewall, the vertical leg of the flashing shall be continuous under the siding. Where anchored masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and counterflashing shall be provided in accordance with Section R703.7.2.2. Where exterior plaster or adhered masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and Section R703.6.3~~.

R905.2.8.4 Other flashing.
Flashing against a vertical front wall, as well as soil stack, vent pipe and chimney flashing, shall be applied according to the asphalt shingle manufacturer's printed instructions.

R905.2.8.5 Drip edge.
~~A drip edge shall be provided at eaves and gables of shingle roofs. Adjacent pieces of drip edge shall be overlapped a minimum of 2 inches (51 mm). Drip edges shall extend a minimum of 0.25 inch (6.4 mm) below the roof sheathing and extend up the roof deck a minimum of 2 inches (51 mm). Drip edges shall be mechanically fastened to the roof deck at a maximum of 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5. Underlayment shall be installed over the drip edge along eaves and under the underlayment on gables. Unless specified differently by the shingle manufacturer, shingles are permitted to be flush with the drip edge.~~

Provide drip edge at eaves and gables of shingle roofs. Overlap to be a minimum of 3 inches (76 mm). Eave drip edges shall extend $^1/_2$ inch (13 mm) below sheathing and extend back on the roof a minimum of 2 inches (51 mm). Drip edge at eaves shall be permitted to be installed either over or under the underlayment. If installed over the underlayment, there shall be a minimum 4 inch (51 mm) width of roof cement installed over the drip edge flange. Drip edge shall be mechanically fastened a maximum of 12 inches (305 mm) on center. Where the V_{asd} as determined in accordance with Section R301.2.1.3 is 110 mph (177 km/h) or greater or the mean roof height exceeds 33 feet (10 058 mm), drip edges shall be mechanically fastened a maximum of 4 inches (102 mm) on center.

Date Submitted	7/21/2012	**Section**	R907 REROOFING	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Moves current Florida-specific criteria from Existing Buildings volume used in residential reroofing to the Residential volume.

Rationale

Currently the only Foundation Code references that provide guidance specific to residential reroofing are found in the Foundation Residential Code. Chapter 6 of the Florida Existing Building Code contains supplementary regulatory requirements exclusive to residential reroofing not contained within in the Foundation Code. However, these supplementary regulatory requirements must be combined with the materials and installation procedures of the Residential Code “611.1- Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15 of the Florida Building Code, Building or Chapter 9 of the Florida Building Code, Residential”.

The purpose of this code modification is to create uniformity by following the Foundation Code model through the consolidation of all the associated roofing/reroofing code sections into one volume providing a single location for contractors, design professionals and code officials to find all code information related to the evaluation and installation of residential reroofing including the mitigation requirements specific to site-built single family residential structures in the Residential Code volume.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION R907 REROOFING

R907.1 General.
Materials and methods of application used for re-covering or replacing an existing roof covering shall comply with the requirements of Chapter 9 of the *Florida Building Code, Residential*.

Exception: Reroofing shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section R905 for roofs that provide positive roof drainage.

-

R907.2 Structural and construction loads.

The structural roof components shall be capable of supporting the roof covering system and the material and equipment loads that will be encountered during installation of the roof covering system.

-

R907.3 Recovering versus replacement.
New roof coverings shall not be installed without first removing all existing layers of roof coverings where any of the following conditions ~~exist~~ occur:

1. Where the existing roof or roof covering is water-soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.

2. Where the existing roof covering is wood shingle or shake, slate, clay, cement or asbestos-cement tile.

3. Where the existing roof has two or more applications of any type of roof covering.

4. When blisters exist in any roofing, unless blisters are cut or scraped open and remaining materials secured down before applying additional roofing.

5. Where the existing roof is to be used for attachment for a new roof system and compliance with the securement provisions of Section R905 cannot be met.

Exceptions:

1. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.

2. ~~Installation of metal panel, metal shingle and concrete and clay tile roof coverings over existing wood shake roofs shall be permitted when the application is in accordance with Section R907.4.~~ Reserved.

3. The application of new protective coating over existing spray polyurethane foam roofing systems shall be permitted without tear-off of existing roof coverings.

4. ~~Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section R905.~~ Reserved.

5. Roof Coating. Application of elastomeric and or maintenance coating systems over existing asphalt shingles shall be in accordance with the shingle manufacturer's approved installation instructions.

R907.4 Roof recovering.
~~Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other *approved* materials securely fastened in place.~~ Reserved.

R907.5 Reinstallation of materials.
Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Any existing flashings, edgings, outlets, vents or similar devices that are a part of the assembly shall be replaced when rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled.

R907.6 Flashings.
Flashings shall be reconstructed in accordance with *approved* manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.

-

R907.7 Wind Mitigation

When a roof covering on an existing site-built single- family residential structure is removed and replaced, the following procedures shall be permitted to be performed by the roofing contractor:

(a) Roof-decking attachment shall be as required by Section R907.7.1.

(b) A secondary water barrier shall be provided as required by Section R907.7.2.

Exception: Single family residential structures permitted subject to the *Florida Building Code* are not required to comply with this section.

-

R907.7.1 Roof decking attachment for site-built single- family residential structures.

For site-built single-family residential structures the fastening shall be in accordance with Section R907.7.1.1 or R907.7.1.2 as appropriate for the existing construction. 8d nails shall be a minimum of 0.113 inch (2.9 mm) in diameter and shall be a minimum of $2^1/_4$ inch (57 mm) long to qualify for the provisions of this section for existing nails regardless of head shape or head diameter.

-

R907.7.1.1

Roof decking consisting of sawn lumber or wood planks up to 12" wide and secured with at least two nails (minimum size 8d) to each roof framing member it crosses shall be deemed to be sufficiently connected. Sawn lumber or wood plank decking secured with smaller fasteners than 8d nails or with fewer than two nails (minimum size 8d) to each framing member it crosses shall be deemed sufficiently connected if fasteners are added such that two clipped head, round head, or ring shank nails (minimum size 8d) are in place on each framing member it crosses.

-

R907.7.1.2

For roof decking consisting of wood structural panels, fasteners and spacing required in columns 3 and 4 of Table R907.7.1.2 are deemed to comply with the indicated design wind speed range. Wood structural panel connections retrofitted with a two part urethane based closed cell adhesive sprayed onto the joint between the sheathing and framing members are deemed to complyprovided testing using the manufacturer's recommended application on panels connected with 6d smooth shank nails at no more than a 6-inch edge and 12-inch field spacing demonstrate an uplift resistance of a minimum of 200 psf.

Supplemental fasteners as required by Table R907.7.1.2 shall be 8d ring shank nails with round heads and the following minimum dimensions:

1. 0.113-inch nominal shank diameter.

2. Ring diameter a minimum of 0.012-inch greater than shank diameter.

3. 16 to 20 rings per inch.

4. A minimum 0.280-inch full round head diameter.

5. Ring shank to extend a minimum of $1^1/_2$ inches from the tip of the nail.

6. Minimum $2\text{-}^1/_4$ inch nail length.

TABLE R907.7.1.2 SUPPLEMENT FASTENERS AT PANEL EDGES AND INTERMEDIATE FRAMING

EXISTING FASTENERS	EXISTING SPACING	V_{asd} 110 MPH OR LESS SUPPLEMENTAL FASTENER SPACING SHALL BE NO GREATER THAN	V_{asd} GREATER THAN 110 MPH SUPPLEMENTAL FASTENER SPACING SHALL BE NO GREATER THAN
Staples or 6d	Any	6?o.c.[b]	6?o.c.[b]
8d clipped head, round head, smooth or ring shank	6?o.c. or less	None necessary	None necessary
8d clipped head, round	Greater than	6?o.c.[a]	6?o.c.[a]

head, smooth or ring shank	6?o.c.		

-

For SI: 1 inch = 25.4 mm.

a. Maximum spacing determined based on existing fasteners and supplemental fasteners.

b. Maximum spacing determined based on supplemental fasteners only.

c. V_{asd} shall be determined in accordance with Section 1609.3.1 of the Florida Building Code, Building or Section R301.2.1.3 of the Florida Building Code, Residential.

-

R907.7.2 Roof secondary water barrier for site-built single family residential structures.

A secondary water barrier shall be installed using one of the following methods when roof covering is removed and replaced:

-

1. All joints in structural panel roof sheathing or decking shall be covered with a minimum 4 inch (102 mm) 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.

2. 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 R905 of the *Florida Building Code, Residential.* (No additional underlayment shall be required over the top of this sheet.) The synthetic underlayment shall be fastened in accordance with the manufacturer's recommendations.

3. 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. No additional underlayment shall be required on top of this sheet for new installations.

4. An underlayment system approved for the particular roof covering shall be applied with the following modification:

(a) 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 inch (25 mm) 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 recommendations.

(b) For roof 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 inch (483 mm) and fastened as described above. An approved synthetic underlayment shall be installed in accordance with the manufacturer's installation instruction. (No additional underlayment shall be required over the top of this sheet.)

Exceptions:

1. Roof slopes < 2:12 having a continuous roof system shall be deemed to comply with Section R907.7.2 requirements for a secondary water barrier.

2. Clay and concrete tile roof systems installed as required by the *Florida Building Code,Residential* are deemed to comply with the requirements of Section R907.7.2 for Secondary Water Barriers.

-

R907.8

When a roof covering on an existing site-built-single-family residential structure is removed and replaced on a building that is located in the wind-borne debris region as defined in the *Florida Building Code, Building* and that has an insured value of $300,000 or more or, if the building is uninsured or for which documentation of insured value is not presented, has a just valuation for the structure for purposes of ad valorem taxation of $300,000 or more:

(a) Roof to wall connections shall be improved as required by Section R907.8.1

(b) Mandated retrofits of the roof-to-wall connection shall not be required beyond a 15 percent increase in the cost of re-roofing.

Exception: Single-family residential structures permitted subject to the *Florida Building Code* are not required to comply with this section.

R907.8.1 Roof-to-wall connections for site-built single-family residential structures.

Where required by Section R907.8, the intersection of roof framing with the wall below shall provide sufficient resistance to meet the uplift loads specified in Table R907.8.1 either because of existing conditions or through retrofit measures. As an alternative to an engineered design, the prescriptive retrofit solutions provided in Sections R907.8.1.1 through R907.8.1.7 shall be accepted as meeting the mandated roof-to-wall retrofit requirements.

Exceptions:

1. Where it can be demonstrated (by code adoption date documentation and permit issuance date) t hat roof-to-wall connections and/or roof-to-foundation continuous load path requirements were required at the time of original construction.

2. Roof-to-wall connections shall not be required unless evaluation and installation of connections at gable ends or all corners can be completed for 15 percent of the cost of roof replacement.

TABLE R907.8.1 REQUIRED UPLIFT CAPACITIES FOR ROOF-TO-WALL CONNECTIONS[a, b] (POUNDS PER LINEAR FOOT)

ULTIMATE DESIGN WIND SPEED, V_{ult}	ROOF SPAN (feet)							OVERHANGS	
	12	20	24	28	32	36	40		
	85	-69.85	-116.42	-139.70	-162.99	-186.27	-209.55	-232.84	-27
Within 6 feet of building corner	90	-82.67	-137.78	-165.34	-192.90	-220.45	-248.01	-275.57	-30.3
	100	-110.51	-184.18	-221.01	-257.85	-294.68	-331.52	-368.36	-37.4

	110	-141.27	-235.45	-282.55	-329.64	-376.73	-423.82	-470.91	-45.3
	120	-174.97	-291.62	-349.94	-408.26	-466.59	-524.91	-583.23	-53.9
	130	-211.60	-352.66	-423.19	-493.72	-564.26	-634.79	-705.32	-63.2
	140	-251.15	-418.59	-502.31	-586.02	-669.74	-753.46	-837.18	-73.3
	150	-293.64	-489.40	-587.28	-685.16	-783.04	-880.92	-978.80	-84.2
	170	-387.40	-645.67	-774.81	-903.94	-1033.08	-1162.21	-1291.35	-108
Greater than 6 feet from building corner	85	-39.10	-65.17	-78.20	-91.24	-104.27	-117.30	-130.34	-27
	90	-48.20	-80.33	-96.39	-112.46	-128.52	-144.59	-160.66	-30.3
	100	-67.95	-113.24	-135.89	-158.54	-181.19	-203.84	-226.49	-37.4
	110	-89.78	-149.63	-179.55	-209.48	-239.40	-269.33	-299.25	-45.3
	120	-113.68	-189.47	-227.37	-265.26	-303.16	-341.05	-378.94	-53.9
	130	-139.67	-232.78	-279.34	-325.90	-372.45	-419.01	-465.57	-63.2
	140	-167.74	-279.56	-335.47	-391.38	-447.29	-503.21	-559.12	-73.3
	150	-197.88	-329.80	-395.76	-461.72	-527.68	-593.64	-659.60	-84.2
	170	-264.41	-440.68	-528.81	-616.95	-705.08	-793.22	-881.35	-108

-

For SI: 1 foot = 304.8 mm; 1 pound per linear foot = 1.488 kg/m; 1 mile per hour = 0.305 m/s.

a. The uplift loads are pounds per lineal foot of building length. For roof uplift connections multiply by 1.33 for framing spaced 16 inches on center and multiply by 2 for framing spaced 24 inches on center.

b. The uplift loads do not account for the effects of overhangs. The magnitude of the above loads shall be increased by adding the overhang loads found in the table. The overhang loads are also based on framing spaced 12 inches on center. The overhang loads given shall be multiplied by the overhang projection and added to the roof uplift value in the table.

c. For Ultimate design wind speeds, V_{ult}, greater than 170 mph, wind uplift forces shall be determined in accordance with Florida Building Code, Residential, Section R802.3 or ASCE 7.

d. Ultimate Design Wind Speeds determined from Figure 1609A in the Florida Building Code,Building or Figure R301.2(4) in the Florida Building Code, Residential.

-

R907.8.1.1 Access for Retrofitting Roof to Wall Connections.

These provisions are not intended to limit the means for gaining access to the structural elements of the roof and wall for the purposes of retrofitting the connection. The retrofit of roof to wall connections can be made by access through the area under the eave, from above through the roof, or from the interior of the house. Methods for above access include removal of roof panels or sections thereof or removal of portions of roof paneling at selected locations large enough for access, viewing, and installing the retrofit connectors and fasteners.

Where panels or sections are removed, the removed portions shall not be reused. New paneling shall be used and fastened as in new construction.

Holes shall be deemed adequately repaired if a patch of paneling is installed with no gap greater than $^1/_2$ inch (13 mm) between the patch and the existing sheathing and if the patch is supported using one of the following methods.

a) Solid $1^1/_2$ inch lumber shall fully support the patch and shall be secured to the existing sheathing with #8 by $1^1/_4$ inch screws spaced a minimum of 3 inches (76 mm) around the perimeter with screws a minimum of $^3/_4$ inch

from the near edge of the hole. The patch shall be secured to the lumber with #8 × 1-$^1/_4$ inch screws spaced on a grid no greater than 6 inches by 6 inches (152 mm × 152 mm) with no fewer than 2 screws.

b) Holes that extend horizontally from roof framing member to adjacent roofing framing member that are less than or equal to 7 inches (178 mm) wide along the slope of the roof shall be supported by minimum of 2 × 4 lumber whose face is attached to each roofing framing members using a minimum of 2 each 3-inch (76 mm) long fasteners (#8 screws or 10d common nails) connecting the two. The patch shall have attached to its bottom, running horizontally, a minimum 2 × 4 either flat wise or on edge secured with #8 × 1$^1/_4$ inch screws a maximum of 4 inches (102 mm) on center and no more distant from the end of the added lumber than 3 inches (76 mm). The patch shall be secured with two #8 × 1-1$^1/_4$ inch screws to each support member.

-

R907.8.1.2 Partially inaccessible straps.

Where part of a strap is inaccessible, if the portion of the strap that is observed is fastened in compliance with these requirements, the inaccessible portion of the strap shall be presumed to comply with these requirements.

-

R907.8.1.3 Prescriptive method for gable roofs on a wood frame wall.

The anchorage of each of the exposed rafters or truss within 6 feet (1829 mm) of the corner along the exterior wall on each side of each gable end shall be inspected. Wherever a strap is missing or an existing strap has fewer than four fasteners on each end, approved straps, ties or right angle brackets with a minimum uplift capacity of 500 lbs (740 kg) shall be installed that connect each rafter or truss to the top plate below. Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. Wherever access makes it possible (without damage of the wall or soffit finishes), both top plate members shall be connected to the stud below using a stud to plate connector with a minimum uplift capacity of 500 lbs (740 kg). Use of straps that connect directly from the rafter or truss to the wall stud below shall be allowed as an alternate provided the two members align with no more than 1$^1/_2$ inches (38 mm) offset.

-

R907.8.1.4 Prescriptive method for gable roofs on a masonry wall.

The anchorage of each of the exposed rafters or truss within 6 feet (1829 mm) of the corner along the exterior wall on each side of each gable end shall be inspected. Wherever a strap is missing or an existing strap has fewer than four fasteners on each end, approved straps, ties or right angle gusset brackets with a minimum uplift capacity of 500 lbs (740 kg) shall be installed that connect each rafter or truss to the top plate below or directly to the masonry wall using approved masonry screws of a length and diameter recommended by the manufacturer. In the absence of manufacturer's recommendations, screws shall provide at least a 2$^1/_2$ inch (64 mm) embedment into the concrete or masonry. When the straps or right angle gusset brackets are attached to a wood sill plate, the sill plate shall be anchored to the concrete masonry wall below. This anchorage shall be accomplished by installing $^1/_4$-inch diameter masonry screws, each with supplementary $^1/_4$-inch washer, having sufficient length to develop a 2$^1/_2$ inch (64 mm) embedment into the concrete and masonry. These screws shall be installed within 4 inches (102 mm) of the truss or rafter on both sides of each interior rafter or truss and on the accessible wall side of the gable end truss or rafter.

-

R907.8.1.5 Prescriptive method for hip roofs on a wood frame wall.

Unless it is possible to verify through non-destructive inspection or from plans prepared by a design professional that the roof structure is anchored at least as well as outlined below, access shall be provided at a minimum to the hip rafter (commonly known as a "king jack"), to the hip girder and at each corner of the hip roof. The hip rafter (commonly known as a "king jack"), the hip girder and the rafters/trusses adjacent to the hip girder that are not anchored with a strap having at least four fasteners on each end, shall be connected to the top plate below using a strap or a right angle gusset bracket having a minimum uplift capacity of 500 lbs (740 kg). Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. Wherever access makes it possible (without damage of the wall or soffit finishes), both top plate members shall be connected to the stud below using a stud to plate connector with a minimum uplift capacity of 500 lbs (740 kg). Use of straps that connect directly from the hip rafter, hip girder or adjacent rafters/trusses to the wall stud below shall be allowed as an alternate provided the two members align with no more than $1^1/_2$ inch (38 mm) offset.

-

R907.8.1.6 Prescriptive method for hip roofs on a masonry wall.

Unless it is possible to verify through non-destructive inspection or from plans prepared by a design professional that the roof structure is anchored at least as well as outlined below, access shall be provided at a minimum to the hip rafter (commonly known as a "king jack"), to the hip girder and at each corner of the hip roof. The hip rafter (commonly known as a "king jack"), the hip girder and the rafters/trusses adjacent to the hip girder that are not anchored with a strap having at least four fasteners on each end, shall be connected to the concrete masonry wall below using approved straps or right angle gusset brackets with a minimum uplift capacity of 500 lbs (740 kg). Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. The straps or right angle gusset brackets shall be installed such that they connect each rafter or truss to the top plate below or directly to the masonry wall using approved masonry screws of a length and diameter recommended by the manufacturer. In the absence of manufacturer's recommendations, screws shall provide at least $2^1/_2$ inches (64 mm) embedment into the concrete or masonry. When the straps or right angle gusset brackets are attached to a wood sill plate, the sill plate shall be anchored to the concrete masonry wall below. This anchorage shall be accomplished by installing $^1/_4$-inch (6 mm) diameter masonry screws, each with supplementary $^1/_4$-inch (6 mm) washer, with sufficient length to develop a $2^1/_2$ inch (64 mm) embedment into the concrete and masonry. These screws shall be installed within 4 inches (102 mm) of the truss or rafter on both sides of each interior rafter or truss and on the accessible wall side of the gable end truss or rafter.

-

R907.8.1.7 Priorities for mandated roof-to-wall retrofit expenditures.

Priority shall be given to connecting the exterior corners of roofs to walls where the spans of the roofing members are greatest. For houses with both hip and gable roof ends, the priority shall be to retrofit the gable end roof-to-wall connections unless the width of the hip end is more than 1.5 times greater than the width of the gable end. When considering priorities for houses with both hip and gable roof ends, and the fifteen percent of the cost of roof replacement is sufficient to complete all of the prioritized elements pursuant to this section, but is not sufficient to complete all of the non-prioritized elements, then no portion of complete retrofit of the non-prioritized element is required.

R5316

Date Submitted	7/18/2012	**Section**	R907	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides current Florida-specific criteria

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

SECTION R907 REROOFING

R907.1 General.
~~Materials and methods of application used for re-covering or replacing an existing roof covering shall comply with the requirements of Chapter 9.~~

~~**Exception:** Reroofing shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2 percent slope) in Section R905 for roofs that provide positive roof drainage.~~
Reroofing shall be done in accordance with the Florida Existing Building Code.

R907.2 Structural and construction loads.

~~**The structural roof components shall be capable of supporting the roof covering system and the material and equipment loads that will be encountered during installation of the roof covering system.**~~

Reserved.

R907.3 Recovering versus replacement.
~~New roof coverings shall not be installed without first removing all existing layers of roof coverings where any of the following conditions exist:~~

~~1. Where the existing roof or roof covering is water-soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.~~

~~2. Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.~~

~~3. Where the existing roof has two or more applications of any type of roof covering.~~

~~**Exceptions:**~~

~~1. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.~~

~~2. Installation of metal panel, metal shingle and concrete and clay tile roof coverings over existing wood shake roofs shall be permitted when the application is in accordance with Section R907.4.~~

-

~~3. The application of new protective coating over existing spray polyurethane foam roofing systems shall be permitted without tear-off of existing roof coverings.~~

~~4. Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section R905.~~

Reserved.

R907.4 Roof recovering.

~~Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other approved materials securely fastened in place.~~ **Reserved.**

R907.5 Reinstallation of materials.
~~Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Any existing flashings, edgings, outlets, vents or similar devices that are a part of the assembly shall be replaced when rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled.~~

Reserved.

R907.6 Flashings.
~~Flashings shall be reconstructed in accordance with approved manufacturer's installationinstructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.~~

Reserved. -

Date Submitted	7/21/2012	**Section**	TABLE R905.11.2 MODIFIED BITU	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

TABLE R905.11.2 MODIFIED BITUMEN ROOFING MATERIAL STANDARDS

MATERIAL	STANDARD
Acrylic coating	ASTM D 6083
Asphalt adhesive	ASTM D 3747
Asphalt cement	ASTM D 3019
Asphalt coating	ASTM D 1227; D 2824
Asphalt primer	ASTM D 41
Modified bitumen roof membrane	ASTM D 6162; D 6163; D 6164; D 6222; D 6223; D 6298; **D 6509** CGSB 37-GP-56M

R5517

Date Submitted	7/21/2012	**Section**	TABLE R905.6.5 SLATE SHINGLE	**Proponent**	Mark Zehnal
Chapter	9	**Affects HVHZ**	No	**Attachments**	No

General Comments No

Alternate Language No

Related Modifications

Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria. bottom of table should be (Slope greater than or equal to 20:12) will not take when submitted.

Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

TABLE R905.6.5 SLATE SHINGLE HEADLAP

SLOPE	HEADLAP (inches)
4:12 = slope < 8:12	4
8:12 = slope < 20:12	3
Slope = 20:12	2

For SI: 1 inch = 25.4 mm.

Date Submitted	7/6/2012	**Section**	2301.2.2	**Proponent**	Michael Goolsby
Chapter	23	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Section formatting

Rationale

While this entire Chapter is applicable for the HVHZ it makes reference and provides direction to sections which are not applicable. The purpose of this proposed modification is to provide guidance to the applicable and equivalent HVHZ sections. In this way, compliance with the intent of these provisions can be maintained in all jurisdictions.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Removes confusion by providing accurate direction regarding application of applicable code sections.

Impact to building and property owners relative to cost of compliance with code

Removes confusion by providing accurate direction regarding application of applicable code sections.

Impact to industry relative to the cost of compliance with code

Removes confusion by providing accurate direction regarding application of applicable code sections.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

It does so by ensuring direction to applicable sections of the code are provided.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

It does so by ensuring direction to applicable sections of the code are provided.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials.

Does not degrade the effectiveness of the code

This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R4980-G1

Proponent	Jack Glenn	**Submitted**	9/23/2012	**Attachments**	No

Comment:

This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone.

M2301.2.2 Roof-mounted collectors. The roof shall be constructed to support the loads imposed by roof-mounted solar collectors. Roof-mounted solar collectors that serve as a roof covering shall conform to the requirements for roof coverings in Chapter 9 the HVHZ shall comply with Chapter 44) of this code. Where mounted on or above the roof coverings, the collectors and supporting structure shall be constructed of noncombustible materials or fire-retardant-treated wood equivalent to that required for the roof construction.

Date Submitted	7/6/2012	**Section**	2302.2.1	**Proponent**	Michael Goolsby
Chapter	23	**Affects HVHZ**	No	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Section formatting

Rationale

While this entire Chapter is applicable for the HVHZ it makes reference and provides direction to sections which are not applicable. The purpose of this proposed modification is to provide guidance to the applicable and equivalent HVHZ sections. In this way, compliance with the intent of these provisions can be maintained in all jurisdictions.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Removes confusion by providing accurate direction regarding application of applicable code sections.

Impact to building and property owners relative to cost of compliance with code

Removes confusion by providing accurate direction regarding application of applicable code sections.

Impact to industry relative to the cost of compliance with code

Removes confusion by providing accurate direction regarding application of applicable code sections.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

It does so by ensuring direction to applicable sections of the code are provided.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

It does so by ensuring direction to applicable sections of the code are provided.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials.

Does not degrade the effectiveness of the code

This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R4982-G1

Proponent	Jack Glenn	**Submitted**	9/23/2012	**Attachments**	No

Comment:

This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone. Roof mounted equipment requirements should be consistent statewide.

M2302.2.1 Roof-mounted panels and modules. Where photovoltaic panels and modules are installed on roofs, the roof shall be constructed to support the loads imposed by such modules. Roof-mounted photovoltaic panels and modules that serve as roof covering shall conform to the requirements for roof coverings in Chapter 9 the HVHZ shall comply with Chapter 44). Where mounted on or above the roof coverings, the photovoltaic panels and modules and supporting structure shall be constructed of noncombustible materials or fire-retardant treated wood equivalent to that required for the roof construction.

R5008

Date Submitted	7/9/2012	**Section**	4401	**Proponent**	Michael Goolsby
Chapter	44	**Affects HVHZ**	Yes	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Eliminating unnecessary duplication of Chapter 44 HVHZ provisions

Rationale

Since the inception of the FBC, the content of Chapter 44 of the FBC, R has been a duplication of the sections contained in the FBC, Building volume. This proposed modification is intended to maintain the continuation of the current level of safety for the protection of life and property unchanged. Importantly, the proposed modification eliminates the need to unnecessarily duplicate more than one-hundred pages into the FBC, R volume, thereby reducing the size of the text contained in the FBC. Additionally, the proposed modification prevents the need to replace all of the non-wind related sections which were removed by legislative directive with dozens of individual modifications, each requiring review and approval; this process would otherwise be unavoidable in order to create a crucial integration of applicable and relevant building code sections into Chapter 44 requirements. In short, this proposed modification is a simplified approach resulting in identical code requirements but through a less time consuming, less complicated and less duplicative process.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

Impact to building and property owners relative to cost of compliance with code

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

Impact to industry relative to the cost of compliance with code

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

It does so by ensuring direction to applicable sections of the code are provided.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

It does so by eliminating the need to unnecessarily duplicate building code provisions and affects a reduction in the number of code pages to be compiled, reviewed, edited and printed.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This modification does not curtail the use of any material, products, methods or systems of construction already deemed acceptable by the Florida Building Code or any alternate materials, design and methods of construction and equipment acceptable to the code official.

Does not degrade the effectiveness of the code

This modification does not degrade the effectiveness of the code; instead, it maintains the applicability of relevant base code requirements as has been the case since the first edition of the Florida Building Code.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5008-G1

Proponent	Jack Glenn	**Submitted**	9/23/2012	**Attachments**	No

Comment:

Creates a reference to Chapter 14 of the FBC-B. The FBC-R was created to be a free standing document and as such should include the language if it meets the criteria for a Florida specific amendment.

SECTION R4401

HIGH-VELOCITY HURRICANE ZONES — EXTERIOR WALL COVERING

R4401.1 Refer to Chapter 14 of the Florida Building Code, Building.

~~R4401.2 Asphalt shingles. Asphalt shingles shall be applied only to solid wood sheathing and shall be in tin-capped and spot-stuck, as set forth in Section R4402.~~

~~R4401.3 Roll slate or felt. Roll slate or felt shall be applied only to solid wood sheathing and shall be secured by nailing, as set forth in Section R4402.~~

~~R4401.4 Metal shingles. Metal shingles shall be applied only to solid wood sheathing and shall be secured as set forth in Section Section R4402.~~

~~R4401.5 Steel shingles. Steel siding shall be designed and applied as set forth in Section R4408.~~

~~R4401.6 Aluminum siding. Aluminum siding shall be designed and applied as set forth in Section R4406.~~

~~R4401.7 Veneers. Masonry veneers shall be applied as set forth in Section R4407.~~

~~R4401.9 Other materials. Any cladding materials or assembly not addressed in this code shall be classified by the building official as the one it most nearly resembles, and shall comply with the requirements for loading and fire resistance herein required for such materials and assemblies.~~

R5009

Date Submitted	7/9/2012	**Section**	4402	**Proponent**	Michael Goolsby
Chapter	44	**Affects HVHZ**	Yes	**Attachments**	Yes
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Eliminating unnecessary duplication of Chapter 44 HVHZ provisions

Rationale

Since the inception of the FBC, the content of Chapter 44 of the FBC, R has been a duplication of the sections contained in the FBC, Building volume. This proposed modification is intended to maintain the continuation of the current level of safety for the protection of life and property unchanged. Importantly, the proposed modification eliminates the need to unnecessarily duplicate more than one-hundred pages into the FBC, R volume, thereby reducing the size of the text contained in the FBC. Additionally, the proposed modification prevents the need to replace all of the non-wind related sections which were removed by legislative directive with dozens of individual modifications, each requiring review and approval; this process would otherwise be unavoidable in order to create a crucial integration of applicable and relevant building code sections into Chapter 44 requirements. In short, this proposed modification is a simplified approach resulting in identical code requirements but through a less time consuming, less complicated and less duplicative process.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

Impact to building and property owners relative to cost of compliance with code

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

Impact to industry relative to the cost of compliance with code

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

It does so by ensuring direction to applicable sections of the code are provided.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

It does so by eliminating the need to unnecessarily duplicate building code provisions and affects a reduction in the number of code pages to be compiled, reviewed, edited and printed.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This modification does not curtail the use of any material, products, methods or systems of construction already deemed acceptable by the Florida Building Code or any alternate materials, design and methods of construction and equipment acceptable to the code official.

Does not degrade the effectiveness of the code

This modification does not degrade the effectiveness of the code; instead, it maintains the applicability of relevant base code requirements as has been the case since the first edition of the Florida Building Code.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5009-G1

Proponent	Jack Glenn	**Submitted**	9/23/2012	**Attachments**	No

Comment:

Creates a reference to Chapter 15 of the FBC-B. The FBC-R was created to be a free standing document and as such should include the language if it meets the criteria for a Florida specific amendment.

SECTION R4402

HIGH-VELOCITY HURRICANE ZONES —

ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

R4402.1. ~~General~~ Refer to Chapter 15 of the Florida Building Code, Building.

~~**R4402.1.1 Scope.** The provisions of this section shall set forth minimum requirements for the installation of roofing components, roofing systems, roofing assemblies and the waterproofing thereof.~~

~~**R4402.1.2 Application.** These High-velocity Hurricane Zone roofing requirements with associated roofing application standards (RAS) and testing application standards (TAS) are solely to be implemented in areas of high basic wind speeds, and where the jurisdiction having authority has adopted their use.~~

~~**R4402.1.2.1** All roofing components, roofing systems and roofing assemblies for construction regulated by this code shall comply with this chapter. All roofing components, roofing systems and roofing assemblies shall have a valid and current, referred to as product approval hereinafter. In the event that the manufacturers published literature or instructions are in conflict with those of the product approval, the product approval shall prevail. Where items specifically and expressly addressed in this section are in conflict with the product approval, the provisions of this section shall prevail.~~

~~**R4402.1.2.2** Innovative products and/or systems outside those currently recognized under this chapter may have a product approval issued based on performance testing; in such case(s) the conditions set in the product approval shall prevail.~~

~~**R4402.1.2.3** For roofing systems to be installed on a specific building or structure, where an existing product approval may not be applied, such roofing system may be granted a onetime approval by the authority having jurisdiction, provided the applicant demonstrates, by testing and/or rational analysis that such roofing system complies with the provision of this code.~~

~~**R4402.1.2.4** Where a product approval does not address a detail for a specific job condition, the permit applicant may propose to the building official an alternate detail to address the specific need of the job. The building official may accept such proposal if it can be demonstrated that the provisions of this code will be met.~~

~~**R4402.1.2.5 Workmanship standards.** All roofing work shall be performed by a qualified contractor licensed to perform roofing, in compliance with the tolerances, quality and methods of construction established herein or set forth in the standards adopted by these high-velocity hurricane zone requirements. Roofing assemblies detailed in product approvals shall be installed in strict compliance with the method of application set forth in such product approval or, if not part of the product approval, in compliance with manufacturer's published application instructions, or as approved by the building official. (Aesthetic issues not affecting the performance of the roof are not part of this section.)~~

~~**R4402.1.2.5.1 Appearance.** If the architectural appearance is to be preserved from below, an alternate method of attachment complying with the wind load requirements of Section R4403 may be proposed unless otherwise addressed in Section R4402. The alternative attachment shall be prepared, signed and sealed by a Florida-registered architect or a Florida-registered engineer, which architect or engineer shall be proficient in structural design.~~

~~**R4402.1.3** Permits outside these High-Velocity Hurricane Zone requirements shall comply with Section 105 of the Florida Building Code, Building . Permits within high wind areas shall be required for all work in connection with the application, repair or maintenance of any roofing component or any roofing assembly and/or any of its components except as otherwise permitted in Section 105 of the Florida Building Code, Building .~~

~~**R4402.1.3.1** All new roofing construction, including recovering and reroofing, repair and maintenance shall have a uniform roofing permit application, as established by the authority having jurisdiction, completed and executed by a licensed contractor.~~

~~**R4402.1.3.2** The uniform roofing permit shall include calculations per Section R4403 of this code, unless the roofing assembly is less than the height/pressure threshold allowed in the applicable protocols herein.~~

~~**4402.1.3.3** Reserved.~~

~~**R4402.1.3.4** Attachments to the uniform roofing permit application shall include two copies of each of the following documents: properly executed OWNERS NOTIFICATION FOR ROOFING CONSIDERATIONS herein; the fire directory listing pages product approval cover sheet, product approval specific system description, product approval specific system limitation, product approval general limitations, and applicable detail drawings; the municipal permit application; other components approvals; and any other additional data reasonably required by the authority having jurisdiction needed to determine the integrity of the roofing system.~~

~~**R4402.1.4.1** All roofing work for which a permit is required shall be inspected by the building official. One or more inspections may be performed at the same time at the request of the roofing contractor or when feasible. Lack of~~

~~roofing contractor's personnel at the job site, in and of itself, shall not be cause to fail the inspection. Certain roofing inspections shall be performed during specific phases of the applications as noted below:~~

~~**R4402.1.4.2** For discontinuous roofing systems (as defined herein or Chapter 2):~~

~~**R4402.1.4.2.1** During or after application of the base sheet, anchor sheet or underlayment of any roofing system.~~

~~**R4402.1.4.2.2** During the installation of the cap sheet.~~

~~**R4402.1.4.2.3** During the installation of any prepared roof covering, such as shingles, tiles, slates, shakes, and similar.~~

~~**R4402.1.4.2.4** Upon completion of all adhesive-set and mortar-set tile systems, and prior to the final inspection, a field verification and static uplift test, in compliance with TAS 106 shall be required to confirm tile adhesion. This test may be required by the building official for mechanically attached tile systems. All results of this test shall be submitted to the building official.~~

~~**R4402.1.4.3** For continuous roofing systems (as defined in herein or Chapter 2):~~

~~**R4402.1.4.3.1** During application of any roofing system prior to the full concealment of the adhesion/attachment process to the roof deck or to the existing roofing assembly.~~

~~**R4402.1.4.3.2** In cases where a roof area is less than 1,500 square feet (139 m2), and when the building official is not able to perform any of the above requested inspection in a timely manner, the building official may authorize to continue with the work and may require that satisfactory evidence be provided to show that the covered work was performed in compliance with this code.~~

~~**R4402.1.4.3.3** After all roofing work has been completed; a final inspection shall be performed by the building official.~~

~~**SECTION R4402.2**~~
~~**HIGH-VELOCITY HURRICANE ZONES—DEFINITIONS**~~

~~**R4402.2.1 Definitions.** For definitions outside Section R4402 and accompanied RAS and TAS, see Chapter 2. For the purposes of Section R4402, accompanying RAS, TAS and roofing products product approval, roofing terms shall be defined in compliance with ASTM D 1079, unless otherwise defined below. The definitions listed below shall take preference. Other terms used herein shall be defined as set forth in Chapter 2 of this code.~~

~~**AIR PERMEABLE ROOFING SYSTEM.** A roofing system consisting of a prepared roof covering over an approved underlayment on a sloped roof. The components within the prepared roof covering are discontinuously laid and small, with unsealed side and head laps. Air permeable roofing systems shall be applied over sheathed decks with either mechanical attachment or a mortar/adhesive bond. Any roofing system with sealed side or head laps shall not be defined as an air permeable roofing system. The authority having jurisdiction may require testing in compliance with TAS 116, to determine whether a roofing system is air permeable.~~

~~**ANCHOR SHEET**. A roofing felt mechanically attached to a nailable deck with approved fasteners to which insulation is then installed in a solid mopping of asphalt. The roofing membrane is then installed to the insulation in the usual manner.~~

~~**ARCHITECTURAL METAL PANEL.** Water shedding (hydrokinetic) roof panel fastened to a roof deck.~~

~~**ASTM (ASTM International).** A scientific and technical organization that is responsible for the development of standards on characteristics and performance of materials, products, systems, as adopted for the high-velocity hurricane zone.~~

~~**NET FREE VENTILATING AREA (NFVA).** The gross area of the smallest plane area of the ventilating device reduced by the percentage of physical obstruction to the plane area.~~

~~**BASE SHEET.** The bottom or first ply of a roofing assembly over which subsequent roofing plies are applied. A base sheet may be designed for mechanical attachment, full or partial adhesion to the substrate.~~

~~**BUILDING INTEGRATED PHOTOVOLTAIC ROOFING.** A roofing product consisting of an electricity generating photovoltaic component integrated into a roof covering.~~

~~**CLASS A ROOFING ASSEMBLY.** A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow-up service, as "Class A" in compliance with ASTM E 108 or UL 790.~~

~~**CLASS B ROOFING ASSEMBLY.** A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow-up service, as "Class B" in compliance with ASTM E 108 or UL 790.~~

~~**CLASS C ROOFING ASSEMBLY**. A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow-up service, as "Class C" in compliance with ASTM E 108 or UL 790.~~

~~**CONTINUOUS ROOFING SYSTEM.** An impervious roof covering, composed from a single or multiple layers, forming a homogenous membrane over the entire roof surface, applied to either a flat or pitched roof surfaces.~~

~~**CORROSION RESISTANT.** Any component that passes appendix of FMRC's Test Standard 4470, as modified, and set forth in TAS 114.~~

~~**COUNTER BATTENS.** Vertical wood strips installed on sloped roofs over which horizontal battens are secured. The primary roof covering is attached or secured to these horizontal battens.~~

~~**COUNTERFLASHING.** Formed metal or elastomeric sheeting secured on or into a wall, curb, pipe, roof-top unit or other surface to cover and protect the upper edge of a base flashing and its associated fasteners.~~

~~**DISCONTINUOUS ROOFING SYSTEM.** A roofing system with unsealed overlapping components, where the combined roofing system has openings at the point of overlap, applied to a sloped surface with a pitch of 2:12, or greater. Discontinuous roofing systems include asphalt shingles; concrete, clay or metal tile; wood shingles or shakes; and cement fiber roofing systems.~~

~~**DRY IN.** The process of applying the first layer of felt in a roofing system.~~

~~**FM APPROVALS.** A research and testing organization that is responsible for examination and testing of construction and other products.~~

~~**FASTENER WITHDRAWAL RESISTANCE TEST.** A static pullout test of mechanical fasteners, which are used to anchor any roofing component, to determine the force required to withdraw a fastener from the substrate. Testing shall be in compliance with the test procedure detailed in TAS 105.~~

~~**FIRE RESISTANT ROOF COVERING.** Any Class A, Class B or Class C roofing system applied to the appropriate deck type within the specified slope of the listed classification.~~

~~**FLASHING.** The roofing component used to seal roofing systems, where the system is interrupted or terminated.~~

~~**LAP.** See NRCA Manual fourth edition.~~

~~**METAL PROFILE.** Including but not limited to eave and gable drip, gravel stop, raised edge systems and fascia systems. All composite and nonmetallic flashing materials shall have a Product Approval.~~

~~**MINIMUM CHARACTERISTIC RESISTANCE FORCE.** A force or pressure which is representative of data from withdrawal resistance testing; static uplift testing; and/or wind uplift testing after the data has been statistically analyzed to a 95 percent level of precision.~~

~~**METAL ROOF PANEL.** An interlocking metal sheet having an installed weather exposure equal or greater than three square feet per sheet.~~

~~**METAL ROOF SHINGLE.** An interlocking metal sheet having an installed weather exposure less than three square feet per sheet.~~

~~**MOMENT.** A quantity that represents the affect of a force applied at a particular point in relation to a specific point or axis.~~

~~**NRCA.** The NRCA Roofing and Waterproofing Manual , fifth edition, as published by the National Roofing Contractors Association.~~

~~**PREPARED ROOF COVERING.** Any manufactured or processed roof covering designed for use as the top layer of a discontinuous roofing system applied to a sloped roof.~~

~~**RAS.** Roofing Application Standards.~~

~~**RECOVERING.** The process of covering an existing roofing assembly with a new roofing system or a prepared roofing system.~~

~~**REPAIR.** The work of corrective procedures by replacing or altering an existing roofing component or system to eliminate water intrusion~~

~~**REROOFING.** The process of recovering or replacing an existing roofing system, either in its entirety or in existing sections.~~

~~**RIDGE VENT.** A ventilator located within 18 inches (457 mm) of the ridge that allows the escape of warm and/or moist air from the attic area or rafter cavity.~~

~~**ROOFING ACCESSORY.** A type of roofing product as described in Section R4402.6.6 of this code.~~

~~**ROOFING ASSEMBLY.** An assembly of interacting roofing components [includes the roof deck, vapor retarder (if present), insulation, and roof covering].~~

~~**ROOFING COATINGS, ADHESIVES AND MASTICS.** Any and all liquid materials applied to the roofing membrane layer to enhance ultraviolet light resistance; increase resistance to fire; increase reflectivity of the roofing assembly; or, in some way, enhance the performance of the roofing assembly. Roofing coatings, adhesives or mastics shall not contain asbestos materials.~~

~~**ROOF COVERING.** An assembly of multiple field-applied components or a single component designed to weatherproof a building's top surface. A roof covering may be a roofing assembly or form a portion thereof.~~

~~**ROOFING COMPONENT.** A roofing product that is incorporated into various roofing assemblies.~~

~~**ROOF DECK.** Solid or spaced sheathing to which the roofing or waterproofing system is applied.~~

~~**ROOFING MAINTENANCE.** Is the work of extending the longevity of a roofing system through preventative care, such as refilling pitch pans, applying coatings, re-graveling, resurfacing and re-caulking.~~

~~**ROOF SECTION.** A separation or division of a roof area by existing expansion 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.~~

~~**ROOFING SYSTEM.** A system of interacting roofing components, generally consisting of membrane or primary roof covering and insulation (not including the roof deck) designed to weatherproof, and sometimes to improve, the building's thermal resistance.~~

~~**HIGH ROOF TILE PROFILE.** Those tiles having a rise-to-width ratio greater than 0.20~~

~~**LOW ROOF TILE PROFILE.** Those tiles having a rise-to-width ratio less or equal than 0.20; except those tiles meeting the flat profile definition.~~

~~**FLAT ROOF TILE PROFILE.** Those tiles with less than 1/2-inch (12.7 mm) rise.~~

~~**STRUCTURAL METAL PANEL.** Roof covering intended to be self supporting between structural members (see Sections R4406.1.8.2 and R4408.9.4).~~

~~**TAS.** Testing Application Standard.~~

~~**UNDERLAYMENT.** One or more water shedding layers applied to a sloped roof prior to the application of a prepared roof covering. The primary purpose of an underlayment is defined as a water-shedding layer to function in combination with a prepared roof covering.~~

~~**WOOD SHAKES.** Tapered or straight pieces of red cedar, or other wood types, of widths ranging from 3 inches to 14 inches (76 mm to 356 mm) ranging in lengths from 18 inches to 32 inches (437 mm to 819 mm) applied to a sloped roof, in conjunction with an approved underlayment, forming a discontinuous prepared roof system.~~

~~**WOOD SHINGLES.** Tapered pieces of red cedar, or other wood types, sawn on both faces, of widths ranging from 3 inches to 14 inches (76 mm to 356 mm) and lengths of 16 inches, 18 inches, and 24 inches (406 mm to 610 mm) applied to a sloped roof forming a discontinuous prepared roof system.~~

~~**SECTION R4402.3**~~
~~**HIGH-VELOCITY HURRICANE ZONES — WEATHER PROTECTION**~~

~~**R4402.3.1 General.** Roof decks shall be covered with roof coverings secured to the building or structure in accordance with the provisions of this section. Roof coverings shall be designed, installed and maintained in accordance with this code and the manufacturer's installation instructions such that the roof covering shall serve to protect the building or structure. All roof coverings, roof systems and roof assemblies shall be designed and installed to resist the wind load requirements of Section R4403 of this code.~~

~~**R4402.3.2.2 Membrane flashings.** All membrane flashing shall be installed according to the roof assembly manufacturer's published literature and in accordance with the provisions set forth in RAS 111.~~

~~**R4402.3.2.3 Metal flashings and terminations.** Metal flashing and terminations shall be of the material and thickness described in Section R4402.6.6 and RAS 111 of this code, and shall be designed and installed in accordance with RAS 111~~

~~**R4402.3.2.3.1** Such felts shall be embedded in hot bitumen or an approved adhesive.~~

~~**R4402.3.2.3.2** Metal surfaces shall be primed with an ASTM D 41 or ASTM D 43 primer, as appropriate and allowed to dry prior to receiving hot bitumen or cold adhesive.~~

~~**R4402.3.2.4 Metal counterflashing.** Metal counterflashing shall be of the material and thickness described in Sections R4402.6.6 and RAS 111 of this code, and shall be installed in accordance with RAS 111.~~

~~**R4402.3.2.4.1** Metal counterflashing shall be built into walls, set in reglets or applied as stucco type and shall be turned down over base flashing not less than 3 inches (76 mm).~~

~~**R4402.3.2.4.2** Metal counterflashing shall be side lapped a minimum of 4 inches (102 mm).~~

~~**R4402.3.2.4.3** Metal counterflashing, where set in reglets or surface-mounted, shall be waterproofed, in accordance with applicable application standards.~~

~~**R4402.3.2.4.4** Where metal counterflashing is used as the means of sealing (such as a vented system) it shall be set in an approved sealant, sealed with an approved adhesive on the top flange and all joints shall be sealed with an approved sealant and lapped a minimum of 4 inches (102 mm).~~

~~**R4402.3.2.5 Roof penetration flashing.**~~

~~**R4402.3.2.5.1** All pipes shall be flashed with approved lead sleeve-type, pitch pans or other approved methods detailed in the roofing system assembly product approval. Lead flashing shall not be less than 2.5 pound per square foot (12.2 kg/m2). Flanges shall be a minimum of 4 inches (102 mm).~~

~~**R4402.3.2.5.2** Other roof penetrations shall be suitably flashed with curbs, collars, pitch pans, in compliance with RAS 111 or an approved method, in compliance with the roofing system assembly Product Approval.~~

~~**R4402.3.2.5.3** No roof penetration shall be located in roof valleys.~~

~~**R4402.3.3 Coping.** Copings shall be designed and installed to resist the wind load requirements of Section R4403 of this code, and shall be in accordance with the provisions set forth in RAS 111.~~

~~**R4402.3.4 Roof drainage.** Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Where required for roof drainage, scuppers shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the roof slope and contributing roof area. Scuppers shall be sized in accordance with the provisions contained in ASCE 7, Section 8 with commentary and shall comply with Section R4403.6.~~

~~**R4402.3.4.1.1** Gutters shall be in compliance with RAS 111.~~

~~**R4402.3.4.2 Overflow drains and scuppers.** Where roof drains are required, overflow drains or overflow scuppers sized in accordance with Florida Building Code, Plumbing shall be installed with the inlet flow line located not less than 2 inches (51 mm) or more than 4 inches (102 mm) above the low point of the finished roofing surface, excluding sumps. Overflow scuppers shall be a minimum of 4 inches (102 mm) in any dimension and shall be~~

~~placed in walls or parapets and shall be located as close as practical to required vertical leaders, conductors or downspouts. Overflow drains and scuppers shall also comply with the Florida Building Code, Plumbing , and Section R4403.6 of this code.~~

~~**R4402.3.4.2.1** When overflow scuppers and roof drains are installed, they shall be lined with approved metal or other approved materials set forth in the roofing system assembly Product Approval.~~

~~**R4402.3.4.2.2** When recovering, reroofing or repairing an existing roof, the existing number of scuppers and/or roof drains shall not be reduced, unless a new drainage system is designed by an architect or engineer, in compliance with the provisions of this code.~~

~~**R4402.3.4.3 Sizing and discharge.** Roof drains, gutters, conductors and leaders shall be sized and discharge in accordance with the Florida Building Code, Plumbing .~~

~~**SECTION R4402.4**~~
~~**HIGH-VELOCITY HURRICANE ZONES — PERFORMANCE REQUIREMENTS**~~

~~**R4402.4.1 General. All roof assemblies, roof coverings and roof systems shall have Product Approval, and shall meet the following minimum requirements.**~~

~~**R4402.4.1.1** All continuous roofing assemblies shall be tested in compliance with FMRC Test Standards 4470 and/or 4471 (for metal roofing), as modified for the purposes of this code and set forth in TAS 114. Only those components listed within the roofing assembly Product Approval shall be approved for use with the roof covering. Roofing assemblies shall be acceptable for use in this code's jurisdiction providing they are in compliance with the fire classification required for the structure to which the roofing assembly is to be installed.~~

~~**R4402.4.1.2** All fastening devices and fastening assemblies used for insulation, anchor sheet or roof coverings shall be tested in compliance with Section R4402.12 of this code.~~

~~**R4402.4.1.3** All roofing assemblies shall be tested by a testing laboratory certified.~~

~~**R4402.4.1.4** All roofing membranes and components shall be tested in compliance with the physical property test requirements detailed in TAS 110.~~

~~**R4402.4.1.5** No loose laid ballasted or non-ballasted system shall be allowed.~~

~~**R4402.4.2 Guidelines for roofing applications.**~~

~~**R4402.4.2.1 Decks.** All roofing systems and prepared roof coverings shall be installed over solid decks, unless otherwise specifically allowed in other sections of this code.~~

~~**R4202.4.2.2 Minimum slope.** All roofing assemblies must be installed in compliance with the slope requirements specified in the product approval, in compliance with Table R4402.4.2~~

~~**TABLE R4402.4.2**~~
~~**MINIMUM SLOPE**~~

~~SYSTEM TYPE~~	~~SLOPE~~
~~Fibrous Cement Shingles~~	~~4:12~~
~~Metal Panels~~ ~~Architectural~~	~~2:12~~
~~Metal Shingles~~	~~4:12~~
~~Mortar or Adhesive Tile~~	~~2:12~~
~~Mechanically Fastened Tile~~ ~~Asphalt Shingles~~	~~4:12~~
~~Laminated~~	~~2:12~~
~~3-Tab~~	~~2:12~~
~~Quarry Slate~~	~~3-1/2:12~~
~~Wood~~	~~2:12~~
~~Shakes~~	~~4:12~~
~~Shingles~~	~~3-1/2:12~~

~~**R4402.4.2.3.2** All eaves shall provide a firm nailable substrate for secure attachment of perimeter edge metal in compliance with RAS 111.~~

~~**R4402.4.2.3.3** Perimeter edge metal shall be fastened with nails or fasteners fabricated from similar or compatible material. The nails or fasteners shall be as set forth in the roofing assembly product approval.~~

~~**R4402.4.2.4 Impact resistance.** Roof coverings installed on low slope roofs in accordance with R4402.8 shall resist impact damage based on the results of test conducted in accordance with ASTM D 3746, ASTM D 4272, CGSB 37-52, FM 4470, or TAS 114.~~

~~**R4402.4.2.5 Ridge vents.** Ridge vents shall have product approval, and shall be tested for wind driven rain in accordance with TAS 110 and R4402.12.~~

~~**SECTION R4402.6**~~
~~**HIGH-VELOCITY HURRICANE ZONES—MATERIALS**~~

~~**R4402.6.1 Scope.** Every roofing component shall comply with the applicable ASTM material standards adopted by this code. All such products shall bear the testing logo imprinted on the material and/or container or shall be marked in a distinctive manner to define compliance with the standards and shall be subject to be evaluated for compliance.~~

~~**R4402.6.4 Product identification.** All roofing components shall be labeled and/or identified as mandated by the Product Approval.~~

~~**R4402.6.4.1** ASTM standard roll goods shall be marked with a yellow line to identify the ASTM standard, or such other marking as may be deemed appropriate by the Product Approval.~~

~~**R4402.6.5 Fasteners.**~~

~~**R4402.6.5.1** Nails shall be minimum 12 gauge, annular ring shank nails having not less than 20 rings per inch, heads not less than 3/8 inch (9.5 mm) in diameter; and lengths sufficient to penetrate through the thickness of plywood panel or wood plank decking not less than 3/16 inch (4.8 mm), or to penetrate into a 1 inch (25 mm) or greater thickness of lumber not less than 1 inch. Nails or wood screws shall be hot dipped, electro or mechanically galvanized to a thickness sufficient to resist corrosion in compliance with TAS 114 Appendix E, Section 2 (ASTM G 85). All nails shall be Product Approved. All nail cartons or carton labels shall be labeled to note compliance with the corrosion resistance requirements. No roofing material shall be fully or partially adhered, unless otherwise noted in the roof assembly Product Approval directly to a nailable deck.~~

~~**R4402.6.5.2** Such fasteners shall be applied through tin caps no less than 15/8 inches (41 mm) and not more than 2 inches (51 mm) in diameter and of not less than 32 gauge (0.010 inch) sheet metal. Cap nails or prefabricated~~

~~fasteners with integral heads complying with this section shall be an acceptable substitute. All tin caps, cap nails or prefabricated fasteners with integral heads shall be tested for corrosion resistance in compliance with TAS 114 Appendix E, Section 2 (ASTM G 85), and shall have Product Approval. All cartons or carton labels for tin caps, cap nails or prefabricated fasteners with integral heads shall note compliance with the corrosion resistance requirements.~~

~~**R4402.6.6 Metal roofing accessories.** All metal accessories for roofs shall be not less than 26 gauge G-90 galvanized or stainless steel, 16 ounce copper, 0.025 inch (0.6 mm) thick aluminum, lead sheet with a minimum 2.5 pound per square foot (12.2 kg/m2) or equivalent noncorrosive metal alloys or composite materials manufactured for use as roof termination. All composite and nonmetallic flashing materials shall have Product Approval.~~

~~**R4402.6.6.1** Metal accessories may be of a manufactured, shop fabricated or field fabricated type, providing the materials and fasteners are in compliance with the minimum requirements of this code and shall be sized, designed and installed in compliance with methods set forth in RAS 111.~~

~~**R4402.6.6.2** Gravel stop or drip edge profiles shall be as follows:~~

~~**R4402.6.6.2.1** The vertical face shall be a minimum of 1 ½ inches (38 mm) and shall extend down not less than ½ inch (12.7 mm) below the sheathing or other member immediately contiguous thereto. In all cases, the deck flange shall be not less than 2 inches (51 mm) in width. Gravel stop or drip edge shall be sized, designed and installed in compliance with RAS 111.~~

~~**R4402.6.6.2.2** Gravel stop or drip edge shall be designed so that the bottom (the kick of the metal) of the drip edge shall have a minimum of ½ inch (12.7 mm) clearance from the structure.~~

~~**R4402.6.6.2.3** Reserved.~~

~~**R4402.6.6.2.4** Gravel stops shall be installed after all roofing felts have been applied, or in compliance with the application method set forth in the roofing assembly product approval. All asphalt or approved cold adhesive bonding areas shall be coated with ASTM D 41 or ASTM D 43, as required, and allowed to dry prior to application.~~

~~**R4402.6.6.2.5** Gravel stop and drip edges shall be joined by lapping a minimum of 4 inches (102 mm) and the entire interior of the joints shall be coated with approved flashing cement. Cover and splice plates shall be of the same material as the gravel stop and drip edge, and shall be sized, fabricated and installed in compliance with RAS 111.~~

~~**R4402.6.6.2.6** The deck flange shall be nailed with an approved minimum 12 gauge annular ring shank nail at 4 inches (102 mm) o.c. The nail shall be manufactured from similar and/or compatible material to the termination profile. All composite materials shall be fastened with nonferrous nails.~~

~~**SECTION R4402.7**~~
~~**HIGH-VELOCITY HURRICANE ZONES — ROOF COVERINGS WITH SLOPES 2:12 OR GREATER**~~

~~**R4402.7.1 General.** Prepared roof coverings shall be as defined in Section R4402.2 and in general limited to application over sloped roof decks capable of receiving mechanical fasteners. Prepared roof coverings may be mechanically fastened or, in specific limited cases noted in the Product Approval, set in an adhesive bond.~~

~~**R4402.7.2 Underlayment.** Underlayment shall be as defined in Section R4402.2. Underlayment shall be installed in compliance with the roofing component Product Approval and shall be in compliance with the following minimum requirements:~~

~~**R4402.7.2.1** Underlayment shall be attached to a nailable deck in a grid pattern of 12 inches (305 mm) between the side laps, with 6-inch (152 mm) spacing at the side laps.~~

~~**R4402.7.2.2** Where the architectural appearance of the underside is to be preserved, the underlayment shall be secured in accordance with Section R4402.8.5.2.~~

~~**R4402.7.2.3** Tin caps and nails or cap nails shall be as defined in Section R4402.6.5.2.~~

~~**R4402.7.2.4** Underlayment nails shall be as defined in R4402.6.5.1.~~

~~**R4402.7.3** If the underlayment is a self-adhering membrane, the membrane shall be applied over a mechanically attached anchor sheet, attached in compliance with R4402.7.2.1.~~

~~**R4402.7.4** All underlayment applications for prepared roof coverings shall be applied in compliance with the manufacturer roofing assembly Product Approval, and shall be not less than one of the following: (1) A double layer of an ASTM D 226 Type I, with a 19 inch headlap; or (2) A single layer of an ASTM D 226, Type II with a 4-inch (102 mm) headlap; or (3) A single layer of an ASTM D 2626 coated base sheet with a 4 inch (102 mm) headlap, and (4) All endlaps shall be a minimum of 6 inches (152 mm).~~

~~**R4402.7.5 Fiber cement shingles.** Fiber-cement shingles shall be applied in compliance with the shingle manufacturer's roofing assembly Product Approval. The roofing system assembly product approval shall meet the following minimum requirements:~~

~~**R4402.7.5.**1 All non-asbestos fiber-cement shingles shall conform to ASTM C 1225.~~

~~**R4402.7.5.2** Fiber-cement shingles shall be installed in compliance with the nailing requirements set forth in the product approval; however, attachment of each component shall be with not less than two corrosion resistant fasteners. If adhesive is used at the head or side laps, the system shall be defined as a "sealed system" with load calculations in compliance with Section R4403.~~

~~**R4402.7.5.3** All intersections shall be flashed in metal as provided in Section R4402.6.6 and RAS 111.~~

~~**R4402.7.5.4** Fiber-cement shingles shall be tested as set forth in Section R4402.12.~~

~~**R4402.7.6 Quarry slate.** Quarry slates shall be applied in compliance with the slate manufacturer's Product Approval. The roofing assembly Product Approval shall meet the following minimum requirements:~~

~~**R4402.7.6.1** Quarry slates shall be installed with not less than two approved fasteners per slate.~~

~~**R4402.7.6.2** All terminations and intersections shall be flashed in metal as provided in Section R4402.6.6 and RAS 111.~~

~~**R4402.7.6.3** Quarry slates shall be tested in compliance with the requirements set forth in Section R4402.12.~~

~~**R4402.7.6.4** Installation of all quarry roof slates shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

~~**R4402.7.7 Asphaltic shingles.** Asphaltic shingles layout, alignment and placement of mechanical attachment shall be in compliance with the Product Approval, and shall be installed in accordance with RAS 115.~~

~~**R4402.7.7.1** Underlayments exceeding minimum underlayments, as detailed in Section R4402.7, shall be applied in compliance with the application methods detailed in the Product Approval. Where the architectural appearance of the underside of the roof is to be preserved, refer to Section R4402.8.5.2.~~

~~**R4402.7.7.2** Installation of all asphaltic shingles shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

~~**R4402.7.7.3** The asphaltic shingle Product Approval shall meet the following minimum requirements:~~

~~**R4402.7.7.3.1** Where asphaltic shingles are to be installed over insulated roof deck, a suitable nailable substrate, in accordance with Section R4402.9.5.7 must be installed over the insulation prior to the installation of approved underlayment and shingles.~~

~~**R4402.7.7.3.2** Asphaltic shingles shall be installed in compliance with the Product Approval, but in no case with less than six approved roofing nails or approved fastening devices which penetrate through the thickness of sheathing or wood plank a minimum of 3/8 inch (4.8 mm) or penetrate into a 1 inch (25 mm) or greater thickness of lumber a minimum of 1 inch (25 mm), except where architectural appearance is to be preserved, in which case a minimum of 3/4 inch (19 mm) ring shank roofing nail may be used.~~

~~**R4402.7.7.3.3** Intersections, eaves, rakes, valleys, gable ends, and the starter course of asphaltic shingles shall be set in an 8 inch (203 mm) wide bed of approved cold adhesive or roofing cement. Application of adhesive or cement shall be in compliance with the application instructions of the Product Approval. Shingles shall not extend more than ¼ inch (6.4 mm) beyond the eave drip.~~

~~**R4402.7.7.3.4** All perimeter termination and valleys shall be fabricated from metal. Minimum metal requirements are set forth in Section R4402.6.6, and RAS 111.~~

~~**R4402.7.7.3.5** Asphaltic shingles shall be tested in compliance with the provisions set forth in Section R4402.12.~~

~~**R4402.7.8 Clay and concrete roof tile.** Tile shall be clay, concrete or composition material of various configurations complying with the physical property requirements of this code. All tile and tile systems shall be tested in compliance with the provisions set forth in Section R4402.12. Tile shall have a Product Approval for a complete tile system, which shall include the tile, underlayment and all tile related accessories required to provide a waterproof system.~~

~~**R4402.7.8.1 Application.** All tile systems shall be installed over solid sheathed decks. All tile installation shall be in accordance with RAS 118, RAS 119, and RAS 120, as applicable.~~

~~**R4402.7.8.1.1** Roof tile mortar shall either be a pre-mixed unit having a Product Approval and tested in compliance with TAS 123 or a job-site mix approved by the building official and in compliance with TAS 113.~~

~~**R4402.7.8.2** The roof tile product approval shall specify the slope requirement for each tile and underlayment system in accordance with Table R4402.4.2.~~

~~**R4402.7.8.3** All roof tile fasteners shall be tested and comply with the requirements set forth in Section R4402.12.~~

~~**R4402.7.8.4 All tile systems.** All tile application designs shall comply with the following limitations in order to withstand the wind loads prescribed in this section, as well as all wind load requirements set forth in Section R4403.~~

~~**R4402.7.8.4.1** Roof tiles systems, combining mechanically fastened tile and mortar and/or adhesive, shall be acceptable.~~

~~**R4402.7.8.4.2** In an air permeable tile roofing systems: (1) the length of each tile shall be not less than 12 inches (305 mm) and not greater than 21 inches (533 mm) and the exposed width of the tile shall be between 8.5 inches and 15 inches (216 and 381 mm); (2) the maximum thickness of the nose (leading edge) of the tile shall not exceed 1.3 inches (33 mm); and (3) mortar or adhesive set system shall have at least two-thirds of the tile free of mortar and/or adhesive contact.~~

~~**R4402.7.8.5** The proposed method of attachment for tile systems which are considered to be air permeable, shall provide sufficient attachment resistance (Mf) (listed in tile product approval) to meet or exceed the moment of resistance (Mr) as determined by following the procedures outlined in RAS 127. The aerodynamic multiplier (k) needed in RAS 127 shall be part of the tile Product Approval and shall be derived from the following formula:~~

~~For direct deck application k = (0.156) x (b) x (l)2~~

~~For batten application k = (0.144) x (b) x (l)2~~

~~Where b (in feet) = exposed width of the tiles~~

~~Where l (in feet) = length of tiles~~

~~**R4402.7.8.6** The proposed method of attachment for tile systems which are not considered air permeable shall provide a minimum characteristic force (F') (listed in tile product approval) to meet or exceed the required uplift resistance (Fr) as determined by following the procedures outlined in RAS 127.~~

~~**R4402.7.8.7** Tile systems shall extend beyond the drip edge (not including the rake) not less than ¾ inch (19 mm) but not more than 2 inches (51 mm).~~

~~**R4402.7.8.10** Mortar or adhesive set tiles applied at an incline from 6:12 up to and including 7:12 shall have the first course of tile (this applies to pan only on two piece barrel tile) mechanically fastened with not less than one fastener per tile. As an alternate, the first course of tile shall be applied in mortar over a single layer of minimum 20 gauge galvanized wire mesh with openings of not less than ½ inch (12.7 mm) or greater than 1 ½ inches (38 mm) with minimum exposure of 12 inches (305 mm) which is mechanically attached to the deck through the underlayment with approved fasteners and tin cap when back nailing the cap sheet. Additionally, for roof inclines of 6:12 up to and including 7:12, every third tile of every fifth course, shall be mechanically fastened with not less than one fastener per tile. For roof inclines above 7:12, in addition to the mortar or adhesive, all tiles shall be mechanically fastened with not less than one fastener per tile. Apply approved flashing cement to seal all tile fastener penetrations, for all roof inclines.~~

~~**R4402.7.8.11** All tile systems shall be shingle lapped interlocking and installed with the headlap as specified in the tile system Product Approval. In no case shall the minimum headlap be less than 2 inches (51 mm) for mortar or adhesive set tile, or less than 3 inches (76 mm) for mechanically set tile, unless restricted by product design.~~

~~**R4402.7.8.12** Where tiles are to be installed over an insulated roof deck, a suitable nailable substrate, in accordance with Sections R4402.9.5.6 and R4402.9.5.7 must be installed over the insulation prior to the installation of approved underlayment and tiles.~~

~~**R4402.7.8.13** For mortar or adhesive set tile, no more than two tiles shall be loose per roofing square [100 square feet (9.3 m^2)]. No loose tile shall be adjacent to each other.~~

~~**R4402.7.9 Metal panels/shingles.** Steel panels/shingles shall be a minimum of G-90 corrosion resistant, and shall be not less than 26 gauge in thickness. Aluminum panels/shingles shall not be less than 0.025 inch (0.685 mm)~~

~~thick. All other metal panel/shingle products shall be an equivalent weight. All metal panel/shingle assemblies shall be capable of withstanding foot traffic without damage to the metal panels/shingles. Metal panels/shingles shall have Product Approval for a complete metal system, which shall include the panel/shingle, underlayment and all related accessories to provide a complete waterproof system.~~

~~**R4402.7.9.1** All metal panels/shingles assemblies shall be tested in accordance with Section R4402.12, and TAS 125.~~

~~**R4402.7.9.2** The entire application method of all metal panel/shingle systems shall be detailed in the Product Approval and RAS 133, as applicable.~~

~~**R4402.7.9.3** Metal shingles may be applied as a recover over a single layer of asphaltic shingles or smooth surface roofing, providing the deck is solid sheathed and in compliance with the provisions of this code, the existing prepared roof covering is in compliance with provisions of this code and the entire metal shingle system is applied as set forth in the Product Approval.~~

~~**R4402.7.9.4** Metal panel/shingle systems shall not extend more than 1 inch (25 mm) beyond the roof eave.~~

~~**R4402.7.9.5** All intersections shall be flashed in metal as provided in Section R4402.6.6, RAS 111 and the roof assembly Product Approval.~~

~~**R4402.7.10 Wood shingles and shakes.** All wood shingles and shakes shall be installed in accordance with RAS 130. Installation of all wood shingles and shakes shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

~~**R4402.7.10.1** All wood shingle/shake systems shall be tested in accordance with Section R4402.12.~~

~~**R4402.7.11** Building integrated photovoltaic roofing modules/shingles. The installation of building integrated photovoltaic roofing modules/shingles shall comply with the provisions of this section.~~

~~R4402.7.11.1 Material standards. Building integrated photovoltaic roofing modules/shingles shall be listed and labeled in accordance with UL 1703.~~

~~R4402.7.11.2 Attachment. Building integrated photovoltaic roofing modules/shingles shall be attached in accordance with the manufacturer's product approval.~~

~~1518.11.3 Wind resistance. Building integrated photovoltaic roofing modules/shingles shall be tested in accordance with procedures and acceptance criteria in TAS 107. Building integrated photovoltaic roofing modules/shingle packaging shall bear a label to indicate compliance with the procedures in TAS 107.~~

~~**SECTION R4402.8**~~
~~**HIGH-VELOCITY HURRICANE ZONES — ROOF COVERINGS WITH SLOPES LESS THAN 2:12**~~

~~**R4402.8.1 General.** All adhered roofing components shall be bonded to the various types of substrates in compliance with the requirements set forth in the roofing assembly Product Approval and the following minimum requirements. The authority having jurisdiction may adopt RAS 150 as the means of complying with the requirements listed in this section.~~

~~**R4402.8.2** All packaged asphalt shall have the following data printed on the carton wrapper:~~

~~**R4402.8.2.1** ASTM designation and type;~~

~~**R4402.8.2.2** Flash point as determined by ASTM D 92, Flash and Fire Point , by Cleveland open cup; and~~

~~**R4402.8.2.3** Equiviscous temperature (EVT) at which the asphalt attains a viscosity of 125 centipoise (25 centipoise for coal tar) as determined by ASTM D 4402, Viscosity Determinations of Unfilled Asphalt Using The Brookfield Thermoset Apparatus.~~

~~**R4402.8.3** Asphalt types, as defined by ASTM D 312, shall be employed in all roofing assemblies. Application of asphalt shall be in compliance with Table R4402.8.3A and Table R4402.8.3B or as detailed in the roofing assembly Product Approval.~~

~~**TABLE R4402.8.3A**~~
~~**SLOPE AND APPLICATION TEMPERATURE CRITERIA**~~

ASTM D312 TYPES OF ASPHALT		MAXIMUM1		
		SLOPE (in./ft)	TEMPERATURE°F	
		MOP	MECHANICAL	
Type I	Dead level	1/4	350 +/ 25	375 +/ 25
Type II	Flat		400 +/ 25	425 +/ 25

		~~1/2~~		
~~Type III~~	~~Steep~~	~~3~~	~~425 +/ 25~~	~~450 +/ 25~~
~~Type IV~~	~~Special steep (All roof tile systems)~~	~~N/A~~	~~450 +/ 25~~	~~475 +/ 25~~

~~1 inch = 25.4 mm; C° = [(°F) 32)]/1.8~~
~~1. Temperature and slope measurements are at point of application~~

~~TABLE R4402.8.3B~~
~~SLOPE AND APPLICATION TEMPERATURE CRITERIA~~

~~ASTM 450 COAL TAR TYPE NO.~~	~~TYPE OF COAL TAR~~	~~MAXIMUM SLOPE (in./ft)~~	~~TEMPERATURE RANGE (°F)~~
~~Type I~~	~~Coal tar pitch~~	~~1/4~~	~~360 +/ 25~~
~~Type III~~	~~Coal Tar bitumen~~	~~1/4~~	~~375 +/ 25~~

~~1 inch = 25.4 mm;C° = [(°F) 32)]/1.8~~

~~R4402.8.4~~ ~~Back nailing of inter-ply sheets shall not be required when using ASTM D 312 Type IV asphalt on slopes less than 3:12.~~

~~R4402.8.5 Mechanical attachment.~~ ~~All mechanically attached roofing components shall be attached to the various types of substrates in compliance with the requirements set forth in the roofing assembly Product Approval and the following minimum requirements.~~

~~R4402.8.5.1 Base sheet attachment on wood decks.~~ ~~Nails shall be minimum 12 gauge, annular ring shank nails having not less than 20 rings per inch; heads not less than 3/8 inch (9.5 mm) in diameter; and lengths sufficient to penetrate through the thickness of plywood panel or wood plank decking not less than 3/16 inch (4.8 mm), or to penetrate into a 1 inch (25.4 mm), or greater, thickness of lumber not less than 1 inch (25.4 mm). Nails shall be hot dipped; electro or mechanically galvanized to a thickness sufficient to resist corrosion in compliance with Appendix E of TAS 114. All nails shall be Product Approved. All nail cartons or carton labels shall be labeled to note compliance with the corrosion resistance requirements. No roofing material shall be fully or partially adhered, unless otherwise noted in the roof assembly Product Approval directly to a nailable deck.~~

~~R4402.8.5.1.1~~ ~~Tin caps shall meet the requirements of Section 4402.6.5.2.~~

~~**R4402.8.5.1.2** Prefabricated fastener systems complying with Sections R4402.8.5.1 and R4402.8.5.1.1 may be used, provided they have Product Approved.~~

~~**R4402.8.5.1.3** Spacing of such fasteners shall be in compliance with patterns set forth in the roofing assembly Product Approval.~~

~~**R4402.8.5.2** Where the architectural appearance of the underside is to be preserved, a base sheet may be secured in an alternate method of attachment prepared, signed, and sealed by a Florida-registered architect or engineer, or in buildings where the mean roof height does not exceed 15 feet (4.6 m), a base sheet may be secured with 1 ¼-inch (32 mm) fasteners on supporting members, with a minimum of ½-inch (12.7 mm) fasteners between the supporting members, all of which shall be secured through tin caps and nailed 6 inches (152 mm) o.c. in all directions.~~

~~**R4402.8.5.3 Lightweight insulating concrete.** All lightweight insulated concrete shall be vented per roofing system manufacturer recommendations.~~

~~**R4402.8.5.3.1** Lightweight concrete shall not be applied over an existing roof deck unless the supporting structure has been approved as adequate to sustain the added weight. Calculations verifying the adequacy of the existing structure to sustain the added weight shall be prepared, signed, sealed and dated by a Florida-registered architect or engineer, which architect or engineer is proficient in structural design, and submitted with the uniform roofing permit application.~~

~~**R4402.8.5.4 Other nailable decks.** The mechanical attachment of roofing components to other nailable decks shall be governed by the roofing assembly Product Approval.~~

~~**R4402.8.6 Cast-in-place and precast structural concrete decks.** Cast-in-place and precast structural concrete decks are considered non-nailable. Concrete decks shall be clean, dry and fully primed with ASTM D 41 or ASTM D 43, as required, primer applied at a rate of not less than 1 gallon (3.8 L) per square. Hot asphalt or cold adhesive shall not be applied until the primer has fully dried.~~

~~**R4402.8.7 Steel decks.** Steel decks shall be covered with a roof insulation panel having its own Product Approval and listed in the roofing assembly product approval. Insulation panels shall be mechanically fastened in compliance with the mechanical attachment patterns listed in the roofing assembly product approval, and in accordance with the provisions of RAS 117.~~

~~**R4402.8.7.1** If the deck thickness, on an existing steel deck, is less than 22 gauge, a field fastener withdrawal resistance test shall be conducted, in compliance with TAS 105, to confirm compliance with the wind load requirements of Section R4403. Test results shall be submitted with the uniform roofing permit application for review prior to issuance of the roofing permit. The field fastener withdrawal resistance test shall be carried out by a certified testing laboratory.~~

~~**R4402.8.7.2** Steel decks shall be welded or mechanically attached to the structure in compliance with the design pressure requirements set forth in Section R4403.~~

~~**R4402.8.7.3** Composite wood and insulation panels shall be mechanically attached to steel decks in compliance with the attachment requirements enumerated in the insulation roofing component Product Approval. The composite wood insulation panel shall be in compliance with the minimum sheathing requirements of this code.~~

~~**R4402.8.8 Flashing.** All flashing shall be installed according to the roof assembly manufacturer's published details and literature and in accordance with RAS 111.~~

~~**R4402.8.9 Valleys.** Valleys in BUR shall be installed in according to the roof assembly manufacturer's published literature for high wind areas and in compliance with the applicable detail described in the Product Approval.~~

~~**R4402.8.10 Parapet walls.** All parapet wall details shall be installed in accordance with the roofing system product approval, manufacturer's published details and literature and in accordance with approved methods detailed in RAS 111.~~

~~**R4402.8.11 Insulation.** Roof insulation shall be applied in compliance with the roofing system Product Approval and RAS 117.~~

~~**R4402.8.12 Surfacing.** Roofing assemblies shall be surfaced in compliance with the Product Approval. Surfacing shall be in sufficient quantity to comply with the required fire classification. Aggregate surfacing shall not be used on slopes greater than 3:12. Aggregate shall be embedded in a flood coat of bitumen applied over a prepared top ply.~~

~~**R4402.8.12.1** On slopes of 3:12 or less, not less than 400 pounds (182 kg) of roofing gravel or 300 pounds (145 kg) of slag per square shall be applied. A minimum of 50 percent of the total aggregate shall be embedded in the flood coat of bitumen. Aggregate shall be dry and free from dirt and shall be in compliance with the sizing requirements set forth in ASTM D 1863. A building official may as an option, request a test to confirm compliance with these requirements.~~

~~**R4402.8.12.2** On inclines greater than 3:12, a smooth surface coating shall be applied.~~

~~**R4402.8.12.3** Mineral-surfaced cap sheet applications shall not require any additional surfacing unless required with the particular assembly for a fire classification.~~

~~**R4402.8.12.4** All smooth surface applications shall be coated with an aluminized or emulsion coating, having a valid and current Product Approval and shall be in compliance with the application instructions in said Product Approval. Coating quantity shall be in compliance with the required fire rating classification for the structure.~~

~~**R4402.8.13 Attachment of metal termination.** All edge metal and terminations shall be installed according to manufacturers published literature, provided it meets the minimum requirements as set for in RAS 111 and Section R4403.~~

~~**R4402.8.14 Expansion joints.** Expansion joint covers and expansion joint components shall be constructed and installed in accordance with the roofing assembly manufacturer's published literature.~~

~~**R4402.8.15 Venting roofing assemblies.** All roof assemblies shall be applied to a dry substrate. Vapor retarders shall be installed, where applicable, to reduce moisture vapor flow into insulation from the warm, humid building interior, leading to internal condensation. Vents shall be installed to assist in the expulsion of moisture vapor where such vapor may enter the roofing assembly or moisture, as defined in Section R4402.11.12, has been left in an existing roofing assembly. Venting units shall not allow vapor to enter the roofing assembly when the high vapor pressure side is above the roofing membrane.~~

~~**R4402.8.16 Waterproofing.** Waterproofing systems may be installed in lieu of an approved roof system over sloped or horizontal decks specifically designed for pedestrian and/or vehicular traffic, whether the deck is above occupied or unoccupied space. In new construction the minimum deck slope shall be ¼ : 12.~~

~~**R4402.8.16.1** The waterproofing system must possess a current and valid product approval.~~

~~**R4402.8.16.2** If an overburden or wearing surface is not to be installed, the waterproofing system must be approved by the manufacturer for use in vehicular and/or pedestrian traffic locations.~~

~~**R4402.8.16.4** If any portion of the waterproofing membrane is to remain exposed, the waterproofing system shall be ultraviolet resistant.~~

~~**R4402.8.16.5** Flashings must be installed according to the waterproofing manufacturer's published specifications and in compliance with the material and attachment standards of RAS 111.~~

~~**R4402.8.16.6** The waterproofing system shall be flood tested in accordance with ASTM D 5957.~~

~~**R4402.8.16.6.1** The flood test shall take place after installation of the waterproofing membrane and prior to the installation of any above membrane components, wearing surface or overburden.~~

~~**R4402.8.16.6.2** An approved testing lab shall provide written verification to the building official confirming that the flood test was performed along with the results, prior to final inspection.~~

~~**SECTION R4402.9**~~
~~**HIGH-VELOCITY HURRICANE ZONES — ROOF INSULATION**~~

~~**R4402.9.1 General.** All roof insulation shall have Product Approval as an approved roofing component for use in roofing assemblies. All insulation shall be tested for physical properties in accordance with TAS 110.~~

~~**R4402.9.2.1** Foam insulation panels shall be overlaid with a perlite, fiberglass, wood fiber or mineral wool overlay unless specifically stated to the contrary in the roof assembly Product Approval.~~

~~**R4402.9.4 Insulation fasteners, membrane fasteners and stress plates.** All Insulation fasteners, membrane fasteners and stress plates shall have a roof component Product Approval, and shall be tested in compliance with RAS 117, Appendixes A, B and C, and TAS 110 and TAS 114, Appendix E, Section 3 (DIN 50018), for corrosion resistance.~~

~~**R4402.9.5 Application.** Roof insulation shall be applied in strict compliance with the application methods detailed in the roof assembly Product Approval and with the requirements set forth in RAS 117.~~

~~**R4402.9.5.1** Roof insulation, either on the ground or on the roof top, shall be kept dry. The building official shall instruct the removal of the insulation from the job when elevated moisture levels are found in the insulation or where panels cannot achieve 85 percent adhesion.~~

~~**R4402.9.5.2** When applied in hot asphalt or cold adhesive, no insulation panel's dimension shall be greater than 4 feet (1219 mm).~~

~~**R4402.9.5.3** Strip or spot mopping of insulation panels shall be used as an application method only when approved in the roof assembly Product Approval.~~

~~**R4402.9.5.4** Where more than one layer of insulation is applied, joints between layers shall be staggered.~~

~~**R4402.9.5.5** Application in approved cold adhesive shall be as detailed in the Product Approval and shall be in compliance with the required fire classification.~~

~~**R4402.9.5.6** Nail boards or composite panels with a nailable surface may be applied to sloped decks for the application of prepared roof covering or metal roofing systems, providing that the nailing surface is minimum 15/32 inch (12 mm) exterior grade plywood sheathing, and has been attached to the deck with approved fastening assemblies in accordance with the windload requirements of Section R4403. Composite panels shall be gapped a minimum of 1/8 inch (3.2 mm) to allow for expansion of the sheathing panel.~~

~~**R4402.9.5.7** Suitable nailable decks installed over rigid board roof insulation in buildings of mean roof height of 35 feet (10.7 m) or less, shall be a minimum of 15/32 inch (12 mm) exterior grade plywood sheathing. These decks shall be fastened to every structural roof frame member or to the existing deck under the insulation, at intervals of not more than 24 inches (610 mm) apart, with a minimum #12 approved insulation fastener spaced at a maximum of 12 inches (305 mm) apart in one direction with a minimum penetration of 1½ inches (38 mm) into the structural member or deck. In these cases the maximum thickness of the rigid insulation board shall not exceed 2 inches (51 mm). An alternate method of attachment may be proposed, provided it is in compliance with Section R4403, and it is prepared, signed and sealed by a Florida registered architect or a Florida professional engineer, which architect or engineer shall be proficient in structural design.~~

~~**R4402.9.5.8** Mechanical attachment of insulation panels at uneven areas shall be acceptable. Hollowing, cutting or scoring of insulation panels to provide contact shall not be acceptable.~~

~~**SECTION R4402.10**~~
~~**HIGH VELOCITY HURRICANE ZONES — REROOFING**~~

~~**R4402.10.1 General.** Materials and methods of application used for recovering or replacing an existing roof covering, system or assembly shall comply with the requirements set forth in Sections R4402.1 through R4402.14.~~

~~**R4402.10.2** Repairs shall be carried out with roofing components as defined in this section having Product Approval.~~

~~**R4402.10.3** Repairs shall be carried out in such a manner as to not to create additional ponding water.~~

~~**R4402.10.4** 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 in any 12-month period unless the entire existing roofing system or roof section is replaced to conform to requirements of this code.~~

~~**R4402.10.5** A roofing system shall not be applied over an existing roof or over an existing roof deck where the roof sheathing has not been fastened in compliance with this code or where the roof sheathing will not permit effective fastening or where sheathing is water soaked or deteriorated so that effective attachment is not possible. All areas of deteriorated sheathing shall be removed and replaced. The building official shall not be required to inspect the renailing of the sheathing under this section.~~

~~**R4402.10.6** Structural concrete decks shall be allowed to dry or shall be dried prior to application of an ASTM D 41 or ASTM D 43, as required, or roofing system proprietary primer where the base sheet or base insulation layer is bonded to the concrete deck.~~

~~**R4402.10.7** On lightweight concrete, gypsum and cementitious wood fiber roof decks a field fastener withdrawal resistance test, in compliance with TAS 105, shall be carried out to confirm compliance with wind load requirements of Section R4403.~~

~~**R4402.10.7.1** If the tested fasteners exhibit a minimum characteristic resistance force less than 80 percent than that listed in the product approval, a structural engineer shall examine the deck's integrity and provide a proposed attachment specification. Such specification shall be submitted with the uniform roofing permit application for review and approval by the building official prior to the issuance of a roofing permit. Calculations for the attachment of the anchor sheet/base sheet or insulation over these deck types, shall be in compliance with RAS 117.~~

~~**R4402.10.8** Steel decks shall be examined prior to recover for indication of corrosion. Any corrosion identified and exposed on the roof side shall be treated with a rust inhibitor, providing the field fastener withdrawal resistance values of the proposed mechanical fasteners comply with the requirements of Section R4403 of this code. All steel decks less than 22 gauge shall be field tested for fastener withdrawal resistance for compliance with Section R4403 prior to application of a new roofing system. Test results shall be submitted with the uniform roofing permit application.~~

~~**R4402.10.9** One additional roofing system may be applied over an original roofing assembly, providing the existing roofing assembly complies with the requirements of Section R4402.10.~~

~~**R4402.10.10** If the recover roofing assembly is to be bonded to an existing roofing membrane, the existing roofing membrane shall be tested in compliance with TAS 124 for uplift resistance. The existing roofing membrane shall resist the design pressures calculated under Section R4403 of this code. Test results shall be submitted with the uniform roofing permit application.~~

~~**R4402.10.11** If the recover roofing assembly is mechanically attached through either a base sheet or insulation layer, the attachment assembly shall be field tested for fastener withdrawal resistance, in compliance with TAS 105, and laboratory tested for pull-over resistance to ensure compliance with wind uplift requirements set forth in Section R4403 of this code. Test results shall be submitted with the uniform roofing permit application. Recover roofing assembly anchor sheet or base sheet shall not be mechanically fastened directly to existing gravel roof unless all gravel is completely removed.~~

~~**R4402.10.12** Moisture content of the existing roofing assembly to be covered by a new roofing system shall not exceed 5 percent by weight in the roofing membrane and 8 percent by weight in the insulation system, as verified by moisture survey performed in accordance with TAS 126. Test results shall be submitted with the uniform roofing permit application.~~

~~**R4402.10.13** Prior to starting the work the contractor has the responsibility of notifying the owner, by means of the roofing permit and required owners notification for roofing considerations herein, of any possibility of ponding water and recommend a structural review if ponding water is a possibility.~~

~~**R4402.10.14** If the new roofing system is to be bonded to the existing roof surface, the surface shall be free of all loose gravel, dirt and silt and dry prior to commencement of the roofing application. All blisters shall be cut and repaired prior to roofing application.~~

~~**R4402.10.14.1** If the existing roof surface has gravel embedded in hot asphalt, all loose gravel shall be removed together with any dirt and silt. The dry membrane surface shall be primed with ASTM D 41 primer or proprietary~~

~~roofing system primer and allowed to dry thoroughly. A flood coat of ASTM D 312, type III or IV asphalt shall be applied to sufficient depth to cover the remaining embedded gravel. The prepared substrate shall be suitable for application of a new insulation layer only.~~

~~**R4402.10.14.2** In the case of existing coal tar assemblies, the existing roof surface shall be primed with ASTM D 43 primer or covered with a mechanically attached separation board prior to application of a new coal tar assembly. If an existing coal tar assembly is to be covered with an asphalt applied roofing system, only the separation board is acceptable. The attachment of the entire assembly, including the separation board, shall meet the design pressure requirements set forth in Section R4403.~~

~~**R4402.10.14.3** Insulation shall have product approval as a roofing component approved for use as a part of the roofing assembly. The insulation panels shall be bonded or mechanically attached in compliance with the Product Approval and RAS 117.~~

~~**R4402.10.15** Where an existing sloped roof is sheathed with spaced sheathing, any existing prepared roof covering shall be removed. New sheathing shall be applied in compliance with Section R4403, or open spacing shall be filled with dimensional lumber to create solid wood sheathing providing the spaced sheathing is in compliance with this code. Spaced sheathing is approved for use with wood shakes and wood shingles only.~~

~~**R4402.10.16** No recover application shall take place over existing wood shingles, shakes, slate, tile or metal shingles.~~

~~**R4402.10.17** Asphaltic shingle assemblies may be applied over one existing layer of asphaltic shingles having not more than 1/8 inch (3.2 mm) difference in level in the existing shingle material. Recover over an existing shingle system shall be with a product having Product Approval as prepared roof covering, in strict compliance with the application method detailed in the Product Approval.~~

~~**R4402.10.17.1** Application of elastomeric and or maintenance coating systems over existing asphalt shingles shall be in accordance with the shingle manufacturer's approved installation instructions.~~

~~**R4402.10.18** Sprayed polyurethane foam (PUF) and elastomeric coating systems may be applied over existing roofing assemblies providing the PUF system has obtained Product Approval, the deck has been prepared in compliance with the Product Approval and this code, the application is in strict compliance with the foam manufacturer's published application instructions for the environmental conditions at the time of application and post application inspections conform to RAS 109.~~

~~**R4402.10.18.1** No sprayed polyurethane foam (PUF) shall be applied over existing composition shingles.~~

~~**R4402.10.18.2** Upon completion of a PUF system, an inspection of the system shall be carried out by an authorized representative of the coating manufacturer. A certification shall be furnished to the building official within 30 days of completion, confirming that the quality control tests detailed in the PUF system Product Approval have been carried out with satisfactory results.~~

~~**R4402.10.18.3** Should a PUF system have inadequate adhesion to meet the design pressures, as set forth in Section R4403, the roofing system shall be removed and replaced with a roofing system tested to adequate adhesion. An additional inspection shall be required once the roofing system has been replaced. A field adhesion test may be requested by the building official during the application or at the completion of the project to confirm adequate adhesion.~~

~~**R4402.10.18.4** The PUF system shall comply with R4402.10.~~

~~**R4402.10.18.5** All PUF systems shall be installed by licensed roofing contractors holding an applicator's certificate from the manufacturer holding the Product Approval for the PUF system.~~

~~**R4402.10.19** Roof coverings or roofing components, such as tile, slate or similar, shall not be applied over an existing roofing system.~~

~~**R4402.10.20** Lightweight insulated concrete shall not be applied over an existing roofing system unless the existing roofing assembly is verified to be adequate to accept the new lightweight insulating concrete and is in compliance with the testing required herein.~~

~~SECTION R4402.11~~
~~HIGH-VELOCITY HURRICANE ZONES — ROOFTOP STRUCTURES AND COMPONENTS~~

~~**R4402.11.1 Rooftop structures.** Rooftop structures shall be designed and constructed in accordance with the Florida Building Code, Building.~~

~~**R4402.11.2 Rooftop mounted equipment.** All rooftop equipment and supports shall be secured to the structure in compliance with the loading requirements of Section R4403. The use of wood "sleepers" shall not be permitted.~~

~~**SECTION R4402.12**~~
~~**HIGH-VELOCITY HURRICANE ZONES—TESTING**~~

~~**R4402.12.1 Scope.** This section defines the minimum testing requirements for substrates, roofing components, roofing systems and roofing assemblies. All roofing products shall be tested for physical properties, water-infiltration, uplift performance and fire resistance, as addressed within this code.~~

~~**R4402.12.1.1** Testing requirements for physical properties of all roofing products shall be as set forth in TAS 110.~~

~~**R4402.12.2 Application.** Testing for substrates, roofing components, roofing systems and roofing assemblies shall comply with the provisions herein and those of Florida Building Code, Building TAS and RAS listed in this code.~~

~~**R4402.12.3 Laboratory certification.** All testing required by this code shall be performed by a certified testing laboratory.~~

~~**R4403.12.4 Margin of safety.** A margin of safety of 2:1 shall be applied to all wind uplift resistance test results. All in-situ (on-site) testing shall have an applied 1.45:1 margin of safety.~~

~~**R4403.12.5 Material labeling.** All products shall be identified with the product approval number or logo; or the manufacturer's name or logo. ASTM standard roll goods shall be marked with a yellow line to identify the ASTM standard, or such other marking indicated in the Product Approval.~~

~~**R4402.12.5.1** All asphaltic shingles, tile products and metal roofing panels and clips shall be labeled on the underside with the Florida Building Code, Building insignia, or Product Approval number, or the wording "Florida Building Code, Building Product Approved," and manufacturer's initials or manufacturer's logo, or as specified in the manufacturer's Product Approval.~~

~~**R4402.12.6 Testing requirements.**~~

~~**R4402.12.6.1 Reserved.**~~

~~**R4402.12.6.2 Continuous roofing systems.** All continuous roofing systems shall be tested in compliance with TAS 110 and TAS 114 in its entirety. All continuous roofing systems shall resist a minimum of 90 pound per square foot~~

~~(psf) (4309 Pa) tested wind uplift pressure resistance. Continuous roofing system testing requirements shall be as follows:~~

~~**R4402.12.6.2.1 Spray applied polyurethane foam.** All spray applied polyurethane foam systems shall be tested in compliance to RAS 109 and TAS 110 and TAS 114.~~

~~**R4402.12.6.2.1.1** Physical properties testing for acrylic coatings used on spray applied polyurethane foam roofing assemblies shall be tested in compliance with ASTM D 6083-97a and Federal Specification TTC-555B, Test Specification for Wind-Driven Rain Infiltration Resistance .~~

~~**R4402.12.6.3 Liquid applied roofing membranes systems.** All liquid applied roofing membranes systems shall be tested in compliance with TAS 114, in addition to the physical properties testing requirements set forth in TAS 110, and fire resistance.~~

~~**R4402.12.6.3.1** For liquid applied acrylic roofing membrane assemblies, physical properties testing shall be in compliance with ASTM D 6083-97a and Federal Specification TTC-555B, Test Specification for Wind-Driven Rain Infiltration Resistance .~~

~~**R4402.12.6.4** The building official may request that a quality control field uplift test be carried out on a continuous roofing system in compliance with test procedure TAS 124. Single-ply systems are not required to meet the deflection requirements established in the test protocol. The roofing system shall resist the design pressures as calculated in compliance with Section R4403 and as established in TAS 124.~~

~~**R4402.12.6.4.1** Should a roofing system fail to meet a quality control field uplift test, the roofing contractor may propose to the building official an acceptable method of repair that is in compliance with the requirements of this code.~~

~~**R4402.12.6.5 Discontinuous roofing systems.** All discontinuous roofing systems shall be tested in compliance with TAS 100 for wind-driven water infiltration resistance. Test specimens used for this test shall be constructed at the approved test facility. Testing requirements shall be as follows:~~

~~**R4402.12.6.5.1 Asphaltic shingle systems.** All asphaltic shingle systems shall comply with the following requirements: TAS 100, TAS 107, ASTM D 3462 and ASTM D 3018. Asphaltic shingle systems shall have a quality control testing program by an approved independent listing agency.~~

~~**R4402.12.6.5.2 Clay and cement roof tiles.** All roof tiles shall be tested in compliance with TAS 100. Physical properties testing for clay roof tiles shall be in compliance with ASTM D 1167. Physical properties testing for concrete roof tiles shall be in compliance with TAS 112. All roof tiles shall resist a minimum wind uplift resistance as determined by Section R4403 of this code and RAS 127. Clay and cement roof tile systems requirements are as follows:~~

~~**R4402.12.6.5.2.1 Underlayment.** All underlayments used in discontinuous roof tile systems shall be tested in compliance with TAS 103 and TAS 104, unless otherwise specifically listed in the applicable RAS.~~

~~**R4402.12.6.5.2.2** Mortar or adhesive set roof tile systems. All mortar or adhesive set tile systems shall be tested for static uplift resistance in compliance with TAS 101, the results of which shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.2.1** Additionally, roof tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116; and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier (l) which represents the system's wind characteristics and shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.2.2** Systems which are tested for characteristics, in compliance with TAS 108 as specified above, shall have the results of the TAS 101 testing treated as attachment resistance moment (Mf), which is representative of the tile bond's resistance to overturning moment, and the tile's restoring moment due to gravity (M_g). Such systems shall use the system's aerodynamic multiplier (l) in conjunction with the system's attachment resistance moment (M_f) and restoring moment due to gravity (M_g), as determined from the TAS 101 static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment-based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.2.3** Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force (F'), as determined from TAS 101 static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift-based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.2.4** Testing in accordance with TAS 106 shall be considered a product application quality control test to determine the general adhesion properties of the system.~~

~~**R4402.12.6.5.2.3 Mechanically fastened, rigid roofing systems.** All mechanically attached set tile systems shall be tested for static uplift resistance in compliance with TAS 102 or TAS 102(A), the results of which shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.3.1** Additionally, roof tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116; and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier (l) which represents the system's wind characteristics and shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.3.2** Systems which are tested for wind characteristics in compliance with TAS 108 as specified above shall have the results of the TAS 102 or TAS 102(A) testing treated as an attachment resistance moment (Mf) which is representative of the rigid component's attachment resistance to an overturning moment, and the tile's restoring moment due to gravity (Mg). Such systems shall use the system's aerodynamic multiplier (l), in conjunction with the system's attachment resistance moment (Mf) and restoring moment due to gravity (Mg), as determined from the TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment-based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.3.3** Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force (F'), as determined from TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift-based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.3.4** TAS 106 quality control field static uplift testing shall be considered a product application quality control test to determine the general uplift resistance properties of the system.~~

~~**R4402.12.6.5.2.4 Metal shingles/panels.** All metal roofing shall be tested in compliance with TAS 100. All metal roofing shall resist a minimum wind uplift resistance as determined by Section R4403 for a roof slope of 9.5 degrees (0.0166 rad) and a roof mean height of 15 feet (4.6 m). All metal roofing systems testing requirements shall be as follows:~~

~~**R4402.12.6.5.2.4.1** All metal roofing shall be test in compliance with requirements set forth in TAS 110 and TAS 125, and shall be tested for wind-driven rain infiltration resistance in compliance with TAS 100.~~

~~**R4402.12.6.5.2.4.2** Rigid metal shingle systems may be tested in an identical manner to nail-on or batten tile systems as set forth in this code.~~

~~**R4402.12.6.5.2.5 Wood shingles or shakes.** All wood shingles and shakes shall be tested, as a system, for wind driven rain infiltration resistance in compliance with TAS 100. The same specimens as tested in TAS 100 shall be tested for pull through tear resistance, and such values shall be listed in the manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.6 Fiber cement shingle or tile panels.** All fiber cement shingles or tiles shall resist a minimum wind uplift resistance as determined by Section R4403 for a roof slope of 9.5 degrees (0.0166 rad) and a roof mean height of 15 ft (4.6 m). All fiber cement shingle or tiles shall be tested in compliance with the following requirements. Wind driven water resistance in compliance with TAS 100, Physical properties in compliance with TAS 110, TAS 135 and uplift resistance.~~

~~**R4402.12.6.5.2.6.1** Additionally, fiber cement tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116 and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier (l) which represents the system's wind characteristics and shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.6.2** Systems which are tested for wind characteristics in compliance with TAS 108 as specified above shall have the results of the TAS 102 or TAS 102(A) testing treated as an attachment resistance moment (Mf) which is representative of the rigid component's attachment resistance to an overturning moment, and the tile's restoring moment due to gravity (M_g). Such systems shall use the system's aerodynamic multiplier (l), in conjunction with the system's attachment resistance moment (M_f) and restoring moment due to gravity (M_g), as determined from the TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment-based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.6.3** Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force (F'), as determined from TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift-based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.6.4** TAS 106 quality control field static uplift testing shall be considered a product application quality control test to determine the general uplift resistance properties of the system.~~

~~**R4402.12.6.5.2.7 Quarry roof slate.** All quarry roof slate shall be tested in compliance with TAS 100 and TAS 110.~~

~~**R4402.12.6.5.2.8 Roof board insulation.** All roof board insulation shall be tested for physical properties as set forth in Section 7 of TAS 110.~~

~~R4402.12.6.5.2.9 Insulation fasteners, membrane fasteners and stress plates. All insulation fasteners, membrane fasteners and stress plates shall be tested in compliance with TAS 117 Appendices A, B and C, and TAS 110 and TAS 114, Appendix E, Section 3, (DIN 50018), for corrosion resistance.~~

~~**R4402.12.6.5.2.10 Roofing nails and tin-caps.** All roofing nails and tin-caps shall be tested for corrosion resistance in compliance with TAS 114, Appendix E, Section 2 (ASTM G 85).~~

~~**R4402.12.6.5.2.11 Roof tile nails or fasteners.** All roof tile nails or fasteners, except those made of copper, monel, aluminum or stainless steel, shall be tested for corrosion in compliance with TAS 114, Appendix E, Section 2 (ASTM G 85), for salt spray for 1,000 hours.~~

~~**R4402.12.6.5.2.11.1** Tile fasteners used in coastal building zones, as defined in Section R4403 shall be copper, monel, aluminum or stainless steel.~~

~~**R4402.12.6.5.2.12** Roofing adhesives, mastics and coatings. All roofing adhesives, mastics and coatings shall be tested in compliance with TAS 110 and TAS 121.~~

~~**R4402.12.6.5.2.12.1** All roofing adhesives, mastics and coatings shall have a quality control testing program by an approved independent listing agency having unannounced follow-up visits.~~

~~**R4402.12.6.5.2.12.2** Acrylic roof coatings shall be tested for physical properties in compliance with ASTM D 6083-97a.~~

~~**R4402.12.6.5.2.13** Ridge vents of metal, plastic or composition material. All ridge vents shall be tested in compliance with TAS 110(A) for wind driven water infiltration. All ridge ventilators shall be restricted to roof mean height as tested in compliance with TAS 100(A), and shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.13.1** All plastic ridge ventilators shall be tested for physical properties as set forth in TAS 110 and R4412.~~

~~**R4402.12.6.5.2.13.2** All plastic ridge ventilator manufacturers shall have an unannounced follow-up quality control program from an approved listing agency. Follow-up test results shall be made available upon request.~~

~~**R4402.12.6.5.2.14** Edge metal, flashings, and coping. All edge metal, flashing and copings, not specifically described in RAS 111, shall be tested in compliance with TAS 110, TAS 111(A), TAS 111(B) or TAS 111(C), respectively.~~

~~**R4402.12.6.5.2.15** Roof tile premixed bagged mortar. All premixed roof tile mortar shall comply with the requirements set forth in TAS 110 and TAS 123, and shall have a quality control testing program by an approved independent listing agency having unannounced follow-up visits. Follow-up test results shall be made available upon request.~~

~~**R4402.12.6.5.2.16** Roof tile adhesive used in repair or supplemental tile attachment. All roof tile adhesive used in repair or supplemental tile attachment shall comply with the requirements set forth in TAS 110 and TAS 123(A).~~

~~**R4402.12.6.5.2.17** Roof tile adhesive used in adhesive set tiles systems. All roof tile adhesive used in adhesive set tile systems shall comply with the requirements set forth in TAS 110 and TAS 123. Physical properties shall be as follows:~~

~~**R4402.12.6.5.2.17.1** Tested for compressive strength in compliance with ASTM D 1621 with a minimum strength of 18 psi (121 kPa) parallel to rise, and 12 psi (82.7 kPa) perpendicular to rise.~~

~~**R4402.12.6.5.2.17.2** Tested for density in compliance with ASTM D 1622 with a minimum density of 1.6 pcf (25.6 kg/m3).~~

~~**R4402.12.6.5.2.17.3** Tested for tensile strength in compliance with ASTM D 1623 with a minimum requirement of 28 psi (193 kPa) parallel to rise.~~

~~**R4402.12.6.5.2.17.4** Tested for dimensional stability taken from a free rise sample specimen. Tested in compliance with ASTM D 2126 with a maximum volume change of +0.07 percent volume change at -40°F (-40°C) for two weeks; and +6.0 percent volume change at 158°F (70°C) and 100 percent RH for two weeks.~~

~~**R4402.12.6.5.2.17.5** Tested in compliance with ASTM D 2856 from a free rise sample specimen with a minimum requirement for 85 percent.~~

~~**R4402.12.6.5.2.17.6** Tested for water absorption in compliance with ASTM D 2842 with a maximum requirement of 10 percent.~~

~~**R4402.12.6.5.2.17.7** Tested in compliance with ASTM E 96 for moisture vapor transmission for a maximum of 3.1 perms.~~

~~**SECTION R4402.13**~~
~~**HIGH-VELOCITY HURRICANE ZONES — REQUIRED OWNERS NOTIFICATION FOR ROOFING CONSIDERATIONS**~~

~~**R4402.13.1 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 Section R4402 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.~~

~~2. **Renailing wood decks:** When replacing roofing, the existing wood roof deck may have to be re-nailed in accordance with the current provisions of Section R4403. (The roof deck is usually concealed prior to removing the existing roof system).~~

~~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 provides the option of maintaining this appearance.~~

~~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 Sections R4402, R4403 and R4413.~~

_____

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

~~Exception: Attic spaces, designed by a Florida-licensed engineer or registered architect to eliminate the attic venting, venting shall not be required.~~

~~SECTION R4402.14~~
~~HIGH-VELOCITY HURRICANE ZONES—UNIFORM PERMIT APPLICATION~~

~~[Use forms as found in the 2010 Residential code]~~

SECTION R4402
HIGH-VELOCITY HURRICANE ZONES —
ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

R4402.1. ~~**General**~~ **Refer to Chapter 15 of the Florida Building Code, Building**.

~~**R4402.1.1 Scope.** The provisions of this section shall set forth minimum requirements for the installation of roofing components, roofing systems, roofing assemblies and the waterproofing thereof.~~

~~**R4402.1.2 Application.** These High-velocity Hurricane Zone roofing requirements with associated roofing application standards (RAS) and testing application standards (TAS) are solely to be implemented in areas of high basic wind speeds, and where the jurisdiction having authority has adopted their use.~~

~~**R4402.1.2.1** All roofing components, roofing systems and roofing assemblies for construction regulated by this code shall comply with this chapter. All roofing components, roofing systems and roofing assemblies shall have a valid and current, referred to as product approval hereinafter. In the event that the manufacturers published literature or instructions are in conflict with those of the product approval, the product approval shall prevail. Where items specifically and expressly addressed in this section are in conflict with the product approval, the provisions of this section shall prevail.~~

~~**R4402.1.2.2** Innovative products and/or systems outside those currently recognized under this chapter may have a product approval issued based on performance testing; in such case(s) the conditions set in the product approval shall prevail.~~

~~**R4402.1.2.3** For roofing systems to be installed on a specific building or structure, where an existing product approval may not be applied, such roofing system may be granted a onetime approval by the authority having jurisdiction, provided the applicant demonstrates, by testing and/or rational analysis that such roofing system complies with the provision of this code.~~

~~**R4402.1.2.4** Where a product approval does not address a detail for a specific job condition, the permit applicant may propose to the building official an alternate detail to address the specific need of the job. The building official may accept such proposal if it can be demonstrated that the provisions of this code will be met.~~

~~**R4402.1.2.5 Workmanship standards.** All roofing work shall be performed by a qualified contractor licensed to perform roofing, in compliance with the tolerances, quality and methods of construction established herein or set forth in the standards adopted by these high-velocity hurricane zone requirements. Roofing assemblies detailed in product approvals shall be installed in strict compliance with the method of application set forth in such product approval or, if not part of the product approval, in compliance with manufacturer's published application instructions, or as approved by the building official. (Aesthetic issues not affecting the performance of the roof are not part of this section.)~~

~~**R4402.1.2.5.1 Appearance.** If the architectural appearance is to be preserved from below, an alternate method of attachment complying with the wind load requirements of Section R4403 may be proposed unless otherwise addressed in Section R4402. The alternative attachment shall be prepared, signed and sealed by a Florida registered architect or a Florida registered engineer, which architect or engineer shall be proficient in structural design.~~

~~**R4402.1.3** Permits outside these High-Velocity Hurricane Zone requirements shall comply with Section 105 of the *Florida Building Code, Building* . Permits within high wind areas shall be required for all work in connection with the application, repair or maintenance of any roofing component or any roofing assembly and/or any of its components except as otherwise permitted in Section 105 of the *Florida Building Code, Building* .~~

~~**R4402.1.3.1** All new roofing construction, including recovering and reroofing, repair and maintenance shall have a uniform roofing permit application, as established by the authority having jurisdiction, completed and executed by a licensed contractor.~~

~~**R4402.1.3.2** The uniform roofing permit shall include calculations per Section R4403 of this code, unless the roofing assembly is less than the height/pressure threshold allowed in the applicable protocols herein.~~

~~**4402.1.3.3** Reserved.~~

~~**R4402.1.3.4** Attachments to the uniform roofing permit application shall include two copies of each of the following documents: properly executed OWNERS NOTIFICATION FOR ROOFING CONSIDERATIONS herein; the fire directory listing pages product approval cover sheet, product approval specific system description, product approval specific system limitation, product approval general limitations, and applicable detail drawings; the municipal permit application; other components approvals; and any other additional data reasonably required by the authority having jurisdiction needed to determine the integrity of the roofing system.~~

~~**R4402.1.4.1** All roofing work for which a permit is required shall be inspected by the building official. One or more inspections may be performed at the same time at the request of the roofing contractor or when feasible. Lack of roofing contractor's personnel at the job site, in and of itself, shall not be cause to fail the inspection. Certain roofing inspections shall be performed during specific phases of the applications as noted below:~~

~~**R4402.1.4.2** For discontinuous roofing systems (as defined herein or Chapter 2):~~

~~**R4402.1.4.2.1** During or after application of the base sheet, anchor sheet or underlayment of any roofing system.~~

~~**R4402.1.4.2.2** During the installation of the cap sheet.~~

~~**R4402.1.4.2.3** During the installation of any prepared roof covering, such as shingles, tiles, slates, shakes, and similar.~~

~~**R4402.1.4.2.4** Upon completion of all adhesive-set and mortar-set tile systems, and prior to the final inspection, a field verification and static uplift test, in compliance with~~

~~TAS 106 shall be required to confirm tile adhesion. This test may be required by the building official for mechanically attached tile systems. All results of this test shall be submitted to the building official.~~

~~**R4402.1.4.3** For continuous roofing systems (as defined in herein or Chapter 2):~~

~~**R4402.1.4.3.1** During application of any roofing system prior to the full concealment of the adhesion/attachment process to the roof deck or to the existing roofing assembly.~~

~~**R4402.1.4.3.2** In cases where a roof area is less than 1,500 square feet (139 m^2), and when the building official is not able to perform any of the above requested inspection in a timely manner, the building official may authorize to continue with the work and may require that satisfactory evidence be provided to show that the covered work was performed in compliance with this code.~~

~~**R4402.1.4.3.3** After all roofing work has been completed; a final inspection shall be performed by the building official.~~

~~SECTION R4402.2~~
~~HIGH-VELOCITY HURRICANE ZONES—DEFINITIONS~~

~~**R4402.2.1 Definitions.** For definitions outside Section R4402 and accompanied RAS and TAS, see Chapter 2. For the purposes of Section R4402, accompanying RAS, TAS and roofing products product approval, roofing terms shall be defined in compliance with ASTM D 1079, unless otherwise defined below. The definitions listed below shall take preference. Other terms used herein shall be defined as set forth in Chapter 2 of this code.~~

~~**AIR PERMEABLE ROOFING SYSTEM.** A roofing system consisting of a prepared roof covering over an approved underlayment on a sloped roof. The components within the prepared roof covering are discontinuously laid and small, with unsealed side and head laps. Air permeable roofing systems shall be applied over sheathed decks with either mechanical attachment or a mortar/adhesive bond. Any roofing system with sealed side or head laps shall not be defined as an air permeable roofing system. The authority having jurisdiction may require testing in compliance with TAS 116, to determine whether a roofing system is air permeable.~~

~~**ANCHOR SHEET**. A roofing felt mechanically attached to a nailable deck with approved fasteners to which insulation is then installed in a solid mopping of asphalt. The roofing membrane is then installed to the insulation in the usual manner.~~

~~**ARCHITECTURAL METAL PANEL.** Water shedding (hydrokinetic) roof panel fastened to a roof deck.~~

~~**ASTM (ASTM International).** A scientific and technical organization that is responsible for the development of standards on characteristics and performance of materials, products, systems, as adopted for the high-velocity hurricane zone.~~

~~**NET FREE VENTILATING AREA (NFVA).** The gross area of the smallest plane area of the ventilating device reduced by the percentage of physical obstruction to the plane area.~~

~~**BASE SHEET.** The bottom or first ply of a roofing assembly over which subsequent roofing plies are applied. A base sheet may be designed for mechanical attachment, full or partial adhesion to the substrate.~~

~~**BUILDING INTEGRATED PHOTOVOLTAIC ROOFING.** A roofing product consisting of an electricity generating photovoltaic component integrated into a roof covering.~~

~~**CLASS A ROOFING ASSEMBLY.** A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow-up service, as "Class A" in compliance with ASTM E 108 or UL 790.~~

~~**CLASS B ROOFING ASSEMBLY.** A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow-up service, as "Class B" in compliance with ASTM E 108 or UL 790.~~

~~**CLASS C ROOFING ASSEMBLY**. A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow-up service, as "Class C" in compliance with ASTM E 108 or UL 790.~~

~~**CONTINUOUS ROOFING SYSTEM.** An impervious roof covering, composed from a single or multiple layers, forming a homogenous membrane over the entire roof surface, applied to either a flat or pitched roof surfaces.~~

~~**CORROSION RESISTANT.** Any component that passes appendix of FMRC's Test Standard 4470, as modified, and set forth in TAS 114.~~

~~**COUNTER BATTENS.** Vertical wood strips installed on sloped roofs over which horizontal battens are secured. The primary roof covering is attached or secured to these horizontal battens.~~

~~**COUNTERFLASHING.** Formed metal or elastomeric sheeting secured on or into a wall, curb, pipe, roof-top unit or other surface to cover and protect the upper edge of a base flashing and its associated fasteners.~~

~~**DISCONTINUOUS ROOFING SYSTEM.** A roofing system with unsealed overlapping components, where the combined roofing system has openings at the point of overlap, applied to a sloped surface with a pitch of 2:12, or greater. Discontinuous roofing systems include asphalt shingles; concrete, clay or metal tile; wood shingles or shakes; and cement fiber roofing systems.~~

~~**DRY-IN.** The process of applying the first layer of felt in a roofing system.~~

~~**FM APPROVALS.** A research and testing organization that is responsible for examination and testing of construction and other products.~~

~~**FASTENER WITHDRAWAL RESISTANCE TEST.** A static pullout test of mechanical fasteners, which are used to anchor any roofing component, to determine the force required to withdraw a fastener from the substrate. Testing shall be in compliance with the test procedure detailed in TAS 105.~~

~~**FIRE-RESISTANT ROOF COVERING.** Any Class A, Class B or Class C roofing system applied to the appropriate deck type within the specified slope of the listed classification.~~

~~**FLASHING.** The roofing component used to seal roofing systems, where the system is interrupted or terminated.~~

~~**LAP.** See NRCA Manual fourth edition.~~

~~**METAL PROFILE.** Including but not limited to eave and gable drip, gravel stop, raised edge systems and fascia systems. All composite and nonmetallic flashing materials shall have a Product Approval.~~

~~**MINIMUM CHARACTERISTIC RESISTANCE FORCE.** A force or pressure which is representative of data from withdrawal resistance testing; static uplift testing; and/or wind uplift testing after the data has been statistically analyzed to a 95 percent level of precision.~~

~~**METAL ROOF PANEL.** An interlocking metal sheet having an installed weather exposure equal or greater than three square feet per sheet.~~

~~**METAL ROOF SHINGLE.** An interlocking metal sheet having an installed weather exposure less than three square feet per sheet.~~

~~**MOMENT.** A quantity that represents the affect of a force applied at a particular point in relation to a specific point or axis.~~

~~**NRCA.** The NRCA Roofing and Waterproofing Manual , fifth edition, as published by the National Roofing Contractors Association.~~

~~**PREPARED ROOF COVERING.** Any manufactured or processed roof covering designed for use as the top layer of a discontinuous roofing system applied to a sloped roof.~~

~~**RAS.** Roofing Application Standards.~~

~~**RECOVERING.** The process of covering an existing roofing assembly with a new roofing system or a prepared roofing system.~~

~~**REPAIR.** The work of corrective procedures by replacing or altering an existing roofing component or system to eliminate water intrusion~~

~~**REROOFING.** The process of recovering or replacing an existing roofing system, either in its entirety or in existing sections.~~

~~**RIDGE VENT.** A ventilator located within 18 inches (457 mm) of the ridge that allows the escape of warm and/or moist air from the attic area or rafter cavity.~~

~~**ROOFING ACCESSORY.** A type of roofing product as described in Section R4402.6.6 of this code.~~

~~**ROOFING ASSEMBLY.** An assembly of interacting roofing components [includes the roof deck, vapor retarder (if present), insulation, and roof covering].~~

~~**ROOFING COATINGS, ADHESIVES AND MASTICS.** Any and all liquid materials applied to the roofing membrane layer to enhance ultraviolet light resistance; increase resistance to fire; increase reflectivity of the roofing assembly; or, in some way, enhance the performance of the roofing assembly. Roofing coatings, adhesives or mastics shall not contain asbestos materials.~~

~~**ROOF COVERING.** An assembly of multiple field-applied components or a single component designed to weatherproof a building's top surface. A roof covering may be a roofing assembly or form a portion thereof.~~

~~**ROOFING COMPONENT.** A roofing product that is incorporated into various roofing assemblies.~~

~~**ROOF DECK.** Solid or spaced sheathing to which the roofing or waterproofing system is applied.~~

~~**ROOFING MAINTENANCE.** Is the work of extending the longevity of a roofing system through preventative care, such as refilling pitch pans, applying coatings, re-graveling, resurfacing and re-caulking.~~

~~**ROOF SECTION.** A separation or division of a roof area by existing expansion 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.~~

~~**ROOFING SYSTEM.** A system of interacting roofing components, generally consisting of membrane or primary roof covering and insulation (not including the roof deck) designed to weatherproof, and sometimes to improve, the building's thermal resistance.~~

~~**HIGH ROOF TILE PROFILE.** Those tiles having a rise-to-width ratio greater than 0.20~~

~~**LOW ROOF TILE PROFILE.** Those tiles having a rise-to-width ratio less or equal than 0.20; except those tiles meeting the flat profile definition.~~

~~**FLAT ROOF TILE PROFILE.** Those tiles with less than $^1/_2$ inch (12.7 mm) rise.~~

~~**STRUCTURAL METAL PANEL.** Roof covering intended to be self supporting between structural members (see Sections R4406.1.8.2 and R4408.9.4).~~

~~**TAS.** Testing Application Standard.~~

~~**UNDERLAYMENT.** One or more water shedding layers applied to a sloped roof prior to the application of a prepared roof covering. The primary purpose of an underlayment is defined as a water shedding layer to function in combination with a prepared roof covering.~~

~~**WOOD SHAKES.** Tapered or straight pieces of red cedar, or other wood types, of widths ranging from 3 inches to 14 inches (76 mm to 356 mm) ranging in lengths from 18 inches to 32 inches (457 mm to 819 mm) applied to a sloped roof, in conjunction with an approved underlayment, forming a discontinuous prepared roof system.~~

~~**WOOD SHINGLES.** Tapered pieces of red cedar, or other wood types, sawn on both faces, of widths ranging from 3 inches to 14 inches (76 mm to 356 mm) and lengths of 16 inches, 18 inches, and 24 inches (406 mm to 610 mm) applied to a sloped roof forming a discontinuous prepared roof system.~~

~~SECTION R4402.3~~
~~HIGH-VELOCITY HURRICANE ZONES — WEATHER PROTECTION~~

~~**R4402.3.1 General.** Roof decks shall be covered with roof coverings secured to the building or structure in accordance with the provisions of this section. Roof coverings shall be designed, installed and maintained in accordance with this code and the manufacturer's installation instructions such that the roof covering shall serve to protect the building or structure. All roof coverings, roof systems and roof assemblies shall be designed and installed to resist the wind load requirements of Section R4403 of this code.~~

~~**R4402.3.2.2 Membrane flashings.** All membrane flashing shall be installed according to the roof assembly manufacturer's published literature and in accordance with the provisions set forth in RAS 111.~~

~~**R4402.3.2.3 Metal flashings and terminations.** Metal flashing and terminations shall be of the material and thickness described in Section R4402.6.6 and RAS 111 of this code, and shall be designed and installed in accordance with RAS 111~~

~~**R4402.3.2.3.1** Such felts shall be embedded in hot bitumen or an approved adhesive.~~

~~**R4402.3.2.3.2** Metal surfaces shall be primed with an ASTM D 41 or ASTM D 43 primer, as appropriate and allowed to dry prior to receiving hot bitumen or cold adhesive.~~

~~**R4402.3.2.4 Metal counterflashing.** Metal counterflashing shall be of the material and thickness described in Sections R4402.6.6 and RAS 111 of this code, and shall be installed in accordance with RAS 111.~~

~~**R4402.3.2.4.1** Metal counterflashing shall be built into walls, set in reglets or applied as stucco type and shall be turned down over base flashing not less than 3 inches (76 mm).~~

~~**R4402.3.2.4.2** Metal counterflashing shall be side lapped a minimum of 4 inches (102 mm).~~

~~**R4402.3.2.4.3** Metal counterflashing, where set in reglets or surface-mounted, shall be waterproofed, in accordance with applicable application standards.~~

~~**R4402.3.2.4.4** Where metal counterflashing is used as the means of sealing (such as a vented system) it shall be set in an approved sealant, sealed with an approved adhesive on the top flange and all joints shall be sealed with an approved sealant and lapped a minimum of 4 inches (102 mm).~~

~~**R4402.3.2.5 Roof penetration flashing.**~~

~~**R4402.3.2.5.1** All pipes shall be flashed with approved lead sleeve-type, pitch pans or other approved methods detailed in the roofing system assembly product approval. Lead flashing shall not be less than 2.5 pound per square foot (12.2 kg/m^2). Flanges shall be a minimum of 4 inches (102 mm).~~

~~**R4402.3.2.5.2** Other roof penetrations shall be suitably flashed with curbs, collars, pitch pans, in compliance with RAS 111 or an approved method, in compliance with the roofing system assembly Product Approval.~~

~~**R4402.3.2.5.3** No roof penetration shall be located in roof valleys.~~

~~**R4402.3.3 Coping.** Copings shall be designed and installed to resist the wind load requirements of Section R4403 of this code, and shall be in accordance with the provisions set forth in RAS 111.~~

~~**R4402.3.4 Roof drainage.** Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Where required for roof drainage, scuppers shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the roof slope and contributing roof area. Scuppers shall be sized in accordance with the provisions contained in ASCE 7, Section 8 with commentary and shall comply with Section R4403.6.~~

~~**R4402.3.4.1.1** Gutters shall be in compliance with RAS 111.~~

~~**R4402.3.4.2 Overflow drains and scuppers.** Where roof drains are required, overflow drains or overflow scuppers sized in accordance with *Florida Building Code, Plumbing* shall be installed with the inlet flow line located not less than 2 inches (51 mm) or more than 4 inches (102 mm) above the low point of the finished roofing surface, excluding sumps. Overflow scuppers shall be a minimum of 4 inches (102 mm) in any dimension and shall be placed in walls or parapets and shall be located as close as practical to required vertical leaders, conductors or downspouts. Overflow drains and scuppers shall also comply with the *Florida Building Code, Plumbing* , and Section R4403.6 of this code.~~

~~**R4402.3.4.2.1** When overflow scuppers and roof drains are installed, they shall be lined with approved metal or other approved materials set forth in the roofing system assembly Product Approval.~~

~~**R4402.3.4.2.2** When recovering, reroofing or repairing an existing roof, the existing number of scuppers and/or roof drains shall not be reduced, unless a new drainage system is designed by an architect or engineer, in compliance with the provisions of this code.~~

~~**R4402.3.4.3 Sizing and discharge.** Roof drains, gutters, conductors and leaders shall be sized and discharge in accordance with the *Florida Building Code, Plumbing* .~~

~~SECTION R4402.4~~
~~HIGH-VELOCITY HURRICANE ZONES — PERFORMANCE REQUIREMENTS~~

~~R4402.4.1 General. All roof assemblies, roof coverings and roof systems shall have Product Approval, and shall meet the following minimum requirements.~~

~~R4402.4.1.1~~ ~~All continuous roofing assemblies shall be tested in compliance with FMRC Test Standards 4470 and/or 4471 (for metal roofing), as modified for the purposes of this code and set forth in TAS 114. Only those components listed within the roofing assembly Product Approval shall be approved for use with the roof covering. Roofing assemblies shall be acceptable for use in this code's jurisdiction providing they are in compliance with the fire classification required for the structure to which the roofing assembly is to be installed.~~

~~R4402.4.1.2~~ ~~All fastening devices and fastening assemblies used for insulation, anchor sheet or roof coverings shall be tested in compliance with Section R4402.12 of this code.~~

~~R4402.4.1.3~~ ~~All roofing assemblies shall be tested by a testing laboratory certified.~~

~~R4402.4.1.4~~ ~~All roofing membranes and components shall be tested in compliance with the physical property test requirements detailed in TAS 110.~~

~~R4402.4.1.5~~ ~~No loose laid ballasted or non ballasted system shall be allowed.~~

~~R4402.4.2 Guidelines for roofing applications.~~

~~R4402.4.2.1 Decks.~~ ~~All roofing systems and prepared roof coverings shall be installed over solid decks, unless otherwise specifically allowed in other sections of this code.~~

~~R4202.4.2.2 Minimum slope.~~ ~~All roofing assemblies must be installed in compliance with the slope requirements specified in the product approval, in compliance with Table R4402.4.2~~

~~TABLE R4402.4.2~~
~~MINIMUM SLOPE~~

~~SYSTEM TYPE~~	~~SLOPE~~
~~Fibrous Cement Shingles~~	~~4:12~~
~~Metal Panels~~ ~~Architectural~~	~~2:12~~
~~Metal Shingles~~	~~4:12~~
~~Mortar or Adhesive Tile~~	~~2:12~~
~~Mechanically Fastened Tile~~ ~~Asphalt Shingles~~ ~~Laminated~~ ~~3-Tab~~	~~4:12~~ ~~2:12~~ ~~2:12~~
~~Quarry Slate~~	~~3-1/2:12~~
~~Wood~~ ~~Shakes~~ ~~Shingles~~	~~2:12~~ ~~4:12~~ ~~3-1/2:12~~

~~R4402.4.2.3.2~~ ~~All eaves shall provide a firm nailable substrate for secure attachment of perimeter edge metal in compliance with RAS 111.~~

~~**R4402.4.2.3.3** Perimeter edge metal shall be fastened with nails or fasteners fabricated from similar or compatible material. The nails or fasteners shall be as set forth in the roofing assembly product approval.~~

~~**R4402.4.2.4 Impact resistance.** Roof coverings installed on low slope roofs in accordance with R4402.8 shall resist impact damage based on the results of test conducted in accordance with ASTM D 3746, ASTM D 4272, CGSB 37-52, FM 4470, or TAS 114.~~

~~**R4402.4.2.5 Ridge vents.** Ridge vents shall have product approval, and shall be tested for wind driven rain in accordance with TAS 110 and R4402.12.~~

~~SECTION R4402.6~~
~~HIGH-VELOCITY HURRICANE ZONES — MATERIALS~~

~~**R4402.6.1 Scope.** Every roofing component shall comply with the applicable ASTM material standards adopted by this code. All such products shall bear the testing logo imprinted on the material and/or container or shall be marked in a distinctive manner to define compliance with the standards and shall be subject to be evaluated for compliance.~~

~~**R4402.6.4 Product identification.** All roofing components shall be labeled and/or identified as mandated by the Product Approval.~~

~~**R4402.6.4.1** ASTM standard roll goods shall be marked with a yellow line to identify the ASTM standard, or such other marking as may be deemed appropriate by the Product Approval.~~

~~**R4402.6.5 Fasteners.**~~

~~**R4402.6.5.1** Nails shall be minimum 12 gauge, annular ring shank nails having not less than 20 rings per inch, heads not less than 3/8 inch (9.5 mm) in diameter; and lengths sufficient to penetrate through the thickness of plywood panel or wood plank decking not less than 3/16 inch (4.8 mm), or to penetrate into a 1 inch (25 mm) or greater thickness of lumber not less than 1 inch. Nails or wood screws shall be hot dipped electro or mechanically galvanized to a thickness sufficient to resist corrosion in compliance with TAS 114 Appendix E, Section 2 (ASTM G 85). All nails shall be Product Approved. All nail cartons or carton labels shall be labeled to note compliance with the corrosion resistance requirements. No roofing material shall be fully or partially adhered, unless otherwise noted in the roof assembly Product Approval directly to a nailable deck.~~

~~**R4402.6.5.2** Such fasteners shall be applied through tin caps no less than 15/8 inches (41 mm) and not more than 2 inches (51 mm) in diameter and of not less than 32 gauge (0.010 inch) sheet metal. Cap nails or prefabricated fasteners with integral heads complying with this section shall be an acceptable substitute. All tin caps, cap nails or prefabricated fasteners with integral heads shall be tested for corrosion resistance in compliance with TAS 114 Appendix E, Section 2 (ASTM G 85), and shall have Product Approval. All cartons or carton labels for tin caps, cap nails or prefabricated fasteners with integral heads shall note compliance with the corrosion resistance requirements.~~

~~**R4402.6.6 Metal roofing accessories.** All metal accessories for roofs shall be not less than 26 gauge G-90 galvanized or stainless steel, 16 ounce copper, 0.025 inch (0.6 mm) thick aluminum, lead sheet with a minimum 2.5 pound per square foot (12.2 kg/m^2) or equivalent noncorrosive metal alloys or composite materials manufactured for use as roof termination. All composite and nonmetallic flashing materials shall have Product Approval.~~

~~**R4402.6.6.1** Metal accessories may be of a manufactured, shop fabricated or field fabricated type, providing the materials and fasteners are in compliance with the minimum requirements of this code and shall be sized, designed and installed in compliance with methods set forth in RAS 111.~~

~~**R4402.6.6.2** Gravel stop or drip edge profiles shall be as follows:~~

~~**R4402.6.6.2.1** The vertical face shall be a minimum of 1 ½ inches (38 mm) and shall extend down not less than ½ inch (12.7 mm) below the sheathing or other member immediately contiguous thereto. In all cases, the deck flange shall be not less than 2 inches (51 mm) in width. Gravel stop or drip edge shall be sized, designed and installed in compliance with RAS 111.~~

~~**R4402.6.6.2.2** Gravel stop or drip edge shall be designed so that the bottom (the kick of the metal) of the drip edge shall have a minimum of ½ inch (12.7 mm) clearance from the structure.~~

~~**R4402.6.6.2.3** Reserved.~~

~~**R4402.6.6.2.4** Gravel stops shall be installed after all roofing felts have been applied, or in compliance with the application method set forth in the roofing assembly product approval. All asphalt or approved cold adhesive bonding areas shall be coated with ASTM D-41 or ASTM D-43, as required, and allowed to dry prior to application.~~

~~**R4402.6.6.2.5** Gravel stop and drip edges shall be joined by lapping a minimum of 4 inches (102 mm) and the entire interior of the joints shall be coated with approved flashing cement. Cover and splice plates shall be of the same material as the gravel stop and drip edge, and shall be sized, fabricated and installed in compliance with RAS 111.~~

~~**R4402.6.6.2.6** The deck flange shall be nailed with an approved minimum 12 gauge annular ring shank nail at 4 inches (102 mm) o.c. The nail shall be manufactured from similar and/or compatible material to the termination profile. All composite materials shall be fastened with nonferrous nails.~~

~~SECTION R4402.7~~
~~HIGH-VELOCITY HURRICANE ZONES — ROOF COVERINGS WITH SLOPES 2:12 OR GREATER~~

~~**R4402.7.1 General.** Prepared roof coverings shall be as defined in Section R4402.2 and in general limited to application over sloped roof decks capable of receiving mechanical fasteners. Prepared roof coverings may be mechanically fastened or, in specific limited cases noted in the Product Approval, set in an adhesive bond.~~

~~**R4402.7.2 Underlayments.** Underlayment shall be as defined in Section R4402.2. Underlayment shall be installed in compliance with the roofing component Product Approval and shall be in compliance with the following minimum requirements:~~

~~**R4402.7.2.1** Underlayment shall be attached to a nailable deck in a grid pattern of 12 inches (305 mm) between the side laps, with 6 inch (152 mm) spacing at the side laps.~~

~~**R4402.7.2.2** Where the architectural appearance of the underside is to be preserved, the underlayment shall be secured in accordance with Section R4402.8.5.2.~~

~~**R4402.7.2.3** Tin caps and nails or cap nails shall be as defined in Section R4402.6.5.2.~~

~~**R4402.7.2.4** Underlayment nails shall be as defined in R4402.6.5.1.~~

~~**R4402.7.3** If the underlayment is a self-adhering membrane, the membrane shall be applied over a mechanically attached anchor sheet, attached in compliance with R4402.7.2.1.~~

~~**R4402.7.4** All underlayment applications for prepared roof coverings shall be applied in compliance with the manufacturer roofing assembly Product Approval, and shall be not less than one of the following: (1) A double layer of an ASTM D 226 Type I, with a 19 inch headlap; or (2) A single layer of an ASTM D 226, Type II with a 4 inch (102 mm) headlap; or (3) A single layer of an ASTM D 2626 coated base sheet with a 4 inch (102 mm) headlap, and (4) All endlaps shall be a minimum of 6 inches (152 mm).~~

~~**R4402.7.5 Fiber cement shingles.** Fiber-cement shingles shall be applied in compliance with the shingle manufacturer's roofing assembly Product Approval. The roofing system assembly product approval shall meet the following minimum requirements:~~

~~**R4402.7.5.**1 All non-asbestos fiber-cement shingles shall conform to ASTM C 1225.~~

~~**R4402.7.5.2** Fiber cement shingles shall be installed in compliance with the nailing requirements set forth in the product approval; however, attachment of each component shall be with not less than two corrosion resistant fasteners. If adhesive is used at the head or side laps, the system shall be defined as a "sealed system" with load calculations in compliance with Section R4403.~~

~~**R4402.7.5.3** All intersections shall be flashed in metal as provided in Section R4402.6.6 and RAS 111.~~

~~**R4402.7.5.4** Fiber-cement shingles shall be tested as set forth in Section R4402.12.~~

~~**R4402.7.6 Quarry slate.** Quarry slates shall be applied in compliance with the slate manufacturer's Product Approval. The roofing assembly Product Approval shall meet the following minimum requirements:~~

~~**R4402.7.6.1** Quarry slates shall be installed with not less than two approved fasteners per slate.~~

~~**R4402.7.6.2** All terminations and intersections shall be flashed in metal as provided in Section R4402.6.6 and RAS 111.~~

~~**R4402.7.6.3** Quarry slates shall be tested in compliance with the requirements set forth in Section R4402.12.~~

~~**R4402.7.6.4** Installation of all quarry roof slates shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

~~**R4402.7.7 Asphaltic shingles**. Asphaltic shingles layout, alignment and placement of mechanical attachment shall be in compliance with the Product Approval, and shall be installed in accordance with RAS 115.~~

~~**R4402.7.7.1** Underlayments exceeding minimum underlayments, as detailed in Section R4402.7, shall be applied in compliance with the application methods detailed in the Product Approval. Where the architectural appearance of the underside of the roof is to be preserved, refer to Section R4402.8.5.2.~~

~~**R4402.7.7.2** Installation of all asphaltic shingles shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

~~**R4402.7.7.3** The asphaltic shingle Product Approval shall meet the following minimum requirements:~~

~~**R4402.7.7.3.1** Where asphaltic shingles are to be installed over insulated roof deck, a suitable nailable substrate, in accordance with Section R4402.9.5.7 must be installed over the insulation prior to the installation of approved underlayment and shingles.~~

~~**R4402.7.7.3.2** Asphaltic shingles shall be installed in compliance with the Product Approval, but in no case with less than six approved roofing nails or approved fastening devices which penetrate through the thickness of sheathing or wood plank a minimum of 3/8 inch (4.8 mm) or penetrate into a 1 inch (25 mm) or greater thickness of lumber a minimum of 1 inch (25 mm), except where architectural appearance is to be preserved, in which case a minimum of 3/4 inch (19 mm) ring shank roofing nail may be used.~~

~~**R4402.7.7.3.3** Intersections, eaves, rakes, valleys, gable ends, and the starter course of asphaltic shingles shall be set in an 8 inch (203 mm) wide bed of approved cold adhesive or roofing cement. Application of adhesive or cement shall be in compliance with the application instructions of the Product Approval. Shingles shall not extend more than ¼ inch (6.4 mm) beyond the eave drip.~~

~~**R4402.7.7.3.4** All perimeter termination and valleys shall be fabricated from metal. Minimum metal requirements are set forth in Section R4402.6.6, and RAS 111.~~

~~**R4402.7.7.3.5** Asphaltic shingles shall be tested in compliance with the provisions set forth in Section R4402.12.~~

~~**R4402.7.8 Clay and concrete roof tile.** Tile shall be clay, concrete or composition material of various configurations complying with the physical property requirements of this code. All tile and tile systems shall be tested in compliance with the provisions set forth in Section R4402.12. Tile shall have a Product Approval for a complete tile system, which shall include the tile, underlayment and all tile related accessories required to provide a waterproof system.~~

~~**R4402.7.8.1 Application.** All tile systems shall be installed over solid sheathed decks. All tile installation shall be in accordance with RAS 118, RAS 119, and RAS 120, as applicable.~~

~~**R4402.7.8.1.1** Roof tile mortar shall either be a pre-mixed unit having a Product Approval and tested in compliance with TAS 123 or a job site mix approved by the building official and in compliance with TAS 113.~~

~~**R4402.7.8.2** The roof tile product approval shall specify the slope requirement for each tile and underlayment system in accordance with Table R4402.4.2.~~

~~**R4402.7.8.3** All roof tile fasteners shall be tested and comply with the requirements set forth in Section R4402.12.~~

~~**R4402.7.8.4 All tile systems.** All tile application designs shall comply with the following limitations in order to withstand the wind loads prescribed in this section, as well as all wind load requirements set forth in Section R4403.~~

~~**R4402.7.8.4.1** Roof tiles systems, combining mechanically fastened tile and mortar and/or adhesive, shall be acceptable.~~

~~**R4402.7.8.4.2** In an air permeable tile roofing systems: (1) the length of each tile shall be not less than 12 inches (305 mm) and not greater than 21 inches (533 mm) and the exposed width of the tile shall be between 8.5 inches and 15 inches (216 and 381 mm); (2) the maximum thickness of the nose (leading edge) of the tile shall not exceed 1.3 inches (33 mm); and (3) mortar or adhesive set system shall have at least two-thirds of the tile free of mortar and/or adhesive contact.~~

~~**R4402.7.8.5** The proposed method of attachment for tile systems which are considered to be air permeable, shall provide sufficient attachment resistance (M_t) (listed in tile product approval) to meet or exceed the moment of resistance (M_r) as determined by following the procedures outlined in RAS 127. The aerodynamic multiplier (k) needed in RAS 127 shall be part of the tile Product Approval and shall be derived from the following formula:~~

~~For direct deck application k = $(0.156) \times (b) \times (l)^2$~~

~~For batten application k = $(0.144) \times (b) \times (l)^2$~~

~~Where b (in feet) = exposed width of the tiles~~

~~Where l (in feet) = length of tiles~~

~~**R4402.7.8.6** The proposed method of attachment for tile systems which are not considered air permeable shall provide a minimum characteristic force (F') (listed in tile product approval) to meet or exceed the required uplift resistance (F_r) as determined by following the procedures outlined in RAS 127.~~

~~**R4402.7.8.7** Tile systems shall extend beyond the drip edge (not including the rake) not less than ¾ inch (19 mm) but not more than 2 inches (51 mm).~~

~~**R4402.7.8.10** Mortar or adhesive set tiles applied at an incline from 6:12 up to and including 7:12 shall have the first course of tile (this applies to pan only on two-piece barrel tile) mechanically fastened with not less than one fastener per tile. As an alternate, the first course of tile shall be applied in mortar over a single layer of minimum 20 gauge galvanized wire mesh with openings of not less than ½ inch (12.7 mm) or greater than 1 ½ inches (38 mm) with minimum exposure of 12 inches (305 mm) which is mechanically attached to the deck through the underlayment with approved fasteners and tin-cap when back nailing the cap sheet. Additionally, for roof inclines of 6:12 up to and including 7:12, every third tile of every fifth course, shall be mechanically fastened with not less than one fastener per tile. For roof inclines above 7:12, in addition to the mortar or adhesive, all tiles shall be mechanically fastened with not less than one fastener per tile. Apply approved flashing cement to seal all tile fastener penetrations, for all roof inclines.~~

~~**R4402.7.8.11** All tile systems shall be shingle lapped interlocking and installed with the headlap as specified in the tile system Product Approval. In no case shall the minimum headlap be less than 2 inches (51 mm) for mortar or adhesive set tile, or less than 3 inches (76 mm) for mechanically set tile, unless restricted by product design.~~

~~**R4402.7.8.12** Where tiles are to be installed over an insulated roof deck, a suitable nailable substrate, in accordance with Sections R4402.9.5.6 and R4402.9.5.7 must be installed over the insulation prior to the installation of approved underlayment and tiles.~~

~~**R4402.7.8.13** For mortar or adhesive set tile, no more than two tiles shall be loose per roofing square [100 square feet (9.3 m^2)]. No loose tile shall be adjacent to each other.~~

~~**R4402.7.9 Metal panels/shingles.** Steel panels/shingles shall be a minimum of G-90 corrosion resistant, and shall be not less than 26 gauge in thickness. Aluminum panels/shingles shall not be less than 0.025-inch (0.685 mm) thick. All other metal panel/shingle products shall be an equivalent weight. All metal panel/shingle assemblies shall be capable of withstanding foot traffic without damage to the metal panels/shingles. Metal panels/shingles shall have Product Approval for a complete metal system, which shall include the panel/shingle, underlayment and all related accessories to provide a complete waterproof system.~~

~~**R4402.7.9.1** All metal panels/shingles assemblies shall be tested in accordance with Section R4402.12, and TAS 125.~~

~~**R4402.7.9.2** The entire application method of all metal panel/shingle systems shall be detailed in the Product Approval and RAS 133, as applicable.~~

~~**R4402.7.9.3** Metal shingles may be applied as a recover over a single layer of asphaltic shingles or smooth surface roofing, providing the deck is solid sheathed and in compliance with the provisions of this code, the existing prepared roof covering is in compliance with provisions of this code and the entire metal shingle system is applied as set forth in the Product Approval.~~

~~**R4402.7.9.4** Metal panel/shingle systems shall not extend more than 1 inch (25 mm) beyond the roof eave.~~

~~**R4402.7.9.5** All intersections shall be flashed in metal as provided in Section R4402.6.6, RAS 111 and the roof assembly Product Approval.~~

~~**R4402.7.10 Wood shingles and shakes.** All wood shingles and shakes shall be installed in accordance with RAS 130. Installation of all wood shingles and shakes shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

~~**R4402.7.10.1** All wood shingle/shake systems shall be tested in accordance with Section R4402.12.~~

~~**R4402.7.11** Building integrated photovoltaic roofing modules/shingles. The installation of building integrated photovoltaic roofing modules/shingles shall comply with the provisions of this section.~~

~~R4402.7.11.1 Material standards. Building integrated photovoltaic roofing modules/shingles shall be listed and labeled in accordance with UL 1703.~~

~~R4402.7.11.2 Attachment. Building integrated photovoltaic roofing modules/shingles shall be attached in accordance with the manufacturer's product approval.~~

~~1518.11.3 Wind resistance. Building integrated photovoltaic roofing modules/shingles shall be tested in accordance with procedures and acceptance criteria in TAS 107. Building integrated photovoltaic roofing modules/shingle packaging shall bear a label to indicate compliance with the procedures in TAS 107.~~

~~SECTION R4402.8~~
~~HIGH-VELOCITY HURRICANE ZONES — ROOF COVERINGS WITH SLOPES LESS THAN 2:12~~

~~**R4402.8.1 General.** All adhered roofing components shall be bonded to the various types of substrates in compliance with the requirements set forth in the roofing assembly Product Approval and the following minimum requirements. The authority having jurisdiction may adopt RAS 150 as the means of complying with the requirements listed in this section.~~

~~**R4402.8.2** All packaged asphalt shall have the following data printed on the carton wrapper:~~

~~**R4402.8.2.1** ASTM designation and type;~~

~~**R4402.8.2.2** Flash point as determined by ASTM D 92, *Flash and Fire Point*, by Cleveland open cup; and~~

~~**R4402.8.2.3** Equiviscous temperature (EVT) at which the asphalt attains a viscosity of 125 centipoise (25 centipoise for coal tar) as determined by ASTM D 4402, *Viscosity Determinations of Unfilled Asphalt Using The Brookfield Thermoset Apparatus.*~~

~~**R4402.8.3** Asphalt types, as defined by ASTM D 312, shall be employed in all roofing assemblies. Application of asphalt shall be in compliance with Table R4402.8.3A and Table R4402.8.3B or as detailed in the roofing assembly Product Approval.~~

~~**TABLE R4402.8.3A**~~
~~**SLOPE AND APPLICATION TEMPERATURE CRITERIA**~~

ASTM D312 TYPES OF ASPHALT		MAXIMUM[1] SLOPE (in./ft)	TEMPERATURE °F	
		MOP	MECHANICAL	
Type I	Dead level	1/4	350 +/-25	375 +/-25
Type II	Flat	1/2	400 +/-25	425 +/-25
Type III	Steep	3	425 +/-25	450 +/-25
Type IV	Special steep (All roof tile systems)	N/A	450 +/-25	475 +/-25

1 inch = 25.4 mm; C° = [(°F) 32)]/1.8
1. Temperature and slope measurements are at point of application

~~**TABLE R4402.8.3B**~~
~~**SLOPE AND APPLICATION TEMPERATURE CRITERIA**~~

ASTM 450 COAL TAR TYPE NO.	TYPE OF COAL TAR	MAXIMUM SLOPE (in./ft)	TEMPERATURE RANGE (°F)
Type I	Coal tar pitch	1/4	360 +/-25
Type III	Coal Tar bitumen	1/4	375 +/-25

1 inch = 25.4 mm;C° = [(°F) 32)]/1.8

~~**R4402.8.4** Back nailing of inter-ply sheets shall not be required when using ASTM D 312 Type IV asphalt on slopes less than 3:12.~~

~~**R4402.8.5 Mechanical attachment.** All mechanically attached roofing components shall be attached to the various types of substrates in compliance with the requirements set forth in the roofing assembly Product Approval and the following minimum requirements.~~

~~**R4402.8.5.1 Base sheet attachment on wood decks.** Nails shall be minimum 12 gauge, annular ring shank nails having not less than 20 rings per inch; heads not less than 3/8-inch (9.5 mm) in diameter; and lengths sufficient to penetrate through the thickness of plywood panel or wood plank decking not less than 3/16-inch (4.8 mm), or to penetrate into a 1-inch (25.4 mm), or greater, thickness of lumber not less than 1 inch (25.4 mm). Nails shall be hot dipped; electro or mechanically galvanized to a thickness sufficient to resist corrosion in compliance with Appendix E of TAS 114. All nails shall be Product Approved. All nail cartons or carton labels shall be labeled to note compliance with the corrosion resistance requirements. No roofing material shall be fully or partially adhered, unless otherwise noted in the roof assembly Product Approval directly to a nailable deck.~~

~~**R4402.8.5.1.1** Tin caps shall meet the requirements of Section 4402.6.5.2.~~

~~**R4402.8.5.1.2** Prefabricated fastener systems complying with Sections R4402.8.5.1 and R4402.8.5.1.1 may be used, provided they have Product Approved.~~

~~**R4402.8.5.1.3** Spacing of such fasteners shall be in compliance with patterns set forth in the roofing assembly Product Approval.~~

~~**R4402.8.5.2** Where the architectural appearance of the underside is to be preserved, a base sheet may be secured in an alternate method of attachment prepared, signed, and sealed by a Florida registered architect or engineer, or in buildings where the mean roof height does not exceed 15 feet (4.6 m), a base sheet may be secured with 1 ¼ -inch (32 mm) fasteners on supporting members, with a minimum of ½ -inch (12.7 mm) fasteners between the supporting members, all of which shall be secured through tin caps and nailed 6 inches (152 mm) o.c. in all directions.~~

~~**R4402.8.5.3 Lightweight insulating concrete.** All lightweight insulated concrete shall be vented per roofing system manufacturer recommendations.~~

~~**R4402.8.5.3.1** Lightweight concrete shall not be applied over an existing roof deck unless the supporting structure has been approved as adequate to sustain the added weight. Calculations verifying the adequacy of the existing structure to sustain the added weight shall be prepared, signed, sealed and dated by a Florida-registered architect or engineer, which architect or engineer is proficient in structural design, and submitted with the uniform roofing permit application.~~

~~**R4402.8.5.4 Other nailable decks.** The mechanical attachment of roofing components to other nailable decks shall be governed by the roofing assembly Product Approval.~~

~~**R4402.8.6 Cast-in-place and precast structural concrete decks.** Cast-in-place and precast structural concrete decks are considered non-nailable. Concrete decks shall be clean, dry and fully primed with ASTM D 41 or ASTM D 43, as required, primer applied at a rate of not less than 1 gallon (3.8 L) per square. Hot asphalt or cold adhesive shall not be applied until the primer has fully dried.~~

~~**R4402.8.7 Steel decks.** Steel decks shall be covered with a roof insulation panel having its own Product Approval and listed in the roofing assembly product approval. Insulation panels shall be mechanically fastened in compliance with the mechanical attachment patterns listed in the roofing assembly product approval, and in accordance with the provisions of RAS 117.~~

~~**R4402.8.7.1** If the deck thickness, on an existing steel deck, is less than 22 gauge, a field fastener withdrawal resistance test shall be conducted, in compliance with TAS 105, to confirm compliance with the wind load requirements of Section R4403. Test results shall be submitted with the uniform roofing permit application for review prior to issuance of the roofing permit. The field fastener withdrawal resistance test shall be carried out by a certified testing laboratory.~~

~~**R4402.8.7.2** Steel decks shall be welded or mechanically attached to the structure in compliance with the design pressure requirements set forth in Section R4403.~~

~~**R4402.8.7.3** Composite wood and insulation panels shall be mechanically attached to steel decks in compliance with the attachment requirements enumerated in the~~

~~insulation roofing component Product Approval. The composite wood insulation panel shall be in compliance with the minimum sheathing requirements of this code.~~

~~**R4402.8.8 Flashing.** All flashing shall be installed according to the roof assembly manufacturer's published details and literature and in accordance with RAS 111.~~

~~**R4402.8.9 Valleys.** Valleys in BUR shall be installed in according to the roof assembly manufacturer's published literature for high wind areas and in compliance with the applicable detail described in the Product Approval.~~

~~**R4402.8.10 Parapet walls.** All parapet wall details shall be installed in accordance with the roofing system product approval, manufacturer's published details and literature and in accordance with approved methods detailed in RAS 111.~~

~~**R4402.8.11 Insulation.** Roof insulation shall be applied in compliance with the roofing system Product Approval and RAS 117.~~

~~**R4402.8.12 Surfacing.** Roofing assemblies shall be surfaced in compliance with the Product Approval. Surfacing shall be in sufficient quantity to comply with the required fire classification. Aggregate surfacing shall not be used on slopes greater than 3:12. Aggregate shall be embedded in a flood coat of bitumen applied over a prepared top ply.~~

~~**R4402.8.12.1** On slopes of 3:12 or less, not less than 400 pounds (182 kg) of roofing gravel or 300 pounds (145 kg) of slag per square shall be applied. A minimum of 50 percent of the total aggregate shall be embedded in the flood coat of bitumen. Aggregate shall be dry and free from dirt and shall be in compliance with the sizing requirements set forth in ASTM D 1863. A building official may as an option, request a test to confirm compliance with these requirements.~~

~~**R4402.8.12.2** On inclines greater than 3:12, a smooth surface coating shall be applied.~~

~~**R4402.8.12.3** Mineral surfaced cap sheet applications shall not require any additional surfacing unless required with the particular assembly for a fire classification.~~

~~**R4402.8.12.4** All smooth surface applications shall be coated with an aluminized or emulsion coating, having a valid and current Product Approval and shall be in compliance with the application instructions in said Product Approval. Coating quantity shall be in compliance with the required fire rating classification for the structure.~~

~~**R4402.8.13 Attachment of metal termination.** All edge metal and terminations shall be installed according to manufacturers published literature, provided it meets the minimum requirements as set for in RAS 111 and Section R4403.~~

~~**R4402.8.14 Expansion joints.** Expansion joint covers and expansion joint components shall be constructed and installed in accordance with the roofing assembly manufacturer's published literature.~~

~~**R4402.8.15 Venting roofing assemblies.** All roof assemblies shall be applied to a dry substrate. Vapor retarders shall be installed, where applicable, to reduce moisture vapor flow into insulation from the warm, humid building interior, leading to internal condensation. Vents shall be installed to assist in the expulsion of moisture vapor where such vapor may enter the roofing assembly or moisture, as defined in Section R4402.11.12, has been left in~~

~~an existing roofing assembly. Venting units shall not allow vapor to enter the roofing assembly when the high vapor pressure side is above the roofing membrane.~~

~~**R4402.8.16 Waterproofing.** Waterproofing systems may be installed in lieu of an approved roof system over sloped or horizontal decks specifically designed for pedestrian and/or vehicular traffic, whether the deck is above occupied or unoccupied space. In new construction the minimum deck slope shall be ¼ : 12.~~

~~**R4402.8.16.1** The waterproofing system must possess a current and valid product approval.~~

~~**R4402.8.16.2** If an overburden or wearing surface is not to be installed, the waterproofing system must be approved by the manufacturer for use in vehicular and/or pedestrian traffic locations.~~

~~**R4402.8.16.4** If any portion of the waterproofing membrane is to remain exposed, the waterproofing system shall be ultraviolet resistant.~~

~~**R4402.8.16.5** Flashings must be installed according to the waterproofing manufacturer's published specifications and in compliance with the material and attachment standards of RAS 111.~~

~~**R4402.8.16.6** The waterproofing system shall be flood tested in accordance with ASTM D 5957.~~

~~**R4402.8.16.6.1** The flood test shall take place after installation of the waterproofing membrane and prior to the installation of any above membrane components, wearing surface or overburden.~~

~~**R4402.8.16.6.2** An approved testing lab shall provide written verification to the building official confirming that the flood test was performed along with the results, prior to final inspection.~~

~~SECTION R4402.9~~
~~HIGH-VELOCITY HURRICANE ZONES — ROOF INSULATION~~

~~**R4402.9.1 General.** All roof insulation shall have Product Approval as an approved roofing component for use in roofing assemblies. All insulation shall be tested for physical properties in accordance with TAS 110.~~

~~**R4402.9.2.1** Foam insulation panels shall be overlaid with a perlite, fiberglass, wood fiber or mineral wool overlay unless specifically stated to the contrary in the roof assembly Product Approval.~~

~~**R4402.9.4 Insulation fasteners, membrane fasteners and stress plates.** All Insulation fasteners, membrane fasteners and stress plates shall have a roof component Product Approval, and shall be tested in compliance with RAS 117, Appendixes A, B and C, and TAS 110 and TAS 114, Appendix E, Section 3 (DIN 50018), for corrosion resistance.~~

~~**R4402.9.5 Application.** Roof insulation shall be applied in strict compliance with the application methods detailed in the roof assembly Product Approval and with the requirements set forth in RAS 117.~~

~~**R4402.9.5.1** Roof insulation, either on the ground or on the roof top, shall be kept dry. The building official shall instruct the removal of the insulation from the job when elevated moisture levels are found in the insulation or where panels cannot achieve 85 percent adhesion.~~

~~**R4402.9.5.2** When applied in hot asphalt or cold adhesive, no insulation panel's dimension shall be greater than 4 feet (1219 mm).~~

~~**R4402.9.5.3** Strip or spot mopping of insulation panels shall be used as an application method only when approved in the roof assembly Product Approval.~~

~~**R4402.9.5.4** Where more than one layer of insulation is applied, joints between layers shall be staggered.~~

~~**R4402.9.5.5** Application in approved cold adhesive shall be as detailed in the Product Approval and shall be in compliance with the required fire classification.~~

~~**R4402.9.5.6** Nail boards or composite panels with a nailable surface may be applied to sloped decks for the application of prepared roof covering or metal roofing systems, providing that the nailing surface is minimum 15/32-inch (12 mm) exterior grade plywood sheathing, and has been attached to the deck with approved fastening assemblies in accordance with the windload requirements of Section R4403. Composite panels shall be gapped a minimum of 1/8 inch (3.2 mm) to allow for expansion of the sheathing panel.~~

~~**R4402.9.5.7** Suitable nailable decks installed over rigid board roof insulation in buildings of mean roof height of 35 feet (10.7 m) or less, shall be a minimum of 15/32- inch (12 mm) exterior grade plywood sheathing. These decks shall be fastened to every structural roof frame member or to the existing deck under the insulation, at intervals of not more than 24 inches (610 mm) apart, with a minimum #12 approved insulation fastener spaced at a maximum of 12 inches (305 mm) apart in one direction with a minimum penetration of 1½ inches (38 mm) into the structural member or deck. In these cases the maximum thickness of the rigid insulation board shall not exceed 2 inches (51 mm). An alternate method of attachment may be proposed, provided it is in compliance with Section R4403, and it is prepared, signed and sealed by a Florida-registered architect or a Florida professional engineer, which architect or engineer shall be proficient in structural design.~~

~~**R4402.9.5.8** Mechanical attachment of insulation panels at uneven areas shall be acceptable. Hollowing, cutting or scoring of insulation panels to provide contact shall not be acceptable.~~

~~SECTION R4402.10~~
~~HIGH-VELOCITY HURRICANE ZONES — REROOFING~~

~~**R4402.10.1 General.** Materials and methods of application used for recovering or replacing an existing roof covering, system or assembly shall comply with the requirements set forth in Sections R4402.1 through R4402.14.~~

~~**R4402.10.2** Repairs shall be carried out with roofing components as defined in this section having Product Approval.~~

~~**R4402.10.3** Repairs shall be carried out in such a manner as to not to create additional ponding water.~~

~~**R4402.10.4** 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 in any 12-month period unless the entire existing roofing system or roof section is replaced to conform to requirements of this code.~~

~~**R4402.10.5** A roofing system shall not be applied over an existing roof or over an existing roof deck where the roof sheathing has not been fastened in compliance with this code or where the roof sheathing will not permit effective fastening or where sheathing is water soaked or deteriorated so that effective attachment is not possible. All areas of deteriorated sheathing shall be removed and replaced. The building official shall not be required to inspect the renailing of the sheathing under this section.~~

~~**R4402.10.6** Structural concrete decks shall be allowed to dry or shall be dried prior to application of an ASTM D 41 or ASTM D 43, as required, or roofing system proprietary primer where the base sheet or base insulation layer is bonded to the concrete deck.~~

~~**R4402.10.7** On lightweight concrete, gypsum and cementitious wood fiber roof decks a field fastener withdrawal resistance test, in compliance with TAS 105, shall be carried out to confirm compliance with wind load requirements of Section R4403.~~

> ~~**R4402.10.7.1** If the tested fasteners exhibit a minimum characteristic resistance force less than 80 percent than that listed in the product approval, a structural engineer shall examine the deck's integrity and provide a proposed attachment specification. Such specification shall be submitted with the uniform roofing permit application for review and approval by the building official prior to the issuance of a roofing permit. Calculations for the attachment of the anchor sheet/base sheet or insulation over these deck types, shall be in compliance with RAS 117.~~

~~**R4402.10.8** Steel decks shall be examined prior to recover for indication of corrosion. Any corrosion identified and exposed on the roof side shall be treated with a rust inhibitor, providing the field fastener withdrawal resistance values of the proposed mechanical fasteners comply with the requirements of Section R4403 of this code. All steel decks less than 22 gauge shall be field tested for fastener withdrawal resistance for compliance with Section R4403 prior to application of a new roofing system. Test results shall be submitted with the uniform roofing permit application.~~

~~**R4402.10.9** One additional roofing system may be applied over an original roofing assembly, providing the existing roofing assembly complies with the requirements of Section R4402.10.~~

~~**R4402.10.10** If the recover roofing assembly is to be bonded to an existing roofing membrane, the existing roofing membrane shall be tested in compliance with TAS 124 for uplift resistance. The existing roofing membrane shall resist the design pressures calculated under Section R4403 of this code. Test results shall be submitted with the uniform roofing permit application.~~

~~**R4402.10.11** If the recover roofing assembly is mechanically attached through either a base sheet or insulation layer, the attachment assembly shall be field tested for fastener withdrawal resistance, in compliance with TAS 105, and laboratory tested for pull-over resistance to ensure compliance with wind uplift requirements set forth in Section R4403 of this code. Test results shall be submitted with the uniform roofing permit application. Recover roofing assembly anchor sheet or base sheet shall not be mechanically fastened directly to existing gravel roof unless all gravel is completely removed.~~

~~**R4402.10.12** Moisture content of the existing roofing assembly to be covered by a new roofing system shall not exceed 5 percent by weight in the roofing membrane and 8 percent by weight in the insulation system, as verified by moisture survey performed in accordance with TAS 126. Test results shall be submitted with the uniform roofing permit application.~~

~~**R4402.10.13** Prior to starting the work the contractor has the responsibility of notifying the owner, by means of the roofing permit and required owners notification for roofing considerations herein, of any possibility of ponding water and recommend a structural review if ponding water is a possibility.~~

~~**R4402.10.14** If the new roofing system is to be bonded to the existing roof surface, the surface shall be free of all loose gravel, dirt and silt and dry prior to commencement of the roofing application. All blisters shall be cut and repaired prior to roofing application.~~

~~**R4402.10.14.1** If the existing roof surface has gravel embedded in hot asphalt, all loose gravel shall be removed together with any dirt and silt. The dry membrane surface shall be primed with ASTM D 41 primer or proprietary roofing system primer and allowed to dry thoroughly. A flood coat of ASTM D 312, type III or IV asphalt shall be applied to sufficient depth to cover the remaining embedded gravel. The prepared substrate shall be suitable for application of a new insulation layer only.~~

~~**R4402.10.14.2** In the case of existing coal tar assemblies, the existing roof surface shall be primed with ASTM D 43 primer or covered with a mechanically attached separation board prior to application of a new coal tar assembly. If an existing coal tar assembly is to be covered with an asphalt applied roofing system, only the separation board is acceptable. The attachment of the entire assembly, including the separation board, shall meet the design pressure requirements set forth in Section R4403.~~

~~**R4402.10.14.3** Insulation shall have product approval as a roofing component approved for use as a part of the roofing assembly. The insulation panels shall be bonded or mechanically attached in compliance with the Product Approval and RAS 117.~~

~~**R4402.10.15** Where an existing sloped roof is sheathed with spaced sheathing, any existing prepared roof covering shall be removed. New sheathing shall be applied in compliance with~~

~~Section R4403, or open spacing shall be filled with dimensional lumber to create solid wood sheathing providing the spaced sheathing is in compliance with this code. Spaced sheathing is approved for use with wood shakes and wood shingles only.~~

~~**R4402.10.16** No recover application shall take place over existing wood shingles, shakes, slate, tile or metal shingles.~~

~~**R4402.10.17** Asphaltic shingle assemblies may be applied over one existing layer of asphaltic shingles having not more than 1/8 inch (3.2 mm) difference in level in the existing shingle material. Recover over an existing shingle system shall be with a product having Product Approval as prepared roof covering, in strict compliance with the application method detailed in the Product Approval.~~

~~**R4402.10.17.1** Application of elastomeric and or maintenance coating systems over existing asphalt shingles shall be in accordance with the shingle manufacturer's approved installation instructions.~~

~~**R4402.10.18** Sprayed polyurethane foam (PUF) and elastomeric coating systems may be applied over existing roofing assemblies providing the PUF system has obtained Product Approval, the deck has been prepared in compliance with the Product Approval and this code, the application is in strict compliance with the foam manufacturer's published application instructions for the environmental conditions at the time of application and post-application inspections conform to RAS 109.~~

~~**R4402.10.18.1** No sprayed polyurethane foam (PUF) shall be applied over existing composition shingles.~~

~~**R4402.10.18.2** Upon completion of a PUF system, an inspection of the system shall be carried out by an authorized representative of the coating manufacturer. A certification shall be furnished to the building official within 30 days of completion, confirming that the quality control tests detailed in the PUF system Product Approval have been carried out with satisfactory results.~~

~~**R4402.10.18.3** Should a PUF system have inadequate adhesion to meet the design pressures, as set forth in Section R4403, the roofing system shall be removed and replaced with a roofing system tested to adequate adhesion. An additional inspection shall be required once the roofing system has been replaced. A field adhesion test may be requested by the building official during the application or at the completion of the project to confirm adequate adhesion.~~

~~**R4402.10.18.4** The PUF system shall comply with R4402.10.~~

~~**R4402.10.18.5** All PUF systems shall be installed by licensed roofing contractors holding an applicator's certificate from the manufacturer holding the Product Approval for the PUF system.~~

~~**R4402.10.19** Roof coverings or roofing components, such as tile, slate or similar, shall not be applied over an existing roofing system.~~

~~**R4402.10.20** Lightweight insulated concrete shall not be applied over an existing roofing system unless the existing roofing assembly is verified to be adequate to accept the new lightweight insulating concrete and is in compliance with the testing required herein.~~

~~SECTION R4402.11~~
~~HIGH-VELOCITY HURRICANE ZONES — ROOFTOP STRUCTURES AND COMPONENTS~~

~~**R4402.11.1 Rooftop structures.** Rooftop structures shall be designed and constructed in accordance with the *Florida Building Code, Building*.~~

~~**R4402.11.2 Rooftop mounted equipment.** All rooftop equipment and supports shall be secured to the structure in compliance with the loading requirements of Section R4403. The use of wood "sleepers" shall not be permitted.~~

~~SECTION R4402.12~~
~~HIGH-VELOCITY HURRICANE ZONES — TESTING~~

~~**R4402.12.1 Scope.** This section defines the minimum testing requirements for substrates, roofing components, roofing systems and roofing assemblies. All roofing products shall be tested for physical properties, water-infiltration, uplift performance and fire resistance, as addressed within this code.~~

> ~~**R4402.12.1.1** Testing requirements for physical properties of all roofing products shall be as set forth in TAS 110.~~

~~**R4402.12.2 Application.** Testing for substrates, roofing components, roofing systems and roofing assemblies shall comply with the provisions herein and those of *Florida Building Code, Building* TAS and RAS listed in this code.~~

~~**R4402.12.3 Laboratory certification.** All testing required by this code shall be performed by a certified testing laboratory.~~

~~**R4403.12.4 Margin of safety.** A margin of safety of 2:1 shall be applied to all wind uplift resistance test results. All in situ (on site) testing shall have an applied 1.45:1 margin of safety.~~

~~**R4403.12.5 Material labeling.** All products shall be identified with the product approval number or logo; or the manufacturer's name or logo. ASTM standard roll goods shall be marked with a yellow line to identify the ASTM standard, or such other marking indicated in the Product Approval.~~

> ~~**R4402.12.5.1** All asphaltic shingles, tile products and metal roofing panels and clips shall be labeled on the underside with the *Florida Building Code, Building* insignia, or Product Approval number, or the wording "Florida Building Code, Building Product Approved," and manufacturer's initials or manufacturer's logo, or as specified in the manufacturer's Product Approval.~~

~~**R4402.12.6 Testing requirements.**~~

~~**R4402.12.6.1 Reserved.**~~

~~**R4402.12.6.2 Continuous roofing systems.** All continuous roofing systems shall be tested in compliance with TAS 110 and TAS 114 in its entirety. All continuous roofing systems shall resist a minimum of 90 pound per square foot (psf) (4309 Pa) tested wind uplift pressure resistance. Continuous roofing system testing requirements shall be as follows:~~

~~**R4402.12.6.2.1 Spray applied polyurethane foam.** All spray applied polyurethane foam systems shall be tested in compliance to RAS 109 and TAS 110 and TAS 114.~~

~~**R4402.12.6.2.1.1** Physical properties testing for acrylic coatings used on spray applied polyurethane foam roofing assemblies shall be tested in compliance with ASTM D 6083-97a and Federal Specification TTC-555B, *Test Specification for Wind-Driven Rain Infiltration Resistance* .~~

~~**R4402.12.6.3 Liquid applied roofing membranes systems.** All liquid applied roofing membranes systems shall be tested in compliance with TAS 114, in addition to the physical properties testing requirements set forth in TAS 110, and fire resistance.~~

~~**R4402.12.6.3.1** For liquid applied acrylic roofing membrane assemblies, physical properties testing shall be in compliance with ASTM D 6083-97a and Federal Specification TTC-555B, *Test Specification for Wind Driven Rain Infiltration Resistance* .~~

~~**R4402.12.6.4** The building official may request that a quality control field uplift test be carried out on a continuous roofing system in compliance with test procedure TAS 124. Single-ply systems are not required to meet the deflection requirements established in the test protocol. The roofing system shall resist the design pressures as calculated in compliance with Section R4403 and as established in TAS 124.~~

~~**R4402.12.6.4.1** Should a roofing system fail to meet a quality control field uplift test, the roofing contractor may propose to the building official an acceptable method of repair that is in compliance with the requirements of this code.~~

~~**R4402.12.6.5 Discontinuous roofing systems.** All discontinuous roofing systems shall be tested in compliance with TAS 100 for wind driven water infiltration resistance. Test specimens used for this test shall be constructed at the approved test facility. Testing requirements shall be as follows:~~

~~**R4402.12.6.5.1 Asphaltic shingle systems.** All asphaltic shingle systems shall comply with the following requirements: TAS 100, TAS 107, ASTM D 3462 and ASTM D 3018. Asphaltic shingle systems shall have a quality control testing program by an approved independent listing agency.~~

~~**R4402.12.6.5.2 Clay and cement roof tiles.** All roof tiles shall be tested in compliance with TAS 100. Physical properties testing for clay roof tiles shall be in compliance with ASTM D 1167. Physical properties testing for concrete roof tiles shall be in compliance with TAS 112. All roof tiles shall resist a minimum wind uplift resistance as determined by Section R4403 of this code and RAS 127. Clay and cement roof tile systems requirements are as follows:~~

~~**R4402.12.6.5.2.1 Underlayment.** All underlayments used in discontinuous roof tile systems shall be tested in compliance with TAS 103 and TAS 104, unless otherwise specifically listed in the applicable RAS.~~

~~**R4402.12.6.5.2.2** Mortar or adhesive set roof tile systems. All mortar or adhesive set tile systems shall be tested for static uplift resistance in compliance with TAS 101, the results of which shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.2.1** Additionally, roof tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116; and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier (I) which represents the system's wind characteristics and shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.2.2** Systems which are tested for characteristics, in compliance with TAS 108 as specified above, shall have the results of the TAS 101 testing treated as attachment resistance moment (M_t), which is representative of the tile bond's resistance to overturning moment, and the tile's restoring moment due to gravity (M_g). Such systems shall use the system's aerodynamic multiplier (I) in conjunction with the system's attachment resistance moment (M_t) and restoring moment due to gravity (M_g), as determined from the TAS 101 static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.2.3** Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force (F'), as determined from TAS 101 static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift-based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.2.4** Testing in accordance with TAS 106 shall be considered a product application quality control test to determine the general adhesion properties of the system.~~

~~**R4402.12.6.5.2.3 Mechanically fastened, rigid roofing systems.** All mechanically attached set tile systems shall be tested for static uplift resistance in compliance with TAS 102 or TAS 102(A), the results of which shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.3.1** Additionally, roof tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116; and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier (I) which represents the system's~~

~~wind characteristics and shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.3.2** Systems which are tested for wind characteristics in compliance with TAS 108 as specified above shall have the results of the TAS 102 or TAS 102(A) testing treated as an attachment resistance moment (M_t) which is representative of the rigid component's attachment resistance to an overturning moment, and the tile's restoring moment due to gravity (M_g). Such systems shall use the system's aerodynamic multiplier (I), in conjunction with the system's attachment resistance moment (M_t) and restoring moment due to gravity (M_g), as determined from the TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment-based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.3.3** Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force (F'), as determined from TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift-based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.3.4** TAS 106 quality control field static uplift testing shall be considered a product application quality control test to determine the general uplift resistance properties of the system.~~

~~**R4402.12.6.5.2.4 Metal shingles/panels.** All metal roofing shall be tested in compliance with TAS 100. All metal roofing shall resist a minimum wind uplift resistance as determined by Section R4403 for a roof slope of 9.5 degrees (0.0166 rad) and a roof mean height of 15 feet (4.6 m). All metal roofing systems testing requirements shall be as follows:~~

~~**R4402.12.6.5.2.4.1** All metal roofing shall be test in compliance with requirements set forth in TAS 110 and TAS 125, and shall be tested for wind driven rain infiltration resistance in compliance with TAS 100.~~

~~**R4402.12.6.5.2.4.2** Rigid metal shingle systems may be tested in an identical manner to nail-on or batten tile systems as set forth in this code.~~

~~**R4402.12.6.5.2.5 Wood shingles or shakes.** All wood shingles and shakes shall be tested, as a system, for wind driven rain infiltration resistance in compliance with TAS 100. The same specimens as tested in TAS 100 shall be tested for pull through tear resistance, and such values shall be listed in the manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.6 Fiber cement shingle or tile panels.** All fiber cement shingles or tiles shall resist a minimum wind uplift resistance as determined by Section R4403 for a roof slope of 9.5 degrees (0.0166 rad) and a roof mean height of 15 ft~~

~~(4.6 m). All fiber cement shingle or tiles shall be tested in compliance with the following requirements. Wind driven water resistance in compliance with TAS 100, Physical properties in compliance with TAS 110, TAS 135 and uplift resistance.~~

~~**R4402.12.6.5.2.6.1** Additionally, fiber cement tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116 and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier (I) which represents the system's wind characteristics and shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.6.2** Systems which are tested for wind characteristics in compliance with TAS 108 as specified above shall have the results of the TAS 102 or TAS 102(A) testing treated as an attachment resistance moment (M_t) which is representative of the rigid component's attachment resistance to an overturning moment, and the tile's restoring moment due to gravity (M_g). Such systems shall use the system's aerodynamic multiplier (I), in conjunction with the system's attachment resistance moment (M_t) and restoring moment due to gravity (M_g), as determined from the TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.6.3** Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force (F'), as determined from TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift-based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.6.4** TAS 106 quality control field static uplift testing shall be considered a product application quality control test to determine the general uplift resistance properties of the system.~~

~~**R4402.12.6.5.2.7 Quarry roof slate.** All quarry roof slate shall be tested in compliance with TAS 100 and TAS 110.~~

~~**R4402.12.6.5.2.8 Roof board insulation.** All roof board insulation shall be tested for physical properties as set forth in Section 7 of TAS 110.~~

~~R4402.12.6.5.2.9 Insulation fasteners, membrane fasteners and stress plates. All insulation fasteners, membrane fasteners and stress plates shall be tested in compliance with TAS 117 Appendices A, B and C, and TAS 110 and TAS 114, Appendix E, Section 3, (DIN 50018), for corrosion resistance.~~

~~**R4402.12.6.5.2.10 Roofing nails and tin-caps.** All roofing nails and tin-caps shall be tested for corrosion resistance in compliance with TAS 114, Appendix E, Section 2 (ASTM G 85).~~

~~**R4402.12.6.5.2.11 Roof tile nails or fasteners.** All roof tile nails or fasteners, except those made of copper, monel, aluminum or stainless steel, shall be tested for corrosion in compliance with TAS 114, Appendix E, Section 2 (ASTM G 85), for salt spray for 1,000 hours.~~

~~**R4402.12.6.5.2.11.1** Tile fasteners used in coastal building zones, as defined in Section R4403 shall be copper, monel, aluminum or stainless steel.~~

~~**R4402.12.6.5.2.12** Roofing adhesives, mastics and coatings. All roofing adhesives, mastics and coatings shall be tested in compliance with TAS 110 and TAS 121.~~

~~**R4402.12.6.5.2.12.1** All roofing adhesives, mastics and coatings shall have a quality control testing program by an approved independent listing agency having unannounced follow-up visits.~~

~~**R4402.12.6.5.2.12.2** Acrylic roof coatings shall be tested for physical properties in compliance with ASTM D 6083-97a.~~

~~**R4402.12.6.5.2.13** Ridge vents of metal, plastic or composition material. All ridge vents shall be tested in compliance with TAS 110(A) for wind driven water infiltration. All ridge ventilators shall be restricted to roof mean height as tested in compliance with TAS 100(A), and shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.13.1** All plastic ridge ventilators shall be tested for physical properties as set forth in TAS 110 and R4412.~~

~~**R4402.12.6.5.2.13.2** All plastic ridge ventilator manufacturers shall have an unannounced follow-up quality control program from an approved listing agency. Follow-up test results shall be made available upon request.~~

~~**R4402.12.6.5.2.14** Edge metal, flashings, and coping. All edge metal, flashing and copings, not specifically described in RAS 111, shall be tested in compliance with TAS 110, TAS 111(A), TAS 111(B) or TAS 111(C), respectively.~~

~~**R4402.12.6.5.2.15** Roof tile premixed bagged mortar. All premixed roof tile mortar shall comply with the requirements set forth in TAS 110 and TAS 123, and shall have a quality control testing program by an approved independent listing agency having unannounced follow up visits. Follow up test results shall be made available upon request.~~

~~**R4402.12.6.5.2.16** Roof tile adhesive used in repair or supplemental tile attachment. All roof tile adhesive used in repair or supplemental tile attachment shall comply with the requirements set forth in TAS 110 and TAS 123(A).~~

~~**R4402.12.6.5.2.17** Roof tile adhesive used in adhesive set tiles systems. All roof tile adhesive used in adhesive set tile systems shall comply with the requirements set forth in TAS 110 and TAS 123. Physical properties shall be as follows:~~

~~**R4402.12.6.5.2.17.1** Tested for compressive strength in compliance with ASTM D 1621 with a minimum strength of 18 psi (121 kPa) parallel to rise, and 12 psi (82.7 kPa) perpendicular to rise.~~

~~**R4402.12.6.5.2.17.2** Tested for density in compliance with ASTM D 1622 with a minimum density of 1.6 pcf (25.6 kg/m^3).~~

~~**R4402.12.6.5.2.17.3** Tested for tensile strength in compliance with ASTM D 1623 with a minimum requirement of 28 psi (193 kPa) parallel to rise.~~

~~**R4402.12.6.5.2.17.4** Tested for dimensional stability taken from a free rise sample specimen. Tested in compliance with ASTM D 2126 with a maximum volume change of +0.07 percent volume change at -40°F (-40°C) for two weeks; and +6.0 percent volume change at 158°F (70°C) and 100 percent RH for two weeks.~~

~~**R4402.12.6.5.2.17.5** Tested in compliance with ASTM D 2856 from a free rise sample specimen with a minimum requirement for 85 percent.~~

~~**R4402.12.6.5.2.17.6** Tested for water absorption in compliance with ASTM D 2842 with a maximum requirement of 10 percent.~~

~~**R4402.12.6.5.2.17.7** Tested in compliance with ASTM E 96 for moisture vapor transmission for a maximum of 3.1 perms.~~

~~SECTION R4402.13~~
~~HIGH-VELOCITY HURRICANE ZONES — REQUIRED OWNERS NOTIFICATION FOR ROOFING CONSIDERATIONS~~

~~**R4402.13.1 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 Section R4402 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.~~

~~2. **Renailing wood decks:** When replacing roofing, the existing wood roof deck may have to be re-nailed in accordance with the current provisions of Section R4403. (The roof deck is usually concealed prior to removing the existing roof system).~~

~~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 provides the option of maintaining this appearance.~~

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 Sections R4402, R4403 and R4413.

_____

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

Exception: Attic spaces, designed by a Florida licensed engineer or registered architect to eliminate the attic venting, venting shall not be required.

~~**SECTION R4402.14**~~
~~**HIGH-VELOCITY HURRICANE ZONES — UNIFORM PERMIT APPLICATION**~~

~~**[Use forms as found in the 2010 Residential code]**~~

R5604

Date Submitted	7/23/2012	**Section**	SECTION - REFERENCED STAN	**Proponent**	Mark Zehnal
Chapter	45	**Affects HVHZ**	No	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

R905.3, R905.3.2, R905.3.3, R905.3.3.1, R905.3.6, R905.3.7, R905.3.7.1, R905.3.8

Summary of Modification

Provides update to previous Commission approved code referenced standard.

Rationale

To carry forward the updated version of a previous Commission approved code standard designed with ASCE 7-10 to provide for the proper installation of tile roofing systems and components connected to Florida's unique environmental conditions including enduring high wind tropical rains and life/property threatening high wind events.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

Impact to building and property owners relative to cost of compliance with code

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

Impact to industry relative to the cost of compliance with code

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

Does not degrade the effectiveness of the code

Does not degrade. Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

FRSA

Florida Roofing, Sheet Metal and Air Conditioning Contractors Association

4111 Metric Drive

Winter Park, Florida 32792

Standard reference number

FRSA/TRI ~~07320/8—05~~ April 2012 (04-12)

Title

Florida High Wind Concrete and Clay Roof Tile Installation Manual, ~~Fourth~~ Fifth Edition

Referenced in code section number

R905.3, R905.3.2, R905.3.3, R905.3.3.1, R905.3.6, R905.3.7, R905.3.7.1, R905.3.8

R5035

Date Submitted	7/9/2012	**Section**	15	**Proponent**	Jaime Gascon
Chapter	1	**Affects HVHZ**	Yes	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Correlating reference weathering standards with latest versions already adopted in base code.

Rationale

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. The newer standards have been in use since 2005.

Impact to building and property owners relative to cost of compliance with code

None. The weathering requirements remain the same.

Impact to industry relative to the cost of compliance with code

None. The weathering requirements remain the same.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This modification does not discriminate since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Does not degrade the effectiveness of the code

This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

15. Metal Panel Roof Assemblies:

15.1 All structural and nonstructural metal panel roof assemblies, and the roofing components therein, shall be tested in compliance with the following requirements, as applicable.

…

Product	Test	Test Standard
Structural and Non-Structural Metal Panel Roof Assembly	Standard Requirements	TAS 125
Structural and Non-Structural Metal Panel Roof Assembly	Fire Resistance	E 108 (min. Class "B")
Structural and Non-Structural Metal Panel Continuous Roof Assembly	Accelerated Weathering	G ~~23~~ 152 or G ~~26~~ 155 (2000 hours)
Structural or Non-Structural Metal Panels	Salt Spray	B 117 (1000 hours)
Insulated Metal Panels	Thermal Value	C 518 (report)

Roofing

Proposed Code Modifications

2013 Florida Building Code - Full Report

This document created by the Florida Department of Business and Professional Regulation - 850-487-1824

TAC: Roofing

Sub Code: Test Protocols

Total Mods for Roofing: 5

R5037

Date Submitted	7/9/2012	**Section**	2.7	**Proponent**	Jaime Gascon
Chapter	1	**Affects HVHZ**	Yes	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Correlating reference weathering standards with latest versions already adopted in base code.

Rationale

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. The newer standards have been in use since 2005.

Impact to building and property owners relative to cost of compliance with code

None. The weathering requirements remain the same.

Impact to industry relative to the cost of compliance with code

None. The weathering requirements remain the same.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This modification does not discriminate since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Does not degrade the effectiveness of the code

This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

2.7 ASTM Standards:

A 90 Standard Test Method for Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles

A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire

B 117 Standard Test Method for Salt Spray (Fog) Testing

D 638 Standard Test Method for Tensile Properties of Plastics

D 751 Standard Test Methods for Coated Fabrics

D 1781 Standard Test Method for Climbing Drum Peel for Adhesives

E 70 Standard Test Method for pH of Aqueous Solutions With the Glass Electrode

E 108 Standard Test Methods for Fire Tests of Roof Coverings

E 380 Excerpts from the Standard Practice for Use of the International System of Units (SI) (the Modernized Metric System)

G ~~23~~152 Standard Practice for Operating Open Flame Carbon Arc Light~~-Exposure~~ Apparatus ~~(Carbon-Arc Type) With and Without Water~~ for Exposure of Nonmetallic Materials

G ~~26~~155 Standard Practice for Operating Xenon Arc Light~~-Exposure~~ Apparatus ~~(Xenon- Arc Type) With and Without Water~~ for Exposure of Nonmetallic Materials

G ~~53~~154 Standard Practice for Operating Fluorescent Light~~- and Water-Exposure~~ Apparatus ~~(Fluorescent UV-Condensation Type)~~ for UV Exposure of Nonmetallic Materials

G 85 Standard Practice for Modified Salt Spray (Fog) Testing

R5039

Date Submitted	7/9/2012	**Section**	8.7	**Proponent**	Jaime Gascon
Chapter	1	**Affects HVHZ**	Yes	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Correlating reference weathering standards with latest versions already adopted in base code.

Rationale

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. The newer standards have been in use since 2005.

Impact to building and property owners relative to cost of compliance with code

None. The weathering requirements remain the same.

Impact to industry relative to the cost of compliance with code

None. The weathering requirements remain the same.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This modification does not discriminate since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Does not degrade the effectiveness of the code

This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

8.7 Accelerated weathering:

8.7.1 Accelerated weathering testing shall be in strict compliance with ASTM G ~~23~~152 or G ~~26~~155.

R5040

Date Submitted	7/9/2012	**Section**	2 & 10.17 & 10.18	**Proponent**	Jaime Gascon
Chapter	1	**Affects HVHZ**	Yes	**Attachments**	No
General Comments	Yes				
Alternate Language	No				

Related Modifications

Summary of Modification

Correlating reference weathering standards with latest versions already adopted in base code.

Rationale

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. The newer standards have been in use since 2005.

Impact to building and property owners relative to cost of compliance with code

None. The weathering requirements remain the same.

Impact to industry relative to the cost of compliance with code

None. The weathering requirements remain the same.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This modification does not discriminate since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Does not degrade the effectiveness of the code

This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

General Comment - 08/09/2012 - 09/23/2012

R5040-G1

Proponent	Ken Cureton	**Submitted**	9/21/2012	**Attachments**	No

Comment:

The proposal provides for provisions with regard to wind mitigation as per 553.844 FS.

2. Referenced Documents:

2.1 ASTM Standards

D 412 Test Method for Rubber Properties in Tension

D 471 Test Method for Rubber Property - Effect of Liquids

D 573 Test method for Rubber-Deterioration in an Air Oven

D 624 Test Method for Rubber Property - Tear Resistance

D 751 Method of Testing Coated Fabrics

D 816 Methods of Testing Rubber Cements

D 1149 Test Method for Rubber Deterioration - Surface Ozone Cracking in a Chamber (Flat Specimens)

D 1204 Test Method for Linear Dimensional Changes of Non-rigid Thermoplastic Sheeting or Film at Elevated Temperature

D 2137 Test Method for Rubber Property - Brittleness Point of Flexible Polymers and Coated Fabrics

G ~~26~~155Standard Practice for Operating Xenon Arc Light~~-Exposure~~ Apparatus for Exposure of Nonmetallic Materials

G ~~53~~154Standard Practice for Operating Fluorescent Light Apparatus for UV-Condensation (QUV) Exposure of Nonmetallic Materials

D 1822 Tensile Impact Testing

E 96 Water Vapor Permeability, Method BW

E 380 Excerpts from Use of the International System of Units (SI) (The Modernized Metric System)

...

10.17 Weather Resistance - Practice G ~~26~~155

...

10.18 Weather Resistance - Practice G ~~53~~154

R5042

Date Submitted	7/9/2012	**Section**	2 & 8.4 & 9.3	**Proponent**	Jaime Gascon
Chapter	1	**Affects HVHZ**	Yes	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Correlating reference weathering standards with latest versions already adopted in base code.

Rationale

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. The newer standards have been in use since 2005.

Impact to building and property owners relative to cost of compliance with code

None. The weathering requirements remain the same.

Impact to industry relative to the cost of compliance with code

None. The weathering requirements remain the same.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This modification does not discriminate since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Does not degrade the effectiveness of the code

This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

2. Referenced Documents:

2.1 ASTM Standards

B 209 Specification for Aluminum and Aluminum-Alloy Sheet and Plate

D 16 Terminology Relating to Paint, Varnish, Lacquer and Related Products

D 562 Standard Test Method for Consistency of Paints Using the Stormer Viscometer

D 1079 Definitions of Terms Relating to Roofing, Waterproofing, and Bituminous Materials

D 2824 Specification for Aluminum-Pigmented Asphalt Roof Coatings

D 2939 Standard Test Method of Testing Emulsified Bitumens Used as Protective Coatings

D 4798 Standard Test Method for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon - ARC Method)

D 4799 Standard Test Method for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Fluorescent UV and Condensation Method)

E 380 Excerpts from Standard Practice for Use of the International System of Units (SI) (the Modernized Metric System)

G ~~26~~155Standard ~~Test Method for~~ Practice for Operating Xenon Arc Light ~~Exposure~~ Apparatus ~~(Xenon - ARC Type) With and Without Water~~ for Exposure of Non-metallic Materials

G ~~53~~154Standard ~~Test Method~~ Practice for Operating Fluorescent Light~~ and Water Exposure~~ Apparatus ~~(Fluorescent UV Condensation Type)~~ for UV Exposure of Nonmetallic Materials

...

8.4 Accelerated Weathering - Test Method G ~~53~~154 or G ~~26~~155 (Test Method A)

...

9.3 Procedure, G ~~53~~154, Section 9.

R5044

Date Submitted	7/9/2012	**Section**	2 & 7.11	**Proponent**	Jaime Gascon
Chapter	1	**Affects HVHZ**	Yes	**Attachments**	No
General Comments	No				
Alternate Language	No				

Related Modifications

Summary of Modification

Correlating reference weathering standards with latest versions already adopted in base code.

Rationale

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. The newer standards have been in use since 2005.

Impact to building and property owners relative to cost of compliance with code

None. The weathering requirements remain the same.

Impact to industry relative to the cost of compliance with code

None. The weathering requirements remain the same.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

This modification updates standards to the latest available versions, which are based on the latest technologies available.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

This modification does not discriminate since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Does not degrade the effectiveness of the code

This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Is the proposed code modification part of a prior code version?

NO

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

2. Referenced Documents:

2.1 ASTM Standards

C 661 Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer

C 794 Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants

D 412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers - Tension

D 471 Test Method for Rubber-Effects of Liquids

D 562 Standard Test Method for Consistency of Paints Using the Stormer Viscometer

D 1079 Standard Definitions of Terms Relating to Roofing, Waterproofing, and Bituminous Materials

D 2196 Standard Test Methods for Rheological Properties of Non-Newtonian Material by Rotational (Brookfield) Viscometer

D 2697 Test Methods for Volume Nonvolatile Matter in Clear or Pigmented Coatings

D 2824 Standard Specification for Aluminum-Pigmented Asphalt Roof Coatings

E 96 Standard Test Methods for Water Vapor Transmission of Materials

E 380 Excerpts from Standard Practice for Use of the International System of Units (SI) (the Modernized Metric System)

G 21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi

G ~~26~~155Standard Practice for Operating Xenon Arc Light~~-Exposure~~ Apparatus ~~(Xenon-Arc Type) With and Without Water~~ for Exposure of Nonmetallic Materials

...

7.11 *Accelerated Weathering* - Test Method G ~~26~~155, except as noted below.