



Slide 92



**PART II**  
**“MITIGATION INSPECTIONS”**

**DFS/OIR FORM B1-1802**

---

---

---

---

---

---




---

---

---

---

Slide 93



**Part II**  
**Uniform Mitigation**  
**Verification**  
**Inspection Form**

**DFS/OIR Form B1-1802**  
**Rev. 01/12**

---

---

---

---

---

---



---

---

---

---

Slide 94



**Background and Overview**

Residential buildings can be effectively evaluated to assure their degree of vulnerability to resist wind.

The reduced risk and associated cost directly related to basic construction characteristics. Roof Geometry, wall construction, frame or masonry, roof deck construction, tie downs, and shutters all impact the effectiveness of the structure relating to wind.

The issue is one of whether the house can be improved to be strengthened to provide a "harden" structure. This would also reduce the potential damage from a tropical cyclone.

33

---

---

---

---

---

---

---

---

---

---

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 95

 **1992** 

**Andrew**

Resulted in Changes to the South Florida Building Code

---

---

---

---

Slide 96

 **1995** 

**Opal**

Responsible for the Governor's Study Commission Resulting in Creation of the Florida Building Code

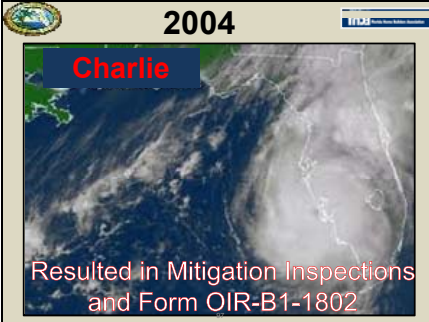

---

---

---

---

Slide 97

 **2004** 

**Charlie**

Resulted in Mitigation Inspections and Form OIR-B1-1802



---

---

---

---

Slide 98

 **FAC 690-170.017** 

**Windstorm Mitigation Discounts**

(1) This rule applies to all residential property insurance rate filings filed on or after January 1, 2007. All residential property insurers must make new filings by March 1, 2007, to reflect the requirements in this rule.

(2) Section 627.0629, F.S., states that discounts on an actuarially reasonable basis or appropriate reductions in deductibles must be provided in the rates for residential property insurance for fixtures or construction techniques, including minimum provisions of the Florida Building Code which have been demonstrated to reduce windstorm loss.

---



---

---


---

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 99

 **FAC 690-170.0155**   
**Forms**

(k) **OIR-B1-1655**, "Notice of Premium Discounts for Hurricane Loss Mitigation," (Rev. 2/10).

 (l) **OIR-B1-1802**, "Uniform Mitigation Verification Inspection Form," (Rev. 2/10).

Office of Insurance Regulation  
Fair, Fast, Professional

---



---

---

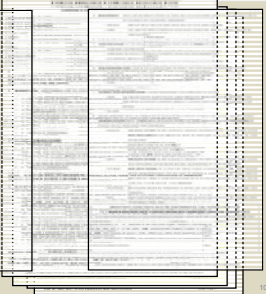
---

---

Slide 100

 **OIR Form 1802 (07/07)** 

New form is 4 pages and was effective as of April 21, 2010



---



---

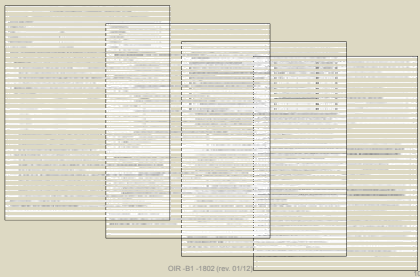
---

---

---

Slide 101

 **Form 1802 (Rev. 01/12)** 



---



---

---

---

---

Slide 102

The revised Form-B1-1802, 02/10, contains 9 sections:

1. Building Code
2. Roof coverings
3. Roof deck Attachment
4. Roof to Wall Attachment
5. Roof Geometry
6. Gable End Bracing
7. Wall construction Type
8. Secondary Water Resistance
9. Opening Protection.

**Old Form**

OIR-B1-1802 (rev. 01/12)

---

---

---

---

---

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 103

The newly revised Form-B1-1802, 01/12, contains only 7 sections:

1. Building Code
2. Roof coverings
3. Roof deck Attachment
4. Roof to Wall Attachment
5. Roof Geometr
6. ~~Gable End Bracing~~ Secondary Water Resistance
7. ~~Wall construction Type~~ Opening Protection
8. ~~Secondary Water Resistance~~
9. ~~Opening Protection~~

*The two sections (6&7) covering "Gable End Bracing" and "Wall Construction" have been removed from the form.*

DFSA  
Division of Financial Services

OIR-B1-1802 (rev. 01/12) 103

---

---

---

---

---

---

---

---

Slide 104

**The OIR-B1-1802 Form**

Uniform Mitigation Verification Inspection Form  
Maintain a copy of this form with the insurance policy

Inspection Date:

**Owner Information**

Owner Name: \_\_\_\_\_ Contact Person: \_\_\_\_\_  
 Address: \_\_\_\_\_ Home Phone: \_\_\_\_\_  
 City: \_\_\_\_\_ Zip: \_\_\_\_\_ Work Phone: \_\_\_\_\_  
 County: \_\_\_\_\_ Cell Phone: \_\_\_\_\_  
 Insurance Company: \_\_\_\_\_ Policy #: \_\_\_\_\_  
 Year of Home: \_\_\_\_\_ # of Stories: \_\_\_\_\_ Email: \_\_\_\_\_

I, \_\_\_\_\_ (print name of the individual who actually performed the inspection), personally conducted the inspection of the residence identified on this form and in my professional opinion, all the data I reported is true and correct.

OIR-B1-1802 (Rev. 02/10) Adopted by Rule 690-170.0155 104

---

---

---

---

---

---

---

---

Slide 105

**The OIR-B1-1802 Form**

Uniform Mitigation Verification Inspection Form  
Maintain a copy of this form and any documentation provided with the insurance policy

Inspection Date:

**Owner Information**

Owner Name: \_\_\_\_\_ Contact Person: \_\_\_\_\_  
 Address: \_\_\_\_\_ Home Phone: \_\_\_\_\_  
 City: \_\_\_\_\_ Zip: \_\_\_\_\_ Work Phone: \_\_\_\_\_  
 County: \_\_\_\_\_ Cell Phone: \_\_\_\_\_  
 Insurance Company: \_\_\_\_\_ Policy #: \_\_\_\_\_  
 Year of Home: \_\_\_\_\_ # of Stories: \_\_\_\_\_ Email: \_\_\_\_\_

**NOTE:** Any documentation used in validating the compliance or existence of each construction or mitigation attribute must accompany this form. At least one photograph must accompany this form to validate each attribute marked in questions 3 through 7. The insurer may ask additional questions regarding the mitigated feature(s) verified on this form.

---

---

---

---

---

---

---

---

Slide 106

**Section 1**

**What Code?**

DFSA  
Division of Financial Services

106

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 107

**1. Building Code: What building code was used to design and build the structure?**

- A. 1994 South Florida Building Code (building permit application date of 9/1/1994 or later in Miami-Dade and Broward Counties (also known as the High Velocity Hurricane Zone (HVHZ)).
- B. Building code prior to the 1994 South Florida Building Code (building permit application date of 8/31/1994 or earlier in Miami-Dade and Broward Counties (HVHZ)).
- C. 2001 Florida Building Code (building permit application date of 3/1/2002 or later outside the HVHZ).
- D. Building code prior to the 2001 Florida Building Code (building permit application date of 2/29/2002 or earlier outside the HVHZ).
- E. Unknown or undetermined.

OIR-B1-1802 (Rev. 02/10) Adopted by Rule 69O-170.0155

---

---

---

---

---

---

---

---

Slide 108

**Form 1802 Section 1**

**1. Building Code:** Was the structure built in compliance with the Florida Building Code (FBC 2001 or later) OR for homes located in the HVHZ (Miami-Dade or Broward counties), South Florida Building Code (SFBC-94)?

- A. Built in compliance with the FBC. Year Built \_\_\_\_\_. For homes built in 2002/2003 provide a permit application with a date after 3/1/2002: Building Permit Application Date (MM/DD/YYYY) \_\_\_\_/\_\_\_\_/\_\_\_\_.
- B. For the HVHZ Only: Built in compliance with the SFBC-94: Year Built \_\_\_\_\_. For homes built in 1994, 1995, and 1996 provide a permit application with a date after 9/1/1994: Building Permit Application Date (MM/DD/YYYY) \_\_\_\_/\_\_\_\_/\_\_\_\_.
- C. Unknown or does not meet the requirements of Answer "A" or "B"

OIR-B1-1802 (rev. 01/12)

---

---

---

---

---

---

---

---

Slide 109

**Section 2**

**Predominant Roof Covering**

Slide 110

**2. Predominant Roof Covering:**

Permit Application Date: \_\_\_\_\_ or Date of Installation: \_\_\_\_\_

- A. At a minimum meets the 2001 Florida Building Code or the 1994 South Florida Building Code and has a Miami-Dade TAS or FBC 2001 Product Approval listing demonstrating compliance with ASTM D 3161 (enhanced for 110MPH) OR ASTM D 7168 (F, G or H) OR FBC TAS 100-95 and TAS 107-95, OR FMRC 4470 and/or 4471 (for metal roofs).
- B. Does not meet the above minimum requirements.
- C. Unknown or undetermined.

OIR-B1-1802 Rev. 02/10 Adopted by Rule 69O-170.0155

---

---

---

---

---

---

---

---

MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 111

**Form 1802 Section 2**

**2. Roof Covering:** Select all roof covering types in use. Provide the permit application date OR FBC/MDC Product Approval number OR Year of Original Installation/Replacement OR indicate that no information was available to verify compliance for each roof covering identified.

2.1 Roof Covering Type:	Permit Application Date	FBC or MDC Product Approval #	Year of Original Installation or Replacement	No Information Provided for Compliance
<input type="checkbox"/> 1. Asphalt/Fiberglass Shingle	/ /			<input type="checkbox"/>
<input type="checkbox"/> 2. Concrete/Clay Tile	/ /			<input type="checkbox"/>
<input type="checkbox"/> 3. Metal	/ /			<input type="checkbox"/>
<input type="checkbox"/> 4. Built Up	/ /			<input type="checkbox"/>
<input type="checkbox"/> 5. Membrane	/ /			<input type="checkbox"/>
<input type="checkbox"/> 6. Other	/ /			<input type="checkbox"/>

A. All roof coverings listed above meet the FBC with a FBC or Miami-Dade Product Approval listing current at time of installation OR have a roofing permit application date on or after 3/1/02 OR the roof is original and built in 2004 or later.  
 B. All roof coverings have a Miami-Dade Product Approval listing current at time of installation OR (for the HVHZ only) a roofing permit application after 9/1/1994 and before 3/1/2002 OR the roof is original and built in 1997 or later.  
 C. One or more roof coverings do not meet the requirements of Answer "A" or "B".  
 D. No roof coverings meet the requirements of Answer "A" or "B".

---

---

---

---

---

---

---

---

---

---


---

Slide 112

**Important Note**

**At least one photo documenting the existence of each visible and accessible construction or mitigation attribute marked in:**

- Section 3 Roof deck attachment.
- Section 4 Roof to wall attachment.
- Section 5 Roof geometry.
- Section 6 Gable end bracing.
- Section 7 Wall construction type.
- Section 8 Secondary water Resistance (SWR)
- Section 9 Opening protection.




---

---

---

---

---

---

---

---

---

---

---

Slide 113


**Section 3**

**Roof Deck Attachment**

*What is the weakest form of roof deck attachment?*

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 114

 **3. Roof Deck Attachment:** What is the weakest form of roof deck attachment?

- A. Plywood/Oriented strand board (OSB) roof sheathing attached to the roof truss/rafter (spaced a maximum of 24" o.c.) by staples or 6d nails spaced at 6" along the edge and 12" in the field. -OR- Batten decking supporting wood shakes or wood shingles. -OR- Any system of screws, nails, adhesives, other deck fastening system or truss/rafter spacing that has an equivalent mean uplift resistance of 66 psf.
- B. Plywood/OSB roof sheathing with a minimum thickness of 1/2" attached to the roof truss/rafter (spaced a maximum of 24" o.c.) by 8d common nails spaced at 6" along the edge and 12" in the field. -OR- Any system of screws, nails, adhesives, other deck fastening system or truss/rafter spacing that has an equivalent mean uplift resistance of 103 psf.
- C. Plywood/OSB roof sheathing with a minimum thickness of 7/16" attached to the roof truss/rafter (spaced a maximum of 24" o.c.) by 8d common nails spaced at 6" along the edge and 6" in the field. -OR- Dimensional lumber/Tongue & Groove decking with a minimum of 2 nails per board. -OR- Any system of screws, nails, adhesives, other deck fastening system or truss/rafter spacing that has an equivalent mean uplift resistance of 182 psf.
- D. Reinforced Concrete Roof Deck.
- E. Other: \_\_\_\_\_
- F. Unknown or undetermined.
- G. No attic access.

OIR-B1-1802 Rev. 02/10 Adopted by Rule 69O-170.0155 114

---

---

---

---

---

---



---

---

---

---

Slide 115

 **Form 1802 Section 3** 

**3. Roof Deck Attachment:** What is the weakest form of roof deck attachment?

- A. Plywood/Oriented strand board (OSB) roof sheathing attached to the roof truss/rafter (spaced a maximum of 24" inches o.c.) by staples or 6d nails spaced at 6" along the edge and 12" in the field. -OR- Batten decking supporting wood shakes or wood shingles. -OR- Any system of screws, nails, adhesives, other deck fastening system or truss/rafter spacing that has an equivalent mean uplift less than that required for Options B or C below.
- B. Plywood/OSB roof sheathing with a minimum thickness of 7/16" inch attached to the roof truss/rafter (spaced a maximum of 24" inches o.c.) by 8d common nails spaced a maximum of 12" inches in the field. -OR- Any system of screws, nails, adhesives, other deck fastening system or truss/rafter spacing that is shown to have an equivalent or greater resistance 8d nails spaced a maximum of 12 inches in the field or has a mean uplift resistance of at least 103 psf.

OIR-B1-1802 Rev. 01/12 115

---

---

---

---

---

---



---

---

---

---

Slide 116

 **Form 1802 Section 3** 

**3. Roof Deck Attachment:** What is the weakest form of roof deck attachment?

- C. Plywood/OSB roof sheathing with a minimum thickness of 7/16" inch attached to the roof truss/rafter (spaced a maximum of 24" inches o.c.) by 8d common nails spaced a maximum of 6" inches in the field. -OR- Dimensional lumber/Tongue & Groove decking with a minimum of 2 nails per board (or 1 nail per board if each board is equal to or less than 6 inches in width). -OR- Any system of screws, nails, adhesives, other deck fastening system or truss/rafter spacing that is shown to have an equivalent or greater resistance than 8d common nails spaced a maximum of 6 inches in the field or has a mean uplift resistance of at least 182 psf.
- D. Reinforced Concrete Roof Deck.
- E. Other: \_\_\_\_\_
- F. Unknown or unidentified.
- G. No attic access.

OIR-B1-1802 Rev. 01/12 116

---

---

---

---

---

---



---


---


---

---

Slide 117

 **How do you determine the Roof Deck Attachment?** 





The APA—Engineered Wood Association has determined that the use of an electronic stud finder (such as the Zircon Videoscanner or Zircon M76) with a metal detection mode can be used to locate sheathing nails.

Nailing location can be identified by visual inspection using a light and a tape.

Photos courtesy of Steve Taylor, Taylor Inspection Services, Inc. 117

---

---

---

---

---

---



---

---

---

---

Slide 118

 **For Jurisdictions Using 1994 & 1997 Standard Building Code** 

**Structural panel roof sheathing:**

**15/32" (1/2") Thickness:**

- 6d common or power driven nails spaced at a maximum of 6" o.c. edges and 12" o.c. field.
- 16 ga. Galvanized wire staples, 3/8" crown, length of 1" plus thickness of sheathing, 4" o.c. edges and 8" o.c. field.

**19/32" (5/8") Thickness or Greater:**

- 8d common or power driven nails spaced at a maximum of 6" o.c. edges and 12" o.c. field.
- 16 ga. Galvanized wire staples, 3/8" crown, length of 1" plus thickness of sheathing, 2" o.c. edges and 5" o.c. field.

118

---

---

---

---

---

---



---

---

---

---

Slide 119

 **Miami-Dade and Broward Counties** 

**1994 & 1998 South Florida Building Code**

**Structural panel roof sheathing:**

**19/32" (5/8") Thickness:**

- 8d common or power driven nails spaced at a maximum of 6" o.c. over all supports, edges and field.
- 8d common or power driven nails spaced at a maximum of 4" o.c. over gable ends.

**In excess of 19/32" (5/8") Thickness:**

- 10d common or power driven nails spaced at a maximum of 6" o.c. over all supports, edges and field.
- 10d common or power driven nails spaced at a maximum of 4" o.c. over gable ends.

**Board Roof Sheathing:**

- 6" wide boards: 2 - 8d common nails in each board.
- 8" wide boards: 3 - 8d common nails in each board.

119

---

---

---

---

---

---

---

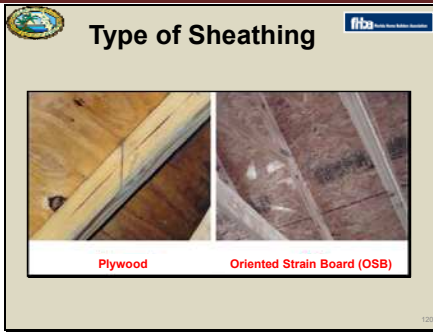
---

---

---



Slide 120



---

---

---

---

---

---

---

---

---

---

---

---

Slide 121



---

---

---

---

---

---

---

---

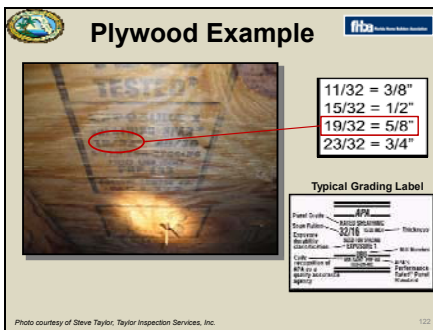
---

---

---

---

Slide 122



---

---

---

---

---

---

---

---

---

---

---

---

Slide 123

## Section 4

### Roof to Wall Attachment

Slide 124

## Roof to Wall Attachment

**4. Roof to Wall Attachment:** What is the weakest roof to wall connection?

A. Toe Nails      Rafter/truss anchored to top plate of wall using nails driven at an angle through the rafter/truss and attached to the top plate of the wall.

B. Clips      Metal attachments on every rafter/truss. Clips are nailed to one side (or both sides in the case of a diamond type clip) of the rafter/truss and attached to the top plate of the wall framing embedded in the bond beam.

C. Single Wraps      Metal Straps must be secured to every rafter/truss with a minimum of 3 nails, wrapping over and securing to the opposite side of the rafter/truss with a minimum of 1 nail. The Strap must be attached to the top plate of the wall framing embedded in the bond beam in at least one place.

Double wraps      Both Metal Straps must be secured to every rafter/truss with a minimum of 3 nails, wrapping over and securing to the opposite side of the rafter/truss with a minimum of 1 nail. Each Strap must be attached to the top plate of the wall frame or embedded in the bond beam in at least one place.

E. Structural      Anchor bolts structurally connected or reinforced concrete roof.

F. Other: \_\_\_\_\_

G. Unknown or Unidentified

H. No attic access.

OIR-B1-1802 Rev. 02/10 Adopted by Rule 69O-170.0155

---

---

---

---

---

---

---

---

Slide 125

## Form 1802 Section 4

**4. Roof to Wall Attachment:** What is the **WEAKEST** roof to wall connection? (Do not include attachment of hip/valley jacks within 5 feet of the inside or outside corner of the roof in determination of WEAKEST type).

A. Toe Nails

Truss/rafter anchored to top plate of wall using nails driven at an angle through the truss/rafter and attached to the top plate of the wall, or

Metal connectors that do not meet the minimal conditions or requirements of B, C, or D

**Minimal conditions to qualify for categories B, C, or D. All visible metal connectors are:**

Secured to truss/rafter with a minimum of three (3) nails, and

Attached to the wall top plate of the wall framing, or embedded in the bond beam, with less than a 1/2" gap from the blocking or truss/rafter and blocked no more than 1.5" of the truss/rafter, and free of visible severe corrosion.

---

---

---

---

---

---

---

---

Slide 126

## Form 1802 Section 4

**4. Roof to Wall Attachment:** What is the **WEAKEST** roof to wall connection? (Do not include attachment of hip/valley jacks within 5 feet of the inside or outside corner of the roof in determination of WEAKEST type).

B. Clips

Metal connectors that do not wrap over the top of the truss/rafter, or

Metal connectors with a minimum of 1 strap that wraps over the top of the truss/rafter and does not meet the nail position requirements of C or D, but is secured with a minimum of 3 nails.

C. Single Wraps

Metal connectors consisting of a single strap that wraps over the top of the truss/rafter and is secured with a minimum of 2 nails on the front side and a minimum of 1 nail on the opposing side.

---

---

---

---

---

---

---

---

Slide 127

**Form 1802 Section 4**

**4. Roof to Wall Attachment:** What is the **WEAKEST** roof to wall connection? (Do not include attachment of hip/valley jacks within 5 feet of the inside or outside corner of the roof in determination of WEAKEST type).

- D. Double Wraps
- Metal Connectors consisting of 2 separate straps that are attached to the wall frame, or embedded in the bond beam, on either side of the truss/rafter where each strap wraps over the top of the truss/rafter and is secured with a minimum of 2 nails on the front side, and a minimum of 1 nail on the opposing side, or
- Metal connectors consisting of a single strap that wraps over the top of the truss/rafter, is secured to the wall on both sides, and is secured to the top plate with a minimum of three nails on each side.
- E. Structural Anchor bolts structurally connected or reinforced concrete roof.
- F. Other: \_\_\_\_\_
- G. Unknown or unidentified
- H. No attic access

© 2018 B1-1802 (rev. 01/12) 127

---

---

---

---

---

---

---

---

---

---

---

---

Slide 128

**Wood Frame Construction**

The size & number of nails **DOES NOT MATTER!**

128

---

---

---

---

---

---

---

---

---

---

---

---

Slide 129

**Typical Metal Hardware and Wood Frame Walls**

**2 Clips** 800 lbs  
**Clip** 500 lbs  
**Clip** 400 lbs  
**Double Wrap** 1000 lbs

129

---

---

---

---

---

---

---

---

---

---

---

---

Slide 130

**Clips**

hurricane clip

Also included in this category are straps that **DO NOT** wrap over the top of the truss chord or rafter.

130

---

---

---

---

---

---

---

---

---


---

---

---

Slide 131

**Single Wrap**



Strap must wrap over the truss top chord or rafter AND be fastened with a minimum of three nails; the nail size is not specified.

131

---

---

---

---

---


---

---

---

Slide 132

**Double Wrap**



Same requirements as a single wrap but with one strap on each side for the truss or rafter.

132

---

---

---

---

---

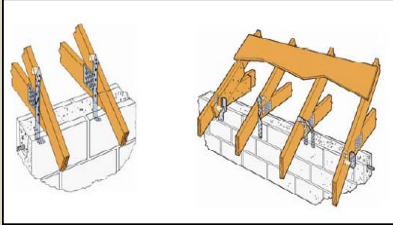
---

---

---

Slide 133

**Typical Metal Hardware for Masonry Walls**



133

---

---

---

---

---

---

---

---

Slide 134

**Masonry**



Single wraps embedded in the top of a masonry bond beam.

134

---

---

---

---

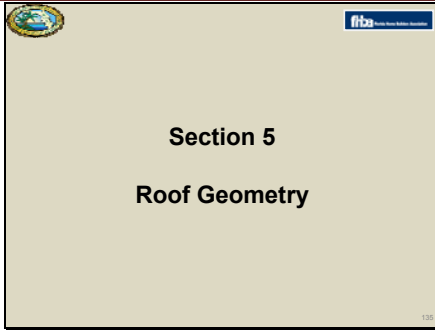
---

---

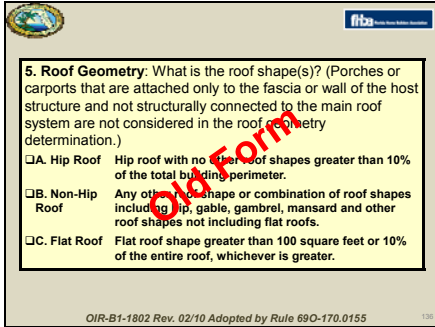
---

---

Slide 135



Slide 136




---

---

---

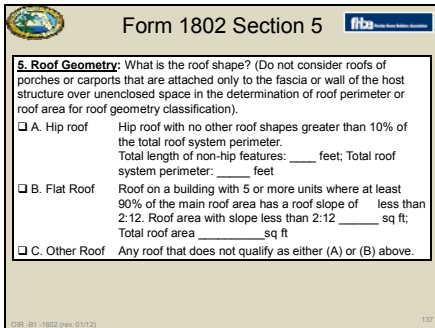
---

---

---

---

Slide 137




---

---

---

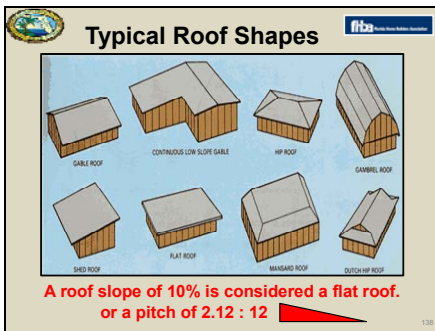
---

---

---

---

Slide 138




---

---

---

---


---

---

---

Slide 139

**Classified as a Gable Roof**



A hip roof is defined as "no other roof shapes greater than 10% of the total building perimeter." The gable portions exceed 10% of the TOTAL building perimeter, therefore, the roof shape is classified as GABLE.

---

---

---

---

---


---

---

---

Slide 140

**Classified as a Hip Roof**



The open gable section is over the front entry and is not part of the main structure of the house.

---

---

---

---

---

---

---

---

Slide 141

**Section 6**

**Gable End Bracing**

Slide 142

**6. Gable End Bracing:** For roof structures that contain gables, please check the **weakest** that apply:

- A. Gable End(s) are braced at a minimum in accordance with the **2001 Florida Building Code.**
- B. Does not meet the above minimum requirements.
- C. Not applicable, unknown or unidentified.

*The 2001 edition of the Florida Building Code DOES NOT contain specific truss bracing specifications.*

OIR-B1-1802 Rev. 02/10 Adopted by Rule 69O-170.0155

---

---

---

---

---

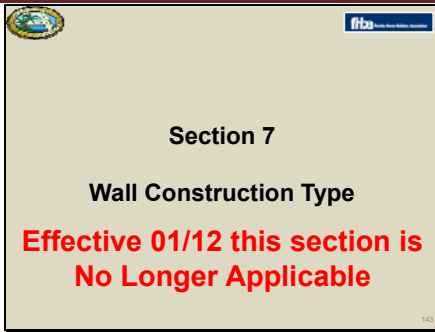
---

---

---

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 143



Section 7

Wall Construction Type

Effective 01/12 this section is No Longer Applicable

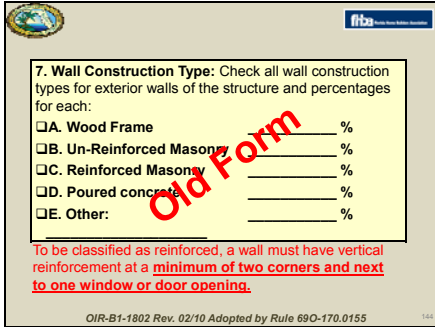
---

---

---

---

Slide 144



7. Wall Construction Type: Check all wall construction types for exterior walls of the structure and percentages for each:

<input type="checkbox"/> A. Wood Frame	_____ %
<input type="checkbox"/> B. Un-Reinforced Masonry	_____ %
<input type="checkbox"/> C. Reinforced Masonry	_____ %
<input type="checkbox"/> D. Poured concrete	_____ %
<input type="checkbox"/> E. Other:	_____ %

To be classified as reinforced, a wall must have vertical reinforcement at a minimum of two corners and next to one window or door opening.

OIR-B1-1802 Rev. 02/10 Adopted by Rule 69O-170.0155

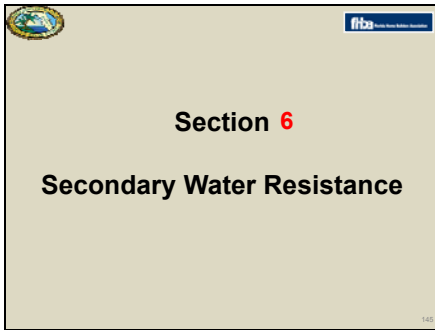
---

---

---

---

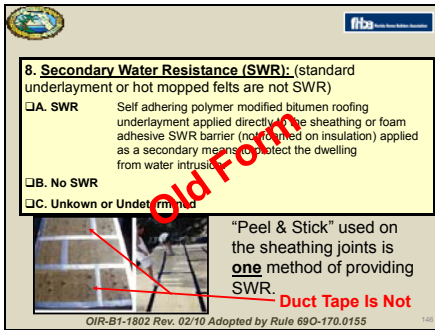
Slide 145



Section 6

Secondary Water Resistance

Slide 146




8. Secondary Water Resistance (SWR): (standard underlayment or hot mopped felts are not SWR)

A. SWR Self adhering polymer modified bitumen roofing underlayment applied directly to sheathing or foam adhesive SWR barrier (not applied on insulation) applied as a secondary means to protect the dwelling from water intrusion.

B. No SWR

C. Unknown or Undetermined

  
"Peel & Stick" used on the sheathing joints is one method of providing SWR. **Duct Tape Is Not**

OIR-B1-1802 Rev. 02/10 Adopted by Rule 69O-170.0155

---

---

---

---

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 147

**Form 1802 Section 6**

**6. Secondary Water Resistance (SWR):** (standard underlayments or hot-mopped felts do not qualify as an SWR)

- A. SWR (also called Sealed Roof Deck) Self-adhering polymer modified-bitumen roofing underlayment applied directly to the sheathing or foam adhesive SWR barrier (not foamed-on insulation) applied as a supplemental means to protect the dwelling from water intrusion in the event of roof covering loss.
- B. No SWR.
- C. Unknown or undetermined.

CR-1802 (Rev. 01/12) 147

---

---

---

---

---

---

---

---

Slide 148

**Spray Foam (adhesive) As SWR**



148

---

---

---

---

---

---

---

---

Slide 149

**Section 9**

**Opening Protection**

149

Slide 150

**9. Opening Protection:** What is the weakest form of wind borne debris protection installed on the structure? (Exterior openings include, but are not limited to: windows, doors, garage doors, skylights, etc. Product approval may be required for opening protection devices without proper rating identification.)

**A. All Exterior Openings (Glazed and Unglazed):** All exterior openings are fully protected at a minimum with impact resistant coverings, impact resistant doors and/or impact resistant window units that are listed as wind borne debris protection devices in the product approval system of the State of Florida or Miami-Dade County and meet the requirements of one of the following for "Cyclic Pressure and Large Missile Impact": For the HVHZ, systems must have either a Miami-Dade NOA or FBC Approval or be labeled for "Use in the HVHZ".

- Miami-Dade County Notice of Acceptance (NOA) TAS 201, 202 and 203. (Large Missile - 9 lb.)
- Florida Building Code Test Specification Standard (TAS) 201, 202 and 203. (Large Missile - 9 lb.)
- American Society for Testing and Materials (ASTM) E 1886 and ASTM E 1996. (Large Missile - 9 lb.)
- Southern Standards Technical Document (SSTD) 12. (Large Missile - 9 lb.)
- For Skylights Only: ASTM E 1896/E 1996. (Large Missile - 4.5 lb.)
- For Garage Doors Only: ANSI/DASMA 115. (Large Missile - 9 lb.)

**Inspectors Initials:** \_\_\_\_\_ **Property Address:** \_\_\_\_\_

\*This verification form is valid up to five (5) years provided no material changes have been made to the structure.  
CR-1802 (Rev. 02/10) Adopted by Rule 690-170.0155 Page 2 of 4

---

---

---

---

---

---

---

---



# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 151

### Form 1802 Section 7

**7. Opening Protection:** What is the weakest form of wind borne debris protection installed on the structure?

**First,** use the table to determine the weakest form of protection for each category of opening.

**Second,** (a) check one answer below (A, B, C, N, or X) based upon the lowest protection level for ALL Glazed openings and (b) check the protection level for all Non-Glazed openings (.1, .2, or .3) as applicable.

**Opening Protection Level Chart Follows:**

DIR: B1-1802 (rev. 01/12) 151

---

---

---

---

---

---

---

---

---

---

Slide 152

### Form 1802 Section 7

**Opening Protection Level Chart**  
Place an "X" in each row to identify all forms of protection in use for each opening type. Check only one answer below (A-X), based on the weakest form of protection (lowest row) for any of the Glazed openings and indicate the weakest form of protection (lowest row) for Non-Glazed openings.

	Glazed Openings			Non-Glazed Openings	
	Windows or entry Doors	Garage Doors	Skylights	Glass Block	Entry Doors Garage doors
<b>N/A</b> Not Applicable. There are no opening of this type on the structure.					
<b>A</b> Verified cyclic pressure & large missile (8 lb. for windows & 4.5 lb. for skylights)					
<b>B</b> Verified cyclic pressure & large missile (4-8 lb. for windows & 2 lb. for skylights)					
<b>C</b> Verified plywood / OSB meeting Table 1609.1.2 of the FBC 2007					
<b>D</b> Verified Non-Glazed Entry or Garage doors indicating compliance with ASTM E 230, ANSI/DASMA 108, PKTAB 202 for wind pressure resistance.					
<b>N</b> Other protective coverings that cannot be identified as A, B, or C.					
<b>X</b> No Windborne Debris Protection					

DIR: B1-1802 (rev. 01/12) 152

---

---

---

---

---

---

---

---


---

---

**MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802**

<b>Opening Protection Level Chart</b> Place an "X" in each row to identify all forms of protection in use for each opening type. Check only one answer below (A-X), based on the weakest form of protection (lowest row) for any of the Glazed openings and indicate the weakest form of protection (lowest row) for Non-Glazed openings.		Glazed Openings				Non-Glazed Openings	
		Windows or entry Doors	Garage Doors	Skylights	Glass Block	Entry Doors	Garage doors
N/A	Not Applicable- There are no opening of this type on the structure						
A	Verified cyclic pressure & large missile (9 lb. for windows / 4.5 lb. for skylights)						
B	Verified cyclic pressure & large missile (4-8 lb. for windows/ 2 lb. for skylights)						
C	Verified plywood / OSB meeting Table 1609.1.2 of the FBC 2007						
D	Verified Non-Glazed Entry or Garage doors indicating compliance with ASTM E 330, ANSI/DASMA 108, PA/TAS 202 for wind pressure resistance.						
N	Other protective coverings that cannot be identified as A, B, or C.						
X	No Windborne Debris Protection						

Slide 153

**Form 1802 Section 7** 

- A. Exterior Openings Cyclic Pressure and 9-lb Large Missile (4.5 lb. for skylights only)** All Glazed openings are protected at a minimum, with impact resistant coverings or products listed as wind borne debris protection devices in the product approval system of the State of Florida or Miami-Dade County and meet the requirements of one of the following for "Cyclic Pressure and Large Missile Impact" (Level A in the table above).
  - Miami-Dade County PA 201, 202, and 203
  - Florida Building Code Testing Application Standard (TAS) 201, 202, and 203
  - American Society for Testing and Materials (ASTM) E 1886 and ASTM E 1996
  - Southern Standards Technical Document (SSTD) 12
  - For Skylights Only: ASTM E 1886 and ASTM E 1996
  - For Garage Doors Only: ANSI/DASMA 115
- A.1 All Non-Glazed openings classified as A in the table above, or no Non-Glazed openings exist.
- A.2 One or More Non-Glazed openings classified as Level D in the table above, and no Non-Glazed openings classified as Level B, C, N, or X in the table above.
- A.3 One or More Non-Glazed Openings is classified as Level B, C, N, or X in the table above.

DFS, B1-1802 (Rev. 01/12) 153

---

---

---

---

---

---


---

---

---

---

Slide 154

**Hurricane Rated Products** 

- Meet impact, wind pressure and pressure cycle testing. These products are tested and approved under the Miami-Dade County or Florida Building Code approval system.
- These products have passed the test standard for **Large Missile Impact** (9 lb. missile) and are approved for installation anywhere in the state.
- These products must meet one of the following building code standards:
  - Miami-Dade County using TAS 201, 202 and 203
  - Florida Product Approval using:
    - SSTD 12-93/97
    - ASTM E 1886 and E 1996 or TAS 201, 202 and 203.

154

---

---

---

---

---

---


---

---

---

---

Slide 155

**Windborne Debris Region** 

- The code allows for **two types** of protection systems, depending on the location within the state. In the High Velocity Hurricane Zones (Broward and Miami-Dade Counties only) all opening must be impact rated or protected. This means all windows, doors, skylights and glass block. In the balance of the windborne debris region, only glazed openings on the structure must be impact rated or protected. This includes windows, sliding glass doors, skylights, doors and garage doors with windows but not glass block.

155

---

---

---

---

---

---

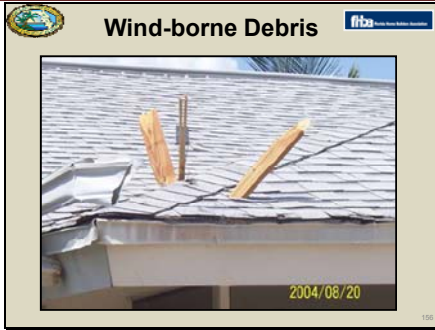
---

---

---

---

Slide 156



---

---

---

---

---

---

---

---

---

---

Slide 157

**Proof of Compliance for Hurricane Rated Products**

Look for a label, sticker or plate on the frame of the shutter or stamp into the metal.

- "Miami-Dade County Product Approved"
- "Florida Building Code Product Approved"
- "SSTD 12"
- "ASTM E1886 & E1996"
- "TAS 201, 202 & 203"

---

---

---

---

---

---

---

---

---

---

Slide 158

**Impact Rated Glazed Products**

**Impact rated glazed products must also be labeled.**

---

---

---

---

---

---

---

---

---

---

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 159




---

---

---

---

---

---

---

---

---

---

---

---

Slide 160

Large Missile (● Impact Location)	
Missile	Level B 2lb @ 50 f/s Level C 4.5lb @ 50 f/s Level D 9lb @ 50 f/s Level E 9lb @ 80 f/s
ASTM E-1996	
2" X 4" Lumber	TAS 201 (HVHZ) 9lb @ 50 f/s
<b>Pass/Fail</b> • No Tear Permitting a 3" Sphere to Pass Through • No Tear Longer than 5" and 1/16" in Width	
Small Missile (● Impact Location)	
Missile	2g @ 130 f/s
ASTM E-1996	
(10) 2 Gram Steel Balls	TAS 201 (HVHZ) 2g @ 130 f/s
<b>Pass/Fail</b> • No Tear Permitting a 3" Sphere to Pass Through • No Tear Longer than 5" and 1/16" in Width	

---

---

---

---

---

---

---

---

---

---

---

---

Slide 161

SECURITY TESTED		PGT - SINGLE HUNG - 34" - 70" Impact and Non-Impact			
PGT 100 Technology Dr Miramar, CA 92051 619-434-1000 www.pgt.com	DATE TESTED	07/15/2010	07/15/2010	07/15/2010	07/15/2010
	TESTER	PGT	PGT	PGT	PGT
	TEST TYPE	IMPACT	IMPACT	IMPACT	IMPACT
	TEST RESULTS	PASS	PASS	PASS	PASS
Impact Window					
SECURITY TESTED		PGT - SINGLE HUNG WINDOW			
PGT 100 Technology Dr Miramar, CA 92051 619-434-1000 www.pgt.com	DATE TESTED	07/15/2010	07/15/2010	07/15/2010	07/15/2010
	TESTER	PGT	PGT	PGT	PGT
	TEST TYPE	IMPACT	IMPACT	IMPACT	IMPACT
	TEST RESULTS	PASS	PASS	PASS	PASS
Non-impact Window					

---

---

---

---

---

---

---

---

---

---

---

---

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 162

Form 1802 Section 7

**B. Exterior Opening Protection- Cyclic Pressure and 4 to 8-lb Large Missile (2-4.5 lb for skylights only)** All Glazed openings are protected, at a minimum, with impact resistant coverings or products listed as windborne debris protection devices in the product approval system of the State of Florida or Miami-Dade County and meet the requirements of one of the following for "Cyclic Pressure and Large Missile Impact" (Level B in the table above):

- ASTM E 1886 and ASTM E 1996 (Large Missile - 4.5 lb.)
- SSTD 12 (Large Missile - 4 lb. to 8 lb.)
- For Skylights Only: ASTM E 1886 and ASTM E 1996 (Large Missile - 2 to 4.5 lb.)

B.1 All Non-Glazed openings classified as A or B in the table above, or no Non-Glazed openings exist

B.2 One or More Non-Glazed openings classified as Level D in the table above, and no Non-Glazed openings classified as Level C, N, or X in the table above

B.3 One or More Non-Glazed openings is classified as Level C, N, or X in the table above

OIR-B1-1802 (rev. 01/12) 162

---

---

---

---

---

---

---

---

Slide 163

**B. All exterior openings** are fully protected at a minimum with impact resistant coverings, impact resistant doors and/or impact resistant window units that are listed as windborne debris protection devices in the product approval system of the State of Florida or Miami-Dade County and meet the requirements of one of the following for "Cyclic Pressure and Large Missile Impact":

- ASTM E 1886 and ASTM E 1996. (Large Missile - 4.5 lb.)
- SSTD 12. (Large Missile - 4 lb. to 8 lb.)
- For Skylights Only: ASTM E 1886/E 1996. (Large Missile - 2 to 4.5 lb.)

OIR-B1-1802 Rev. 02/10 Adopted by Rule 69O-170.0155 163

---

---

---

---

---

---

---

---

Slide 164

**C. All exterior openings** are fully protected at a minimum with impact resistant coverings, impact resistant doors and/or impact resistant window units that are listed as windborne debris protection devices in the product approval system of the State of Florida or Miami-Dade County and meet the requirements of one of the following for "Cyclic Pressure and Large Missile Impact":

- Miami-Dade County NOA 2011, 202 and 203. (Small Missile - 2 grams)
- Florida Building Code TAB 11, 202 and 203. (Small Missile - 2 grams)
- ASTM E 1886 and ASTM E 1996. (Small Missile - 2 grams)
- SSTD 12. (Small Missile - 2 grams)

FBC 1609.1.2 Protection of Openings:  
2. Glazed openings located more than 30 feet above grade shall meet the provisions of the Small Missile Test

OIR-B1-1802 Rev. 02/10 Adopted by Rule 69O-170.0155 164

---

---

---

---

---

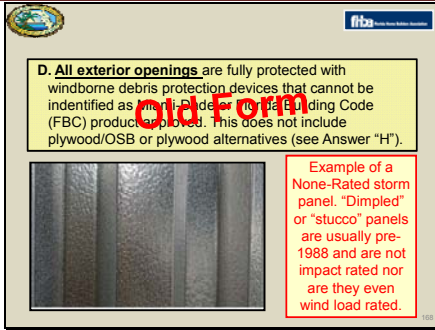
---

---

---



Slide 168



Slide 168 content: A slide with a header 'Old Form' in red. It features a yellow box with text: 'D. All exterior openings are fully protected with windborne debris protection devices that cannot be identified as impact rated or Code Book (FBC) products approved. This does not include plywood/OSB or plywood alternatives (see Answer "H").' Below this is a photo of a dimpled metal storm panel. To the right of the photo is a red-bordered box with text: 'Example of a None-Rated storm panel. "Dimpled" or "stucco" panels are usually pre-1988 and are not impact rated nor are they even wind load rated.'

---

---

---

---

---

---

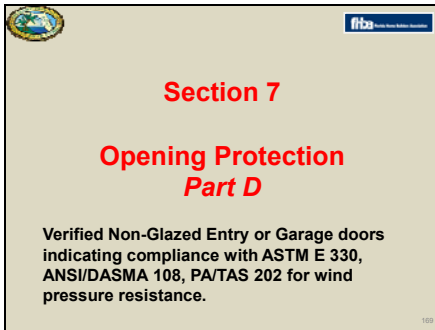
---

---

---

---

Slide 169



Slide 169 content: A slide with a header 'Section 7' in red, followed by 'Opening Protection Part D' in red. Below this is text: 'Verified Non-Glazed Entry or Garage doors indicating compliance with ASTM E 330, ANSI/DASMA 108, PA/TAS 202 for wind pressure resistance.'

---

---

---

---

---

---

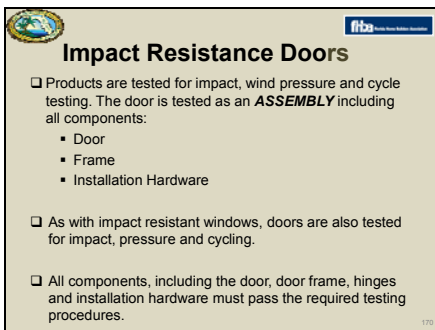
---

---

---

---

Slide 170



Slide 170 content: A slide with a header 'Impact Resistance Doors'. It contains three bullet points: 'Products are tested for impact, wind pressure and cycle testing. The door is tested as an ASSEMBLY including all components: Door, Frame, Installation Hardware'; 'As with impact resistant windows, doors are also tested for impact, pressure and cycling.'; and 'All components, including the door, door frame, hinges and installation hardware must pass the required testing procedures.'

---

---

---

---

---

---

---

---

---

---



Slide 171

**Must Be Labeled...**



The label can usually be located on the hinge side of the door slab.

171

---

---

---

---

---

---

---

---

---

---

Slide 172

**Garage Doors**

- As with all other doors, garage doors must be impact rated or protected with impact rated devices.
- There are many types of garage doors of differing materials, such as wood, fiberglass or steel, with and without windows.
- Mounting methods include overhead sectional, overhead roll-up, overhead one piece and hinged on the side.

172

---

---

---

---

---

---

---

---

---

---

Slide 173

**Garage Doors...continued**

- Doors that have passed the wind load and impact testing generally have all the following features:
- Steel panels without windows or openings (there are impact rated garage doors with windows). A review of the product approval is necessary to determine if a garage door with windows is impact rated unless the door is specifically labeled as impact rated.
- The tracks for the door will normally have 5 to 9 track mounting brackets or continuous mounting.

173

---

---

---

---

---

---

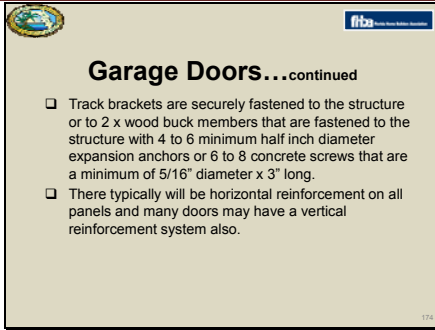
---

---

---

---

Slide 174



**Garage Doors...continued**

- ❑ Track brackets are securely fastened to the structure or to 2 x wood buck members that are fastened to the structure with 4 to 6 minimum half inch diameter expansion anchors or 6 to 8 concrete screws that are a minimum of 5/16" diameter x 3" long.
- ❑ There typically will be horizontal reinforcement on all panels and many doors may have a vertical reinforcement system also.

174

---

---

---

---

---

---

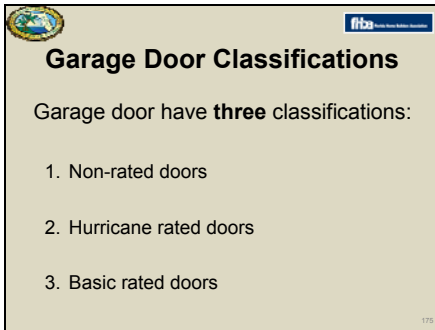
---

---

---

---

Slide 175



**Garage Door Classifications**

Garage door have **three** classifications:

1. Non-rated doors
2. Hurricane rated doors
3. Basic rated doors

175

---

---

---

---

---

---

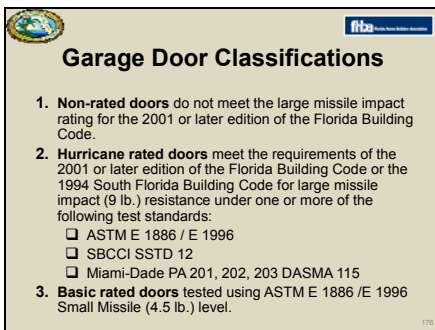
---

---

---

---

Slide 176



**Garage Door Classifications**

1. **Non-rated doors** do not meet the large missile impact rating for the 2001 or later edition of the Florida Building Code.
2. **Hurricane rated doors** meet the requirements of the 2001 or later edition of the Florida Building Code or the 1994 South Florida Building Code for large missile impact (9 lb.) resistance under one or more of the following test standards:
  - ❑ ASTM E 1886 / E 1996
  - ❑ SBCCI SSTD 12
  - ❑ Miami-Dade PA 201, 202, 203 DASMA 115
3. **Basic rated doors** tested using ASTM E 1886 / E 1996 Small Missile (4.5 lb.) level.

176

---

---

---

---

---

---

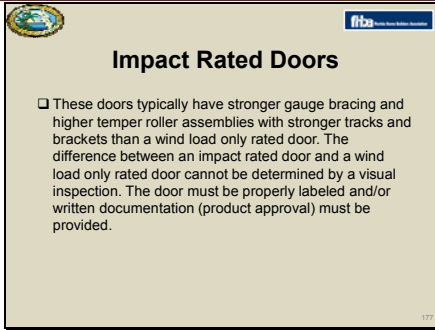
---

---

---

---

Slide 177



**Impact Rated Doors**

- ❑ These doors typically have stronger gauge bracing and higher temper roller assemblies with stronger tracks and brackets than a wind load only rated door. The difference between an impact rated door and a wind load only rated door cannot be determined by a visual inspection. The door must be properly labeled and/or written documentation (product approval) must be provided.

---

---

---

---

---

---

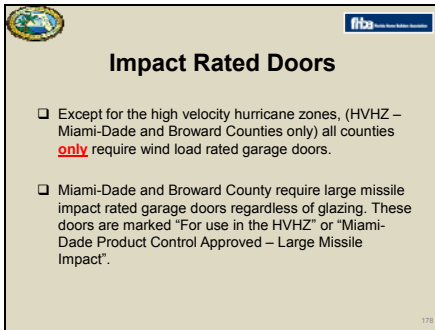
---

---

---

---

Slide 178



**Impact Rated Doors**

- ❑ Except for the high velocity hurricane zones, (HVHZ – Miami-Dade and Broward Counties only) all counties **only** require wind load rated garage doors.
- ❑ Miami-Dade and Broward County require large missile impact rated garage doors regardless of glazing. These doors are marked "For use in the HVHZ" or "Miami-Dade Product Control Approved – Large Missile Impact".

---

---

---

---

---

---

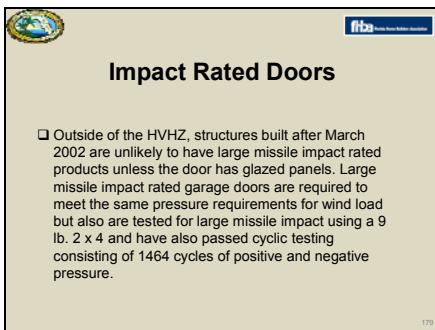
---

---

---

---

Slide 179



**Impact Rated Doors**

- ❑ Outside of the HVHZ, structures built after March 2002 are unlikely to have large missile impact rated products unless the door has glazed panels. Large missile impact rated garage doors are required to meet the same pressure requirements for wind load but also are tested for large missile impact using a 9 lb. 2 x 4 and have also passed cyclic testing consisting of 1464 cycles of positive and negative pressure.

---

---

---

---

---

---



---

---

---

---

Slide 180

### Bracing Kits

❑ After market bracing kits will increase the wind resistance of a garage door but do not qualify the door as large missile impact resistant. Any structure where the permit application was submitted after March 1, 2002 will, at a minimum, meet the wind load requirements of the 2001 edition of the Florida Building Code.

180

---

---

---

---

---

---



---

---

---

---

Slide 181

### Remember...

In order for the structure to achieve the "Hurricane" rating under the Opening Protection section, **ALL** openings, including garage doors and side hinge door **MUST** be impact rated products and be clearly labeled as such.

181

---

---

---

---

---

---



---

---


---

---

Slide 182

### Example of Impact Rated Garage Door



Heavy duty track mounted with 5-6 brackets per side

182

---

---

---

---

---

---

---

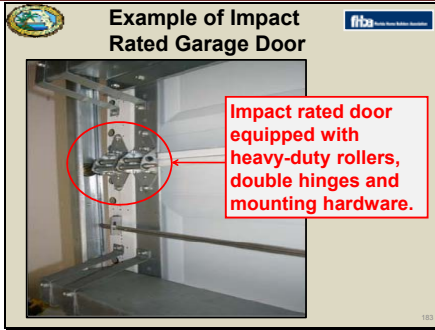
---

---

---

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 183



---

---

---

---

---

---

---

---

---

---

Slide 184



---

---

---

---

---

---

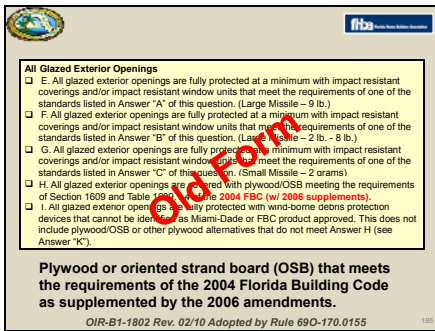
---

---

---

---

Slide 185



---

---

---

---

---

---



---

---

---

---

Slide 186

 **Window Films...** 

Window films have been tested many times and to date, none have passed the large missile (9 lb.) test and the required pressure and cycle testing. Documentation is sometimes provided stating that the product has been tested to various standards. None, however, have obtained product approval under Miami-Dade County or the Florida Building Code. The most common method of installing window film is known as "daylight installation". This type of installation does nothing to keep the glazing attached to the frame during an event and provides very little protection, if any, from wind and rain from entering the structure.

186

---

---

---

---

---

---



---

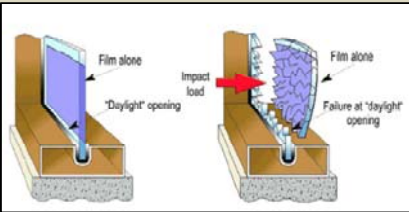
---

---

---

Slide 187

 **Window film...Don't Cut It!** 



The diagram shows two cross-sections of a window frame. The left side shows a window with a film installed, labeled "Film alone" and "Daylight opening". The right side shows a window with a film installed, labeled "Film alone" and "Failure at Daylight opening". A red arrow labeled "Impact load" points to the film in the right diagram, which is shown peeling away from the frame.

187

---

---

---

---

---

---



---

---

---

---

Slide 188

 **Window film don't cut it Unless...** 

The only way window films have passed the small missile (4.5 lb.) test is with the film fastened to the window frame. Some systems use an adhesive system and other use mechanical fasteners. The majority of these tests were conducted with commercial window frames and as such are not applicable to the majority of residential construction. The mechanically fastened film has passed Factory Mutual large missile testing but it is not Florida Building Code or Miami-Dade County product approved.

188

---

---

---

---

---

---

---


---

---

---

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 189

**No Mitigation Credit** 

**9. Opening Protection** (continued)

**None or Some Glazed Openings**

- J. At least one glazed exterior opening does not have wind-borne debris protection.
- K. No glazed exterior openings have wind-borne debris protection. This includes plywood/OSB plywood alternative systems that do not meet Answer "H"
- L. Unknown or undetermined

Inspectors Initials: \_\_\_\_\_ Property Address: \_\_\_\_\_

\*This verification form is valid up to five (5) years provided no material changes have been made to the structure. OIR-B1-1802 (Rev. 02/10) Adopted by Rule 69O-170.0155 Page 3 of 4

OIR-B1-1802 Rev. 02/10 Adopted by Rule 69O-170.0155 189

---

---

---

---

---

---


---

---

---

---

Slide 190

**Form 1802 Section 7** 

**N. Exterior Opening Protection (unverified shutter systems with no documentation)** All Glazed openings are protected with protective coverings not meeting the requirements of Answer "A", "B", or "C" or systems that appear to meet Answer "A" or "B" with no documentation of compliance (Level N in the table above).

- N.1 All Non-Glazed openings classified as Level A, B, C, or N in the table above, or no Non-Glazed openings exist
- N.2 One or More Non-Glazed openings classified as Level D in the table above, and no Non-Glazed openings classified as Level X in the table above
- N.3 One or More Non-Glazed openings is classified as Level X in the table above

**X. None or Some Glazed Openings** One or more Glazed openings classified and Level X in the table above.

OIR-B1-1802 (rev. 01/12) 190

---

---

---

---

---

---


---

---

---

---

Slide 191

**Who Can Perform The Inspection?** 

**MITIGATION INSPECTIONS MUST BE PERFORMED BY A QUALIFIED INSPECTOR.**  
**Section 627.711(2), Florida Statutes, provides a listing of individuals who may sign this form.**

Inspector Name:	License Type:	License or Certificate #:
Inspection company:		Phone:

**Qualified Inspector – I hold an active license or certificate as a: (check one)**

- A home inspector licensed under s. 489.83, who has completed at least 3 hours of hurricane mitigation training which includes hurricane mitigation techniques and compliance with the uniform mitigation verification form and completion of a proficiency exam.
- A building code inspector certified under s. 489.607;
- A general, building, or residential contractor licensed under s. 489.111;
- A professional engineer licensed under s. 481.015;
- A professional architect licensed under s. 481.213;
- Any other individual or entity recognized by the insurer as possessing the necessary qualifications to properly complete a uniform mitigation verification form.

OIR-B1-1802 Rev. 02/10 Adopted by Rule 69O-170.0155 191

---

---

---

---

---

---

---

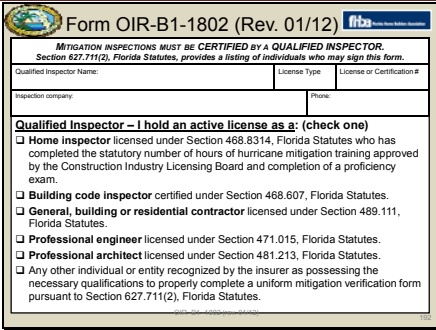
---

---

---

# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 192



Form OIR-B1-1802 (Rev. 01/12) **flba**

**MITIGATION INSPECTIONS MUST BE CERTIFIED BY A QUALIFIED INSPECTOR. Section 627.711(2), Florida Statutes, provides a listing of individuals who may sign this form.**

Qualified Inspector Name: \_\_\_\_\_ License Type: \_\_\_\_\_ License or Certification #: \_\_\_\_\_

Inspector Company: \_\_\_\_\_ Phone: \_\_\_\_\_

**Qualified Inspector – I hold an active license as a: (check one)**

- Home inspector** licensed under Section 468.8314, Florida Statutes who has completed the statutory number of hours of hurricane mitigation training approved by the Construction Industry Licensing Board and completion of a proficiency exam.
- Building code inspector** certified under Section 468.607, Florida Statutes.
- General, building or residential contractor** licensed under Section 489.111, Florida Statutes.
- Professional engineer** licensed under Section 471.015, Florida Statutes.
- Professional architect** licensed under Section 481.213, Florida Statutes.
- Any other individual or entity recognized by the insurer as possessing the necessary qualifications to properly complete a uniform mitigation verification form pursuant to Section 627.711(2), Florida Statutes.

---

---

---

---

---

---

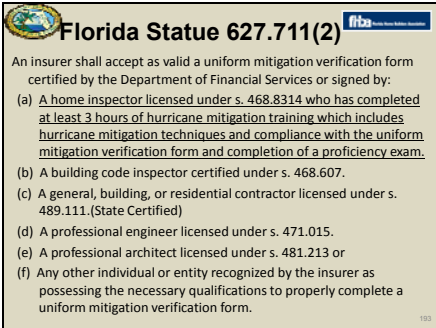
---

---

---

---

Slide 193



**Florida Statue 627.711(2)** **flba**

An insurer shall accept as valid a uniform mitigation verification form certified by the Department of Financial Services or signed by:

- (a) A home inspector licensed under s. 468.8314 who has completed at least 3 hours of hurricane mitigation training which includes hurricane mitigation techniques and compliance with the uniform mitigation verification form and completion of a proficiency exam.
- (b) A building code inspector certified under s. 468.607.
- (c) A general, building, or residential contractor licensed under s. 489.111. (State Certified)
- (d) A professional engineer licensed under s. 471.015.
- (e) A professional architect licensed under s. 481.213 or
- (f) Any other individual or entity recognized by the insurer as possessing the necessary qualifications to properly complete a uniform mitigation verification form.

---

---

---

---

---

---

---

---

---

---

Slide 194



**Done Deal...** **flba**

Individuals signing this form must have their license or certificate in an "Active" status at time of the inspection.

I, \_\_\_\_\_ am a qualified inspector and I personally performed the inspection or had my employee \_\_\_\_\_ perform the inspection and I agree to be responsible for his/her work.

Qualified Inspector Signature: \_\_\_\_\_  
An individual or entity who knowingly provides or utters a false or fraudulent mitigation verification form with the intent to obtain or receive a discount on an insurance policy to which the individual or entity is not entitled commits a misdemeanor of the first degree, punishable as provided in s. 775.10, Florida Statutes. The Qualified Inspector who certifies this form is strictly liable for all facts, statements, concealment of facts, omissions, and documentation provided by his or her employee who actually performed the inspection.

Inspectors Initials \_\_\_\_\_ Proper Address: \_\_\_\_\_

\*This verification form is valid up to five (5) years provided no material changes have been made to the structure. OIR-B1-1802 (Rev. 02/10) Adopted by Rule 690-170.0155 Page 4 of 4

**NOTE: Inspector MUST initial each page of this form.**

OIR-B1-1802 Rev. 02/10 Adopted by Rule 690-170.0155

---

---

---

---

---

---

---

---



---

---



# MITIGATION TECHNIQUES, INSPECTIONS AND DFS/OIR FORM B1-1802

Slide 195

 Form OIR-B1-1802 (Rev. 01/12) 

Individuals other than licensed contractors licensed under Section 489.111, Florida Statutes, or professional engineer licensed under Section 471.015, Florida Statutes, must inspect the structures personally and not through employees or other persons. Licensees under s.471.015 or s.489.111 may authorize a direct employee who possesses the requisite skill, knowledge, and experience to conduct a mitigation verification inspection.

I, \_\_\_\_\_ am a qualified inspector and I personally  
(print name)  
performed the inspection or (licensed contractors and professional engineers only) I had my employee (\_\_\_\_\_) perform  
(print name of inspector)  
the inspection and I agree to be responsible for his/her work.

Qualified Inspector Signature: \_\_\_\_\_ Date: \_\_\_\_\_

OIR-B1-1802 (rev. 01/12) 195

---

---

---

---

---

---



---

---

---

---

Slide 196

 Form OIR-B1-1802 (Rev. 01/12) 

An individual or entity who knowingly or through gross negligence provides a false or fraudulent mitigation verification form is subject to investigation by the Florida Division of Insurance Fraud and may be subject to administrative action by the appropriate licensing agency or to criminal prosecution. (Section 627.711(4)-(7), Florida Statutes) The Qualified Inspector who certifies this form shall be directly liable for the misconduct of employees as if the authorized mitigation inspector personally performed the inspection.

Homeowner to complete: I certify that the named Qualified Inspector or his or her employees did perform an inspection of the residence identified on this form and that proof of identification was provided to me or my Authorized Representative.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

An individual or entity who knowingly provides or utters a false or fraudulent mitigation verification form with the intent to obtain or receive a discount on an insurance premium to which the individual or entity is not entitled commits a misdemeanor of the first degree. (Section 627.711(7), Florida Statutes)

The definitions on this form are for inspection purposes only and cannot be used to certify any product or construction feature as offering protection from hurricanes.

---

---

---

---

---

---



---

---

---

---

Slide 197

 **A Final Note...** 

**Florida Statute 627.711**

**(3) An individual or entity who knowingly provides or utters a false or fraudulent mitigation verification form with the intent to obtain or receive a discount on an insurance premium to which the individual or entity is not entitled commits a misdemeanor of the first degree, punishable as provided in s. 775.082 or s. 775.083.**

197

---

---

---

---

---

---


---

---


---

---

Slide 201



**PART II  
QUESTIONS**



---

---

---

---

---

---

---

---

---

---

**Uniform Mitigation Verification Inspection Form**  
 Maintain a copy of this form and any documentation provided with the insurance policy

Inspection Date:	
Owner Information	Contact Person:
Owner Name:	Home Phone:
Address:	Work Phone:
City:	Cell Phone:
County:	Policy #:
Insurance Company:	Email:
Year of Home:	# of Stories:

NOTE: Any documentation used in validating the compliance or existence of each construction or mitigation attribute must accompany this form. At least one photograph must accompany this form to validate each attribute marked in questions 3 through 7. The insurer may ask additional questions regarding the mitigated feature(s) verified on this form.

- Building Code:** Was the structure built in compliance with the Florida Building Code (FBC 2001 or later) OR for homes located in the HVHZ (Miami-Dade or Broward counties), South Florida Building Code (SFB-C94)?
  - A. Built in compliance with the FBC. Year Built: \_\_\_\_ For homes built in 2002/2003 provide a permit application with a date after 3/1/2002; Building Permit Application Date (mm/dd/yyyy) \_\_\_\_/\_\_\_\_/\_\_\_\_.
  - B. For the HVHZ Only: Built in compliance with the SFB-C94; Year Built: \_\_\_\_ For homes built in 1994, 1995, and 1996 provide a permit application with a date after 9/1/1994; Building Permit Application Date (mm/dd/yyyy) \_\_\_\_/\_\_\_\_/\_\_\_\_.
  - C. Unknown or does not meet the requirements of Answer "A" or "B".
- Roof Covering:** Select all roof covering types in use. Provide the permit application date OR FBC/MDC Product Approval number OR Year of Original Installation/Replacement OR indicate that no information was available to verify compliance for each roof covering identified.
 

2.1 Roof Covering Type	Permit Application Date	FBC or MDC Product Approval #	Year of Original Installation or Replacement	Year of Installation or Replacement	Year of Original Installation or Replacement	Year of Installation or Replacement
<input type="checkbox"/> 1. Asphalt/Flt Shingle	_____	_____	_____	_____	_____	_____
<input type="checkbox"/> 2. Concrete/Tile	_____	_____	_____	_____	_____	_____
<input type="checkbox"/> 3. Metal	_____	_____	_____	_____	_____	_____
<input type="checkbox"/> 4. Slate/Tp	_____	_____	_____	_____	_____	_____
<input type="checkbox"/> 5. Membrane	_____	_____	_____	_____	_____	_____
<input type="checkbox"/> 6. Other _____	_____	_____	_____	_____	_____	_____

- Roof Deck Attachment:** What is the **WEAKEST** form of roof deck attachment?
  - A. Plywood/Oriented strand board (OSB) roof sheathing attached to the roof truss/rafter (spaced a maximum of 24" inches o.c.) by staples or 6d nails spaced at 6" along the edge and 12" in the field. -OR- Barton decking supporting wood shakes or wood shingles. -OR- Any system of screws, nails, adhesives, other deck fastening system or truss/rafter spacing that has an equivalent mean uplift resistance of at least 109 psf.
  - B. Plywood/OSB roof sheathing with a minimum thickness of 7/16 inch attached to the roof truss/rafter (spaced a maximum of 24" inches o.c.) by 8d common nails spaced a maximum of 12" inches in the field. -OR- Any system of screws, nails, adhesives, other deck fastening system or truss/rafter spacing that is shown to have an equivalent or greater resistance. 8d nails spaced a maximum of 12 inches in the field or has a mean uplift resistance of at least 109 psf.
  - C. Plywood/OSB roof sheathing with a minimum thickness of 7/16 inch attached to the roof truss/rafter (spaced a maximum of 24" inches o.c.) by 8d common nails spaced a maximum of 6" inches in the field. -OR- Dimensional Lumber/Tongue & Groove decking with a minimum of 2 nails per board (or 1 nail per board if such board is equal to or less than 6 inches in width). -OR- Any system of screws, nails, adhesives, other deck fastening system or truss/rafter spacing that is shown to have an equivalent or greater resistance of at least 109 psf.
  - D. No roof coverings meet the requirements of Answer "A", "B", or "C".

Inspectors Initials \_\_\_\_\_ Property Address \_\_\_\_\_  
 \*This verification form is valid for up to five (5) years provided no material changes have been made to the structure.  
 OIR-B1-1802 (Rev. 01/12) Adopted by Rule 690-170.0155 Page 1 of 4

greater resistance than 8d common nails spaced a maximum of 6 inches in the field or has a mean uplift resistance of at least 182 psf.

- Roof to Wall Attachment:** What is the **WEAKEST** roof to wall connection? (Do not include attachment of hip/valley jacks within 5 feet of the inside or outside corner of the roof in determination of WEAKEST type)
  - A. The Nails
    - Truss/rafter anchored to top plate of wall using nails driven at an angle through the truss/rafter and attached to the top plate of the wall, or
    - Metal connectors that do not meet the minimal conditions or requirements of B, C, or D
  - B. Clips
    - Metal connectors that do not wrap over the top of the truss/rafter, or
    - Metal connectors with a minimum of 1 strap that wraps over the top of the truss/rafter and does not meet the nail position requirements of C or D, but is secured with a minimum of 3 nails.
  - C. Single Wraps
    - Metal connectors consisting of a single strap that wraps over the top of the truss/rafter and is secured with a minimum of 2 nails on the front side and a minimum of 1 nail on the opposing side.
  - D. Double Wraps
    - Metal connectors consisting of 2 separate straps that are attached to the wall frame, or embedded in the bond beam, on either side of the truss/rafter where each strap wraps over the top of the truss/rafter and is secured with a minimum of 2 nails on the front side, and a minimum of 1 nail on the opposing side, or
    - Metal connectors consisting of a single strap that wraps over the top of the truss/rafter, is secured to the wall on both sides, and is secured to the top plate with a minimum of three nails on each side.
  - E. Structural
    - Anchor bolts structurally connected or reinforced concrete roof.
  - F. Other \_\_\_\_\_
  - G. Unknown or unidentified
  - H. No attic access

**Minimal conditions to qualify for categories B, C, or D. All visible metal connectors are:**

- Secured to truss/rafter with a minimum of three (3) nails, and
- Attached to the wall top plate of the wall framing, or embedded in the bond beam, with less than a 1/2" gap from the blocking or truss/rafter and blocked no more than 1.5" of the truss/rafter, and free of visible severe corrosion.

- Roof Geometry:** What is the roof shape? (Do not consider roofs of porches or carports that are attached only to the fascia or wall of the host structure over unenclosed space in the determination of roof perimeter or roof area for roof geometry classification).
  - A. Hip Roof
    - Hip roof with no other roof shapes greater than 10% of the total roof system perimeter.
    - Total length of non-hip features: \_\_\_\_\_ feet; Total roof system perimeter: \_\_\_\_\_ feet
    - Roof on a building with 5 or more units where at least 90% of the main roof area has a roof slope of less than 2:12. Roof area with slope less than 2:12 \_\_\_\_\_ sq ft; Total roof area \_\_\_\_\_ sq ft
  - B. Flat Roof
  - C. Other Roof
    - Any roof that does not qualify as either (A) or (B) above.

- Secondary Water Resistance (SWR):** (standard underlayment or hot-dipped felt do not qualify as an SWR)
  - A. SWR (also called Sealed Roof Deck): Self-adhering polymer modified-bitumen roofing underlayment applied directly to the sheathing or foam adhesive SWR barrier (not formed-on installation) applied as a supplemental means to protect the sheathing from water intrusion in the event of roof covering loss.
  - B. No SWR
  - C. Unknown or undetermined.

Inspectors Initials \_\_\_\_\_ Property Address \_\_\_\_\_  
 \*This verification form is valid for up to five (5) years provided no material changes have been made to the structure or inaccuracies found on the form.  
 OIR-B1-1802 (Rev. 01/12) Adopted by Rule 690-170.0155 Page 2 of 4

7. **Opening Protection:** What is the weakest form of wind borne debris protection installed on the structure? First, use the table to determine the weakest form of protection for each category of opening. Second, (a) check one answer below (A, B, C, N, or X) based upon the lowest protection level for ALL Glazed openings and (b) check the protection level for all Non-Glazed openings (1, 2, or 3) as applicable.

**Opening Protection Level Chart**

Place an "x" in each row to identify all forms of protection in use for each opening type. Check only one answer below (A thru X), based on the weakest form of protection (lowest row) for any of the Glazed openings and indicate the weakest form of protection (lowest row) for Non-Glazed openings.

N/A Not applicable; there are no openings of this type on the structure

	Glazed Openings	Non-Glazed Openings
	Windows or Entry Doors	Garage Doors
A	Verified cyclic pressure & large missile (4.9 lb for windows door/2 lb for skylights)	
B	Verified cyclic pressure & large missile (4.9 lb for windows door/2 lb for skylights)	
C	Verified plywood/OSB meeting Table 1609.12.2 of the IRC 2007	
D	Verified Non-Glazed Entry or Garage Doors indicating compliance with ASTM E 330, ANSI/ASMA 108, or FM 715 202 for wind pressure resistance	
E	Opening Protection products that appear to be A or B but are not verified	
N	Other protective coverings that cannot be identified as A, B, or C	
X	No Windborne Debris Protection	

**A. Exterior Openings Cyclic Pressure and 2-lb Large Missile (4.9 lb for skylights only)** All Glazed openings are protected at a minimum, with impact resistant coverings or products listed as wind borne debris protection devices in the product approval system of the State of Florida or Miami-Dade County and meet the requirements of one of the following for "Cyclic Pressure and Large Missile Impact" (Level A in the table above).

- Miami-Dade County PA 201, 202, and 203
- Florida Building Code Testing Application Standard (TAS) 201, 202, and 203
- American Society for Testing and Materials (ASTM) E 1886 and ASTM E 1996
- Southern Standards Technical Document (SSTD) 12
- For Skylights Only: ASTM E 1886 and ASTM E 1996
- For Garage Doors Only: ANSI/ASMA 115

**B. Exterior Openings Cyclic Pressure and 4 to 8-lb Large Missile (2.4 to 4.5 lb for skylights only)** All Glazed openings are protected, at a minimum, with impact resistant coverings or products listed as windborne debris protection devices in the product approval system of the State of Florida or Miami-Dade County and meet the requirements of one of the following for "Cyclic Pressure and Large Missile Impact" (Level B in the table above):

- ASTM E 1886 and ASTM E 1996 (Large Missile - 4.3 lb.)
- SSTD 12 (Large Missile - 4 lb. to 8 lb.)
- For Skylights Only: ASTM E 1886 and ASTM E 1996 (Large Missile - 2 to 4.5 lb.)

**C. Exterior Opening Protection - Wood Structural Panels meeting IRC 2007** All Glazed openings are covered with plywood/OSB meeting the requirements of Table 1609.12.2 of the IRC 2007 (Level C in the table above).

- C.1 All Non-Glazed openings classified as A, B, or C in the table above, or no Non-Glazed openings exist
- C.2 One or More Non-Glazed openings classified as Level D in the table above, and no Non-Glazed openings classified as Level N or X in the table above
- C.3 One or More Non-Glazed openings is classified as Level N or X in the table above

Inspectors Initial \_\_\_\_\_ Property Address \_\_\_\_\_  
 \*This verification form is valid for up to five (5) years provided no material changes have been made to the structure or inaccuracies found on the form.  
 OIR-B1-1802 (Rev. 01/12) Adopted by Rule 69C-170.0155

- N. Exterior Opening Protection (uncovered) All Glazed openings are protected with protective coverings not meeting the requirements of Answer "A", "B", or "C" or systems that appear to meet Answer "A", "B", or "C" with no documentation of compliance (Level N in the table above).
- N.1 All Non-Glazed openings classified as Level A, B, C, or N in the table above, or no Non-Glazed openings exist
- N.2 One or More Non-Glazed openings is classified as Level X in the table above, and no Non-Glazed openings classified as Level X in the table above
- N.3 One or More Non-Glazed openings is classified as Level X in the table above
- X. None or Some Glazed Openings One or more Glazed openings classified and Level X in the table above.

**MITIGATION INSPECTIONS MUST BE CERTIFIED BY A QUALIFIED INSPECTOR**  
 Section 627.71(2), Florida Statutes, provides a listing of individuals who may sign this form.

Qualified Inspector Name: \_\_\_\_\_ License Type: \_\_\_\_\_ Address: \_\_\_\_\_  
 Inspection Company: \_\_\_\_\_ Phone: \_\_\_\_\_

- Qualified Inspector - I hold an active license as:** (check one)
- Home inspector licensed under Section 468.83(4), Florida Statutes who has completed the statutory number of hours of hurricane mitigation training approved by the Construction Industry Licensing Board and completion of a proficiency exam.
  - Building code inspector certified under Section 468.607, Florida Statutes.
  - General, building or residential contractor licensed under Section 489.111, Florida Statutes.
  - Professional engineer licensed under Section 471.015, Florida Statutes.
  - Professional architect licensed under Section 481.215, Florida Statutes.
  - Any other individual or entity recognized by the insurer as possessing the necessary qualifications to properly complete a uniform mitigation verification form pursuant to Section 627.71(2), Florida Statutes.

Individuals other than licensed contractors licensed under Section 489.111, Florida Statutes, or professional engineer licensed under Section 471.015, Florida Statutes, must inspect the structures personally and not through employees or other persons. Licensees under s.471.015 or s.489.111 may authorize a direct employee who possesses the requisite skill, experience, and expertise to conduct a mitigation verification inspection.

I, \_\_\_\_\_ (print name) an a qualified inspector and I personally performed the inspection or licensed contractors and professional engineers only) I had my employee (\_\_\_\_\_) perform the inspection and I agree to be responsible for his/her work. (print name of inspector)

Qualified Inspector Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 An individual or entity who knowingly or through gross negligence provides a false or fraudulent mitigation verification form is subject to investigation by the Florida Division of Insurance Fraud and may be subject to administrative action by the appropriate licensing agency or criminal prosecution. (Section 627.71(4)(7), Florida Statutes). The Qualified Inspector who certifies this form shall be directly liable for the misconduct of employees as if the authorized mitigation inspector personally performed the inspection.

Homeowner to complete: I certify that the named Qualified Inspector or his or her employee did perform an inspection of the residence identified on this form and that proof of identification was provided to me or my Authorized Representative.  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_

An individual or entity who knowingly provides or offers a false or fraudulent mitigation verification form with the intent to obtain or receive a discount on an insurance premium to which the individual or entity is not entitled commits a misdemeanor of the first degree. (Section 627.71(1)(7), Florida Statutes)

The definitions on this form are for inspection purposes only and cannot be used to certify any product or construction feature as offering protection from hurricanes.

Inspectors Initial \_\_\_\_\_ Property Address \_\_\_\_\_  
 \*This verification form is valid for up to five (5) years provided no material changes have been made to the structure or inaccuracies found on the form.  
 OIR-B1-1802 (Rev. 01/12) Adopted by Rule 69C-170.0155