To: Cindy Walden
Subject: RE: OIR B1-1802 Recommendations

From: Darius Grimes [mailto:darius@disaster-smart.com]
Sent: Friday, July 08, 2011 4:47 PM
To: Michael Milnes; Cindy Walden
Cc: 'Bill York'
Subject: OIR B1-1802 Recommendations

Form is attached, due to the number of changes my I listed my comments below:

Purpose:

There were two versions of the form circulated during the last meeting with third being provided by me at the meeting. This is an major undertaking and any form that emerges from the process should be reviewed prior to adoption to make sure the language from all of the different forms and even my attached form is technically accurate and does not create conflicts with the statutes, rules, and interpretations that are likely to emerge in the field. I have tried over many long hours to merge the best of all the different version and include the best ideas from other stakeholders directly involved in this process. It is unlikely that we can get a form that everyone will agree with so I focused on producing a form that is easier to understand than the current form and includes many of the excellent ideas being circulated and yes even the constructive criticism from some. It should also be understood that as much as I know about a good portion the form purpose and what needs to be done I am not infallible and with a the high degree of technical knowledge required it is unlikely that any single person can create a perfect form or potentially avoid unintended errors as we saw with the last version of the form.

There are several underlying principles that should be observed with any form recommendation

1. The language needs to conform to the 4 C's Complete, Concise, Clear and Correct to avoid misinterpretation and potential legal challenges,
2. The form must communicate easily to the consumer, the inspector, and the underwriter to understand why a credit is or is not indicated and include relevant data points that more easily identify the feature that needs mitigation or update to qualify for a credit,
3. The form needs to avoid unnecessary collection of data that seeks to expand or conflict with language under the statutory requirements, unfairly preference products, systems, or assemblies with respect to compliance with the overall intent, but certainly should include the data points relevant to the conclusions with some guidance in navigating the most correct answer for the inspector and underwriter when adverse or unusual conditions are present.
4. The answers must not be expanded so that several answers can be defined form the same condition, e.g. Building Code prior to and Unknown or undetermined, this is in effect the same answer but the reaction of the market did create instances where on e or more carriers would not accept the form if unknown or undetermined was chosen, they clearly wanted correct answers. So while unknown or undetermined is useful, there is no service to either the carrier or the consumer when an inspector chooses this rather than a more obviously correct answer.
5. Vertical alignment, the form should use the same format throughout to make the checked boxes easy to identify without needing to read both right and left as well as up and down.

I am not convinced I have fully accomplished this and certainly I recommend another public hearing to review the final form prior to any move for adoption considering the number of changes we are considering. In addition, implementation of forms with this much change needs to be carefully considered and there should be a 60-90 waiting period after

adoption to allow the industry to re-tool in terms of performing the inspections, train inspectors and underwriters, and allow carriers to correctly map the answers back to their individual rate filings.

Suggested language for the NOTE:

Documentation can take many different forms, specifying a photo alone is not clear as to what may be required to support the inspector findings. In many cases especially in terms of permits, affidavits, product approvals, and engineering documents, the inspector may need to provide these either as attachments or they could simply photograph the documents. The change is intended to make it clear that documentation should be provided in whatever for the inspector chooses, this could be in the form of photos.

1. Section 1 Building Code:
   The primary purpose of this section is to identify whether or not a home qualifies for a building code credit. The are several data points that are critical to this especially year built. This information is easily obtained from public records but in the case of homes built around code changes more specific data is needed, it requires the permit application date to determine this. For this reason we included the new data points recommended by ARA but refined the answers to eliminate previous confusion and more correctly identify the correct answers.

2. Roof Covering
   In the two page version of the form we simply asked if the roof was FBC 2001 or newer, this was too little detail. In the current form we expanded the section to be more specific, unfortunately we were too specific and arbitrarily deleted consideration for other roof types that also met the intent for mitigation credits. The changes recommended here have a specific purpose, to eliminate the ambiguous and subjective term "Predominant" and to indicate all roof types in use with the ability to document the compliance of each. Since all carrier require elevation photos of the structure, anyone that wants to use predominance can, any carrier that wants to be more specific concerning a non-compliant roof that that could be less than predominate but comprise a major part of the main roof structure and could contribute to a substantial claim, also has the option to consider this. From an inspection standpoint, we are there only to document the existing features, since the roof is the major cause of claims, all roof covering in use should be mitigated or in compliance with the mitigation measures outlined in the study.

3. Roof Decking
   This section has remained pretty much unchanged in all of the previous rule hearings, probably because it is well written and easy to verify and comply with the variables for compliance including an engineering calculation to determine uplift. The suggestions we have seen thus far only serve to complicate this section further or reduce it to a matter of data points that is suggesting an attached table or formula that would expand the form to include other attachments. All of the suggestions we have seen fail to significantly improve the language already in use, no recommendations are made. Every carrier in the state including both admitted and non-admitted requires photos of the nail length/type, and the spacing of the fasteners , there is no reason to add this detail to the form.

4. Roof to Wall
   The only real changes made here are to the language of sections thru D, here are the specifics:
   - Answer A we added language to help the inspector navigate to this answer when a clip has less than three nails.
   - Answer B we added the requirement for 3 nails and eliminated the wording about double sided clips this was confusing, we also no direct the inspector to use this answer for straps defined as non-wrap that are free from severe corrosion and are properly aligned to the truss/rafter or blocking. This is helpful in determining the correct answer to use in unusual conditions when they do not easily meet a specific definition.
   - Answer C and D We clarified the need for at least 2 nails on one side and one on the opposite side with a minimum of three nails. The previous language was subjective and unclear in how to address straps that

had less than 3 nails on one side but did have a and one on the opposing side. Based on recent testing by Simpson Strong-Tie a 2 and 1 configuration is adequate to achieve the credit for this section. In addition we added language specific tot eh proper alignment of the connectors and addressed sever corrosion. Poorly applied connectors or severe corrosion left the inspector no choice in the previous version, the new language instructs them to use other to define conditions for connectors that fall into this category.

5. Roof Geometry
   The current form eliminated most of the arguments about the definition of a "major wall" and has made the inspection process easier to select the correct answer. One major problem was in identifying single family homes as FLAT when the this condition is not included in the LRS, Hip or Non-Hip are the correct answers. Flat does have significance in multi-family structures and since the current for is the only state approved form for these conditions we leave the definition but clarify the conditions for a flat roof and specify that it is only intended for multi family structures.

6. Sealed Roof Deck
   The only major change is to change the name of this section to reflect new terminology being used to classify this as something additional to traditional hot mops or felt papers. The need for this was underscored by the public comments from the Roofing and Sheet Metal Manufacturers Association in suggesting that the current terminology was confusing to the industry since it mimicked the code language calling for Secondary Water Barrier.

7. Opening Protection
   We struggled with the recommendations by ARA, while we like the format the navigation of the section to map credits proved to be a difficult endeavor, what we need is answers that speak directly to the overall protection level of the openings. I did attempt to create version that incorporated the table as a data point system to support the proper selection of the answers but ran out of time to get this done to my satisfaction. Instead we recommend compressing the current version which does make the section more navigable and is based solely on the study language for ALL or ALL Glazed openings. A major confusion point in the current version is that somehow the bullets got changed into check boxes besides the standards, this confused the industry into thinking that they needed to check boxes in several sections, we remedied this by returning these too bullets. We also eliminated some of the redundancy in answers by grouping them and adding check boxes to indicate ALL or ALL Glazed.

Certainly we would like to have time to continue to improve the form and would support another meeting to take the best forms you receive so we can help to craft a final form for adoption. Thank you for your assistance In providing support and helping us through the legal specifics needed to fully understand the mission in changing the form within the statute, this is an important part of the process.

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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:

NOTE: Provide documentation used in validating the compliance or existence of each visible and accessible construction or mitigation attribute. Your insurer may ask additional questions regarding your mitigated feature/s.

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, South Florida Building Code (SFBC-94)?

Building Permit Application Date MM/DD/YYYY ____/____/_____ or Year Built YYYY _____

- ☐ A. For the HVHZ Only- Meets the SFBC or has a permit application date after 9/1/1994
- ☐ B. Meets the FBC or has a permit application date after 3/1/2002
- ☐ C. Does not meet the requirements of Answer "A" or "B"
- ☐ D. Unknown or unable to determine compliance or no building permit was available.

2. **Roof Covering:** Select all roof covering types in use. Provide the permit application date or FBC/MDC Product Approval number, or indicate that no documentation was available to verify compliance.

2.1 Roof Cover Type:	Permit Application Date	FBC or MDC Approval	No Documentation
☐ 1. Asphalt/Fiberglass Shingle	____/____/_____	_____	____
☐ 2. Concrete/Clay Tile	____/____/_____	_____	____
☐ 3. Metal	____/____/_____	_____	____
☐ 4. Built Up	____/____/_____	_____	____
☐ 5. Membrane	____/____/_____	_____	____
☐ 6. Other_____	____/____/_____	_____	____

- ☐ A. All roof coverings listed above meet the FBC or SFBC and have a Miami-Dade NOA or FBC Product Approval listing current at time of installation OR a have a roofing permit application date later than March 1, 2002 (for the HVHZ only, a roofing permit application after 9/1/1994).
- ☐ B. One or more roof coverings do not meet the requirements of Answer "A".
- ☐ C. No roof coverings meet the requirements of Answer "A".

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 55 psf.
- ☐ B. 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 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.

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- ☐ 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 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 unidentified.
- ☐ G. No attic access.

4. **Roof to Wall Attachment:** What is the **WEAKEST** roof to wall connection? (Definition: "on every truss/rafter" excludes hip/valley jacks within 5 feet of the inside or outside corner of the roof.)

- ☐ 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 OR any type of Clip that does not meet the definitions for Answer B.
- ☐ B. Clips: (Metal attachments including clips or non-wrap straps) on every rafter/truss that are nailed with a minimum of three nails to at least one side of the rafter/truss and attached to the top plate of the frame wall or embedded in the bond beam. This includes single wraps or other type of attachments that have a minimum of three nails but do not meet the conditions for "C" or "D" and are properly aligned to the truss rafter or blocking and free of severe corrosion (flaky red rust).
- ☐ C. Single Wraps Metal Straps must be secured to every rafter/truss with a minimum of 3 nails, 2 nails on one side wrapping over and secured 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 frame or embedded in the bond beam in at least one place. For conditions where placement of the wrap is greater than ¼ inch from the blocking or the truss/rafter OR where the blocking is greater than 1.5 inches Or where severe corrosion (flaky red rust) is present use Answer F.
- ☐ D. Double Wraps: Both Metal Straps must be individually secured to every rafter/truss with a minimum of 3 nails, 2 nails on one side wrapping over and secured to the opposite side of the rafter/truss with a minimum of 1 nail. Each Strap must be embedded in the bond beam or attached to the top plate of the wall in at least one place. For conditions where placement of the wrap is greater than ¼ inch from the blocking or the truss/rafter OR where the blocking is greater than 1.5 inches OR where severe corrosion (flaky red rust) is present use Answer F.
- ☐ E. Structural: Anchor bolts structurally connected or reinforced concrete roof.
- ☐ F. Other: _____
- ☐ G. Unknown or Unidentified
- ☐ H. No attic access

5. **Roof Geometry:** What is the roof shape(s)? (Porches or carports that are attached only to the fascia or wall of the host structure and not structurally connected to the main roof system are not considered in the roof geometry determination.)

- ☐ A. Hip Roof: Hip roof and has no other roof shapes greater than 10% of the total roof perimeter.
  Total length of Non-Hip features: _____, feet. Total roof perimeter: _____ feet.
- ☐ B. Non-Hip Roof: Any other roof shape or combination of roof shapes including hip, gable, gambrel, mansard, flat and other roof shapes greater than 10% of the total roof perimeter. (for flat roofs on multi-family structures see Answer "C")
- ☐ C. Flat Roof: Roof shape on a multi-family homes where at least 90% of the total roof area has a slope of less than 2:12
  Roof areas with slope less than 2:12: _____, sq ft. Total roof area: _____ sq ft.

6. **Sealed Roof Deck (SRD):** (standard underlayment's or hot mopped felts do not qualify as an SRD)

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

7. **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.) Check only one answer based upon the opening or openings with the weakest for of protection as identified below.

Inspectors Initials _____ Property Address_____

A. Exterior Openings Cyclic Pressure and 9-lb Large Missile

☐ A.1 All Exterior Openings

☐ A.2 All Glazed 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 marked *"For Use in the HVHZ"*.

- 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/E 1996
- For Garage Doors Only: ANSI/DASMA 115

B. Exterior Openings Cyclic Pressure and 4 to 8-lb Large Missile (2-4.5 lbs for skylights only)

☐ B.1 All Exterior Openings

☐ B.2 All Glazed 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.)

C. Exterior Openings (Cyclic Pressure and Small Missile)

☐ C.1 All Exterior Openings

☐ C.2 All Glazed 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 Small Missile Impact":

- Miami-Dade County NOA 201, 202 **and** 203. (Small Missile – 2grams)
- Florida Building Code TAS 201, 202 **and** 203. (Small Missile – 2 grams)
- ASTM E 1886 **and** ASTM E 1996 (Small Missile – 2 grams)
- SSTD 12 (Small Missile – 2 grams)

D. Exterior Openings (unverified shutter systems with no documentation)

☐ D.1 All Exterior Openings

☐ D.2 All Glazed Openings

Are fully protected with windborne debris protection devices that cannot be identified as Miami-Dade or Florida Building Code (FBC) product approved. This does not include plywood/OSB or plywood alternatives (see Answer 7.6 "A" or "B").

E. Exterior openings (Wood Structural Panels)

☐ E.1 All Exterior Openings

☐ E.2 All Glazed Openings

Are covered with plywood/OSB meeting the requirements of Section 1609 and Table 1609.1.4 of the 2004 FBC (with 2006 supplements).

F. None or Some Glazed Openings

☐ F.1 At least one glazed exterior opening does not have wind-borne debris protection. This includes plywood/OSB or plywood alternative systems that do not meet Answer 7.5 "A" or B".

☐ F.2 No glazed exterior openings have wind-borne debris protection. This includes plywood/OSB or plywood alternative systems that do not meet Answer 7.5 "A" or B".

☐ G. Unknown or undetermined.

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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 Certificate #:
Inspection 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.

Individuals other than licensed contractors licensed under Section 489.111, Florida Statutes, or professional engineer licensed under Section 471.015, Florida Statues, 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 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) **(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 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 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 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.

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