



August 7, 2007

Mo Madani, Planning Manager
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

BY HAND DELIVERY

Re: Rule Workshop Proposed Rule 9B-3.0475, Mitigation Retrofits Required,
Florida Administrative Weekly, Volume 33, Number 30, July 27, 2007,
Page 3324

Dear Mo:

We respect, appreciate, and support the need to address mitigation of existing structures in Florida. On behalf of the roofing industry, Florida Roofing, Sheet Metal and Air Conditioning Contractors Association (FRSA) has promoted strong standards for roofing since 1922, and we think it is unfortunate that Florida is in the position of needing to adopt mitigation provisions.

Based on our experience (not speculation, but experience), one of the most important reasons Florida is now in need of adopting mitigation provisions is because of lack of attention paid to enforcement of both licensing and construction standards in the last 30 or so years. While these problems still exist at unacceptable levels, we know it can be worse.

The cost for roofing is already very high (costs for materials, employee expense, insurance, fuel, etc. have increased a lot in recent years). The requirements imposed by HB 7057 will make the cost even higher, and FRSA is concerned that the changes were adopted without enough consideration of the price breaking point for the consumer. It is naïve to take the position that, since the law requires something, people will simply do it as is required by law. In the experience of the roofing and other construction industries, when consumers reach the point beyond their ability or willingness to pay, they resort to the use of unlicensed contractors and purchasing unpermitted repairs and replacements. In fact, a significant portion of storm damage attributable to poor construction stems from improper work over many years, rather than insufficient code standards.

It is very difficult for state and local enforcement officials to prevent these problems (these violations are moving targets). Short of one-on-one matching of personnel, no one expects the government to be able to stop these practices. However, it is a problem when the government creates or furthers the incentive for the consumer to resort to these practices. Regardless of any philosophical debate, the practical effect could be that the very law that was intended to make things stronger could actually serve to reduce the quality of construction. Strong building codes are important, but this must be balanced with cost and what the market (the consumer) will pay.

We are very concerned that merely imposing greater requirements on Florida's property owners (who are already stretched thin by astronomical increases in property insurance costs and property taxes) will lead to even higher levels of use of unlicensed contractors (almost all of whom are also unqualified or they would be licensed) to perform work without the required permits which is what serves to ensure compliance with the Florida Building Code. Not only would this make mitigation efforts a failure, it is also likely to bring construction in Florida to levels even lower than what exists and has existed that prompted the need for mitigation requirements. We urge the Florida Building Commission and all others involved to be particularly aware of this very real unintended consequence. It is not a matter of "if" it happens - it is a matter of how much worse the problem becomes, and that will be determined in part by whether or not careful attention is given to adoption of requirements for mitigation.

We are also concerned that the changes imposed by HB 7057 will allow the insurance industry to deny or eliminate premium credits (because these provisions now become minimum code requirements, rather than additional steps worthy of a premium credit). While this is not our direct concern, these questions are posed to us by our customers, and we would like for the insurance industry to take the appropriate level of responsibility by providing the information needed so that we can inform our customers at the time they are trying to make a decision about repairs and improvements. We do think information about the effects of mitigation requirements on premium credits needs to be developed and made available contemporaneously with adopting the mitigation building code requirements. In addition, we hope that, with the adoption of these mitigation requirements, property insurance rates will be reduced enough to meaningfully offset the added mitigation expenses for the consumer.

We also urge that life safety and other considerations are not ignored while considering measures that are designed to protect against storm damage. For instance, a product or method that nearly guarantees a roof will stay on during the worst known storm may cause improper retention of moisture and create rot during the rest of the year (or years) and significantly reduce the life of a roof. We understand that is of no concern or consequence to the insurance industry, but it is of crucial importance to the consumer. Mitigation is important, but it needs to be balanced with other considerations, and we urge the Florida Building Commission to be concerned first and foremost with the consumer, rather than any commercial special interest group.

Finally, there is much mitigation information in circulation that is based on theory, anecdotal information, and guesses. This is important, but it should not be what is used exclusively. While it may be useful for an option or information, the adoption of standards for which there is not enough data based on application and experience is a mistake. Wherever possible, any decision to create or make a change in a standard should be based on scientific findings, rather than speculation or limited conclusions.

HURRICANE MITIGATION RETROFITS FOR EXISTING SITE-BUILT SINGLE FAMILY RESIDENTIAL STRUCTURES

The reference in the proposed rule to "section 553.884" should be "section 553.844" to be correct.

STRENGTHENING OR CORRECTING ROOF-DECKING ATTACHMENTS AND FASTENERS DURING REROOFING (section 553.844(2)(b)4., Florida Statutes)

(2) The Florida Building Commission shall:

(b) Develop and adopt within the Florida Building Code a means to incorporate recognized mitigation techniques for site built, single-family residential structures constructed prior to the implementation of the Florida Building Code, including, but not limited to:

4. Strengthening or correcting roof-decking attachments and fasteners during reroofing;

Proposed alternate rule language:

For proposed section 201.1 Roof sheathing fastening for site-built single family residential structures, we propose that all the drafted language be deleted and replaced with:

201.1 Roof sheathing fastening for site-built single family residential structures. Roof sheathing shall be fastened to meet the requirements of chapters 16 and 23 of the Florida Building Code-Building.

In addition, we propose that the following be added (at the appropriate time) to chapter 15 of the Florida Building Code – Building:

1510.1.1 Roof sheathing shall be fastened to meet the requirements of chapters 16 and 23 of the Florida Building Code-Building.

Concerns about language as proposed:

- It is unnecessarily complicated and, for no needed reason, sets up varying standards that will create confusion and may ultimately serve to prevent achieving the desired goal. Since the requirement expressed in HB 7057 is to do what is already described and set out in the Florida Building Code for new construction, FRSA recommends that the rule provision say the same thing as the Florida Building Code and/or references existing provisions of the Florida Building Code. No risk of creating differing standards should be taken, but rather steps should be taken to make sure that the rule language is consistent with code requirements for new construction.

Cost considerations:

- Estimated cost to ADD reroofing of the deck ranges from \$60.00 to \$70.00 per 100s/f.

SECONDARY WATER BARRIERS FOR ROOFS AND STANDARDS RELATING TO SECONDARY WATER BARRIERS (section 553.844(2)(b)2., Florida Statutes)

(2) The Florida Building Commission shall:

(b) Develop and adopt within the Florida Building Code a means to incorporate recognized mitigation techniques for site built, single-family residential structures constructed prior to the implementation of the Florida Building Code, including, but not limited to:

2. Secondary water barriers for roofs and standards relating to secondary water barriers. The criteria may include, but need not be limited to, roof shape, slope, and composition of all elements of the roof system;

Proposed amendments to proposed language: (proposed additions are double-underlined and in *italics*; proposed deletions are ~~stricken through~~)

201.2 Roof secondary water barrier for site-built single family residential structures. A secondary water barrier shall be installed using one of the following methods ~~when roofing~~

replacement when reroofing, and all materials used must meet the requirements of FBC's product approval system for wind driven rain and wind uplift resistance.

- a) All joints in roof sheathing or decking shall be covered with a minimum 4 in. wide strip of adhered approved membrane self-adhering polymer modified bitumen tape applied directly to the sheathing or decking. The deck and self-adhering polymer modified bitumen tape shall be covered with one of the underlayment systems approved for the particular roof covering to be applied to the roof
- b) The entire roof deck shall be covered with an approved adhered membrane self-adhering polymer modified bitumen cap sheet. No additional underlayment shall be required on top of this cap sheet for new installations.
- c) The entire roof deck shall be covered with a mechanically attached approved membrane.
- d) All joints in the roof sheathing shall be sealed with an approved sealant.
- e) All joints in the roof sheathing shall be sealed with an approved sealant; the entire roof shall then be covered with an approved coating.

EXCEPTIONS:

- 1. An asphalt impregnated 30# felt underlayment installed with nails and tin tabs as required for the HVHZ and covered with either an approved self-adhering polymer modified bitumen cap sheet or an approved cap sheet applied using an approved hot mop application shall be deemed to meet the requirements for the secondary water barrier.

Concerns about language as proposed:

- As drafted, the provision is too product and method specific to allow for other means of accomplishing the legislative mandate. The legislation calls for standards as well as criteria, but the proposed language appears to focus only on one or two possible products or methods.
- The proposed rule language fails to take into account that standards for reroofing need to be more flexible than what may be required for new construction. With repair and retrofitting, you take the structure as you find it, and requirements to be imposed that are too specific as to product or method run the risk of making the improvement(s) impossible to perform.
- The products or methods proposed have potential flaws in application such that the mandated secondary water barrier may not be achieved. There are other products and methods that will provide the desired secondary water barrier that are also likely to provide solutions for the flaws that accompany the proposed products or methods.
- The proposed rule language appears to articulate what some set of persons or groups believe will actually achieve a secondary water barrier, but it would be better to avoid assumptions and require that the product or method meet product approval and test requirements to ensure that what is being adopted is more than theory or perception.
- FRSA supports rule language that will focus on standards and criteria for several reasons:
 - A. This will allow greater flexibility for use of differing products and methods for greater selection designed to work best with any roof system.

B. This will allow use of existing means that provide a better secondary water barrier than what is described in the proposed rule (prevent setting a minimum and possibly flawed standard as the only method of compliance).

C. This will allow and encourage development and improvements in technology for secondary water barriers (because the approved products and methods are not tied only to a limited number of products or methods available at the time of adoption of the rule).

D. This will allow design and construction professionals and manufacturers to make adjustments to ensure achieving a secondary water barrier without need for amending the rule.

E. Standards and criteria should help prevent price increases that too often result from code specifications that are unnecessarily specific such that only one or two manufacturers can meet the requirements.

Practical considerations:

- With the use of "peel and stick," there will be a problem with "back lap" on horizontal applications. Good roofing practice says that any application that leaves a joining edge facing up will increase the likelihood of water intrusion.

- It should be the case that a secondary water barrier that meets all the requirements for a primary water barrier is acceptable. The proposed rule language does not allow that (does not appear to even contemplate that).

- The proposed rule language fails to take into account details that would be included in manufacturer's specifications such as condition of the surface in preparation for application (free of ALL debris, completely dry, etc.). If the rule language controls, this will be a significant oversight.

Cost considerations:

- Estimated cost for "peel and stick" as described in the proposed rule is \$130.00 per square.

Other considerations/concerns:

- While the legislation relates to hurricane mitigation, other concerns need to be taken into account, including whether products that can meet the mitigation requirements will also be capable of meeting fire rating and other requirements. (Reference: section 553.844(2)(a) that states: "analyze the extent to which a proposed Florida Building Code provision will mitigate property damage to buildings and their contents in evaluating that proposal. If the nature of the proposed Florida Building Code provision relates only to mitigation of property damage and not to a life safety concern, the proposal shall be reviewed based on its measurable benefits in relation to the costs imposed." FRSA is not exactly sure what this provision says, but we do know that it would be absurd to adopt a mitigation provision that violates minimum life safety requirements.)

- Manufacturer specifications will be crucial to ensure that the legislative mandates will actually be achieved. For example, the use of a particular "peel and stick" will not adhere to certain surfaces without taking one or more additional steps. In some cases, a required additional step will cause a violation of the proposed rule language "applied directly to the sheathing or decking," creating an unacceptable catch-22. This type of conflict needs to be accounted for and specific rule language is not the best way to do it (unless the rule includes very detailed requirements and specifications for every single type of secondary water barrier and every detail associated with it).

- Nothing in the proposed rule as drafted is consistent with what is required in the HVHZ, and this creates a curious double standard for the State of Florida.

PRESCRIPTIVE TECHNIQUES FOR IMPROVEMENT OF ROOF-TO-WALL CONNECTIONS (section 553.844(2)(b)3., Florida Statutes)

(2) The Florida Building Commission shall:

(b) Develop and adopt within the Florida Building Code a means to incorporate recognized mitigation techniques for site built, single-family residential structures constructed prior to the implementation of the Florida Building Code, including, but not limited to:

3. Prescriptive techniques for improvement of roof-to-wall connections. The Legislature recognizes that the cost of retrofitting existing buildings to meet the code requirements for new construction in this regard may exceed the practical benefit to be attained. The Legislature intends for the commission to provide for the integration of alternate, lower cost means that may be employed to retrofit existing buildings that are not otherwise required to comply with the requirements of the Florida Building Code for new construction so that the cost of such improvements does not exceed approximately 15 percent of the cost of reroofing;

Proposed rule language (for reference):

201.3 Roof-to-wall connections for site-built single family residential structures. Where required by Section 511.4, the intersection of roof framing with the wall below shall be strengthened by adding metal connectors, clips, straps, and fasteners such that the performance level equals or exceeds the uplift capacities as specified in Table 201.3. As an alternative to an engineered design, the prescriptive retrofit solutions provided in Sections 201.3.1 through 201.3.4 shall be accepted as meeting the mandated roof-to-wall retrofit requirements.

201.3.1 Prescriptive method for gable roofs on a wood frame wall. Sufficient eave sheathing shall be removed to expose a minimum of 6-feet of framing members, measured from the corner, along the exterior wall on each side of each gable end. The anchorage of each of the exposed rafters or truss shall be inspected. Wherever a strap is missing or an existing strap has fewer than four fasteners on each end, approved straps, ties or right angle gusset brackets with a minimum uplift capacity of 500 lbs shall be installed that connect each rafter or truss to the top plate below. Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. Wherever access makes it possible (without damage of the wall or soffit finishes), both top plate members shall be connected to the stud below using a stud to plate connector with a minimum uplift capacity of 500 lbs.

201.3.2 Prescriptive method for gable roofs on a masonry wall. Sufficient eave sheathing shall be removed to expose a minimum of 6-feet of framing members, measured from the corner, along the exterior wall on each side of each gable end. The anchorage of each of the exposed rafters or truss shall be inspected. Wherever a strap is missing or an existing strap has fewer than four fasteners on each end, approved straps, ties or right angle gusset brackets with a minimum uplift capacity of 500 lbs shall be installed that connect each rafter or truss to the top plate below or directly to the masonry wall using approved masonry screws that will provide at least a 2-1/2 embedment into the concrete or masonry. When the straps or right angle gusset brackets are attached to a wood sill plate, the sill plate shall be anchored to the concrete masonry wall below. This anchorage shall be accomplished by installing 1/4-inch diameter masonry screws, each with supplementary 1/4-inch washer, having sufficient length to develop a 2-1/2 inch embedment into the concrete and masonry. These screws

shall be installed within 4-inches of the truss or rafter on both sides of each interior rafter or truss and on the accessible wall side of the gable end truss or rafter.

201.3.3 Prescriptive method for hip roofs on a wood frame wall. Sufficient corner eave sheathing shall be removed from the side of the hip ridge parallel to the roof ridge to provide access to a minimum 6-foot length of the exterior wall. The hip ridge board and any exposed rafters that are not anchored with a strap having at least four fasteners on each end, shall be connected to the top plate below using a strap or a right angle gusset bracket having a minimum uplift capacity of 500 lbs. Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. Wherever access makes it possible (without damage of the wall or soffit finishes), both top plate members shall be connected to the stud below using a stud to plate connector with a minimum uplift capacity of 500 lbs.

201.3.4 Prescriptive method for hip roofs on a masonry wall. Sufficient corner eave sheathing shall be removed from the side of the hip ridge parallel to the roof ridge to provide access to a minimum 6-foot length of the exterior wall. The hip ridge board and any exposed rafters that are not anchored with a strap having at least four fasteners on each end, shall be connected to the concrete masonry wall below using approved straps or right angle gusset brackets with a minimum uplift capacity of 500 lbs. Adding fasteners to existing straps shall be allowed in lieu of adding a new strap provided the strap is manufactured to accommodate at least 4 fasteners at each end. The straps or right angle gusset brackets shall be installed such that they connect each rafter or truss to the top plate below or directly to the masonry wall using approved masonry screws that will provide at least a 2-1/2 embedment into the concrete or masonry. When the straps or right angle gusset brackets are attached to a wood sill plate, the sill plate shall be anchored to the concrete masonry wall below. This anchorage shall be accomplished by installing 1/4-inch diameter masonry screws, each with supplementary 1/4-inch washer, with sufficient length to develop a 2-1/2 inch embedment into the concrete and masonry. These screws shall be installed within 4-inches of the truss or rafter on both sides of each interior rafter or truss and on the accessible wall side of the gable end truss or rafter.

201.3.5 Priorities for mandated roof-to-wall retrofit expenditures. For houses with both hip and gable roof ends, the priority shall be to retrofit the gable end roof-to-wall connections unless the width of the hip end is more than 1.5 times greater than the width of the gable end. Priority shall be given to connecting the corners of roofs to walls below where the spans of the roofing members are greatest.

Practical and cost considerations:

- FRSA believes interpretation or clarification is needed in order to ensure that section 553.844(2)(b)3., Florida Statutes, can be understood by consumers and contractors. We have the following questions:

Question: With the proposed rule language in proposed 201.3.5 (stated above), is the Florida Building Commission applying the estimated 15 percent to gable end bracing requirements as well as roof-to-wall connections? If so, please provide the reference to section 553.844, Florida Statutes, that allows or requires that.

Question: If the cost of improvements, even if for roof ends only, well exceeds 15 percent of the cost of reroofing, is the consumer or contractor required to select a portion of the area and improve that only? For example, if a residence has four roof ends and the total cost to improve all four would be 20 percent of the total cost of reroofing, should the consumer do two or three (if the associated cost can be attributed evenly to each roof end)?

If so, how does the consumer or the contractor select which two or three should be improved?

Question: Is the quoted provision intended to apply the estimated 15 percent to the actual roof-to-wall connection improvement or to all the required work associated with getting from the point of needing reroofing and making the needed determination of what would constitute a roof-to-wall connection improvement for that particular structure?

Question: If the cost to determine what the particular structure needs for a roof-to-wall connection improvement is more than the target of approximately 15 percent, will the consumer be in compliance with the law if he or she contracts for work to be performed up to the point of determination of the needed roof-to-wall connection improvements without actually making the improvements?

Question: If the Florida Building Commission cannot answer any of these questions, does it have a recommendation on where to obtain the answers so that consumers and contractors will have some level of certainty that their good faith efforts will not later be found in violation of law or used to invalidate an insurance claim?

FRSA members would like to avoid being in the position of having to tell customers that, even though the law intends the additional cost to the consumer to be limited to approximately 15 percent of the cost of reroofing, actual compliance may require spending 30 to 50 percent more than the cost of reroofing.

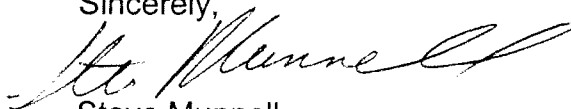
Other considerations:

- The prescriptive methods in proposed sections 201.3.1, 201.3.2, 201.3.3, and 201.3.4 (stated above), all require the removal of sufficient eave sheathing to provide access for a minimum 6-foot length of framing member or exterior wall. This is good but expensive practice where the cost and responsibility does not end with removal. Once removed, the contractor must make provisions for protecting the open space until such time as it can be determined what improvements are needed and/or the work is completed. Complicating the issue of cost is the fact that the work and inspection under these provisions cross two scopes of work for licensure purposes, and this will likely necessitate engaging the services of additional contractors. That is likely to add time and expense to these requirements. This concern is encompassed in our question above relating to the expense of meeting these requirements.

- It is not clear to FRSA that the proposed prescriptive methods will cover all possible conditions that could be encountered in reroofing an existing structure, and we believe it should be acknowledged that, in some cases, the services of an engineer will be required to properly comply with the law and rules. In addition to added time, this will also be a factor in added expense to the consumer.

We appreciate your time and will be happy to offer any assistance, provide any additional information that will be helpful, or answer any questions.

Sincerely,



Steve Munnell
Executive Director

cc: The Honorable Bill Posey, Florida Senate
The Honorable Trey Traviesa, Florida House of Representatives
The Honorable Kevin McCarty, Insurance Commission
Mr. Brian Diffenbaugh, Staff Director, Senate Banking and Insurance Committee