

Proposed Modification to the Florida Building Code

Modification #:

Section 553.73, Fla Stat

Name: Dan Arlington
St. Johns County Building Department

Address: 4040 Lewis Speedway Road, St. Augustine, Florida 32084
E-mail: darlington@sjcfl.us
Phone: 904-827-6834
Fax: 904-827-6849
Code: Florida Building Code-Building (2007)

Section #: 1609.4.3

Text of Modification [additions underlined; deletions stricken]:

1609.4.3 Exposure categories. An exposure category shall be determined in accordance with the following:

Exposure B. Exposure B shall apply where the ground surface roughness condition, as defined by Surface Roughness B, prevails in the upwind direction for a distance of at least 2,600 feet (792 m) or 20 times the height of the building, whichever is greater.

Exception: For buildings whose mean roof height is less than or equal to 30 feet (9144 mm), the upwind distance is permitted to be reduced to 1,500 feet (457 m).

Exposure C. Open terrain with scattered obstructions, including surface undulations or other irregularities, having heights generally less than 30 feet (9144 mm) extending more than 1,500 feet (457.2 m) from the building site in any quadrant. This exposure shall also apply to any building located within Exposure B-type terrain where the building is within 100 feet horizontally in any direction of open areas of Exposure C-type terrain that extends more than 600 feet (182.9 m) and width greater than 150 ft. in the upwind direction. Short-term (less than two year) changes in the pre-existing terrain exposure, for the purposes of development, shall not be considered open fields. Where development buildout will occur within three years and the resultant condition will meet the definition of Exposure B, Exposure B shall be regulating for the purpose of permitting. This category includes flat open country, grasslands and ocean or gulf shorelines and shall extend downwind for a distance of 1500 feet. For buildings located within a distance of 600 feet of inland bodies of water that present a fetch of 1 mile (1.61 km) or more or inland waterways or rivers with a width of 1 mile (1.61 km) or more roof sheathing uplift and roof-to-wall ~~uplift~~ connection loads shall be increased by 20 percent.

Amendment
DCAP-DEC-194
FILING AND ACKNOWLEDGEMENT
FILED, on this date, with the designated
Clerk, receipt of which is hereby
acknowledged.
Paula P. Ford
Paula P. Ford
Commission Clerk
Date *7/24/08*

Exposure D. This exposure category is not applicable in Florida.

Fiscal Impact Statement [Provide documentation of the costs and benefits of the proposed modifications to the code for each of the following entities. Cost data should be accompanied by a list of assumptions and supporting documentation. Explain expected benefits.]:

A. Impact to local entity relative to enforcement of code:

This proposed code change reinstates the original code change language, proposed by Dr. Jeff Stone (Modification # 2660-Revised). The original language addressed recent research relative to wind loads on buildings sited near open bodies of inland waters; specifically two (2) unconnected areas, the roof sheathing uplift fasteners and the roof-to-wall connections. Sometime in the revision process, the word "uplift" was substituted for the word "connection". Uplift loads are typically viewed as continuous and carried to the building foundation. Dr. Stone's original word ("connection") more clearly describes the intent to increase the connection at two specific, unconnected locations. The word "uplift" has been interpreted as a continuous uplift path to the foundation, significantly increasing costs for no reason.

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

Reinstating Dr. Stone's original language will decrease the cost of construction while addressing the two specific areas that recent research has shown to be at risk in extreme wind exposures.

C. Impact to industry relative to cost of compliance with code:

Reinstating Dr. Stone's original language will decrease the cost of construction while addressing the two specific areas that recent research has shown to be at risk in extreme wind exposures.

Rationale [Provide an explanation of why you would like this Proposed Modification to the Florida Building Code.]:

The purpose of this proposed code change is to clarify Dr. Stone's original intent by providing a 20% increase in connections where they are needed, but not causing unnecessary costs to builders and homeowners.

Please explain how the proposed modification meets the following requirements:

- 1. Has a reasonable and substantial connection with the health, safety, and welfare of the general public:**

The proposed modification does not decrease the effectiveness of the Code and helps decrease unnecessary costs.

- 2. Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction:**

The proposed modification does not decrease the effectiveness of the Code and

helps decrease unnecessary costs.

- 3. Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities:**

The proposed modification does not discriminate against or change existing construction materials or practices.

- 4. Does not degrade the effectiveness of the code:**

The proposed modification does not decrease the effectiveness of the Code and helps decrease unnecessary costs.

Section for DCA Only

Committee Action:

Committee Reason:

Commission Action:

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Code: 2007 Florida Building Code - Residential
Section #: R301.2.1.4

Text of Modification [additions underlined; deletions ~~stricken~~]:

R301.2.1.4 Exposure category. For each wind direction considered, an exposure category that adequately reflects the characteristics of ground surface irregularities shall be determined for the site at which the building or structure is to be constructed. For a site located in the transition zone between categories, the category resulting in the largest wind forces shall apply. Account shall be taken of variations in ground surface roughness that arise from natural topography and vegetation as well as from constructed features. For any given wind direction, the exposure in which a specific building or other structure is sited shall be assessed as being one of the following categories:

Exception: An intermediate exposure between the exposure categories defined is permitted in a transition zone provided that it is determined by a rational analysis method.

1. Exposure A. This exposure category is not applicable in Florida.
2. Exposure B. Urban and suburban areas, wooded areas or other terrain with numerous closely spaced obstructions having the size of single-family dwellings or larger. Exposure B shall be assumed unless the site meets the definition of another type exposure.
3. Exposure C. Open terrain with scattered obstructions, including surface undulations or other irregularities, having heights generally less than 30 feet (9144 mm) extending more than 1,500 feet (457.2 m) from the building site in any quadrant. This exposure shall also apply to any building located within Exposure B-type terrain where the building is within 100 feet horizontally in any direction of open areas of Exposure C-type terrain that extends more than 600 feet (182.9 m) and width greater than 150 feet in the upwind direction. Short-term (less than two year) changes in the pre-existing terrain exposure, for the purposes of development,

shall not be considered open fields. Where development build out will occur within 3 years and the resultant condition will meet the definition of Exposure B, Exposure B shall be regulating for the purpose of permitting. This category includes flat open country, grasslands and ocean or gulf shorelines and shall extend downwind for a distance of 1,500 feet. For buildings located within a distance of 600 feet of inland bodies of water that present a fetch of 1 mile (1.61 km) or more or inland waterways or rivers with a width of 1 mile (1.61 km) or more roof sheathing uplift and roof-to-wall ~~uplift~~ uplift-connection loads shall be increased by 20 percent.

4. Exposure D. This exposure category is not applicable in Florida.

Fiscal Impact Statement [Provide documentation of the costs and benefits of the proposed modifications to the code for each of the following entities. Cost data should be accompanied by a list of assumptions and supporting documentation. Explain expected benefits.]:

A. Impact to local entity relative to enforcement of code:

This proposed code change reinstates the original code change language, proposed by Dr. Jeff Stone (Modification # 2662-Revised). The original language addressed recent research relative to wind loads on buildings sited near open bodies of inland waters; specifically two (2) unconnected areas, the roof sheathing uplift fasteners and the roof-to-wall connections. Sometime in the revision process, the word "uplift" was substituted for the word "connection". Uplift loads are typically viewed as continuous and carried to the building foundation. Dr. Stone's original word ("connection") more clearly describes the intent to increase the connection at two specific, unconnected locations. The word "uplift" has been interpreted as a continuous uplift path to the foundation, significantly increasing costs for no reason.

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