

SENATE STAFF ANALYSIS AND ECONOMIC IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: Regulated Industries Committee

BILL: CS/CS/SB 1774

SPONSOR: Regulated Industries Committee, Community Affairs Community, and Senator Constantine

SUBJECT: Building Code

DATE: April 18, 2006

REVISED: _____

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Vickers	Yeatman	CA	Fav/CS
2.	Oxamendi	Imhof	RI	Fav/CS
3.				
4.				
5.				
6.				

I. Summary:

This bill authorizes the Florida Building Commission to amend the Florida Building Code to implement revised wind-design standards for new construction in the state, including the windborne-debris requirements applicable to the region from the eastern border of Franklin County to the Florida-Alabama line. Depending on the commission's final adopted standard, new construction in the impacted areas may be required to incorporate increased protection for structural openings (doors and windows).

The bill extends from June 30, 2006 to September 30, 2006, the date by which all elevators that allow public access in buildings that are least six stories high, must be keyed to allow operation with a master key in fire emergency situations. This provision applies to buildings on which a building permit has been issued. It also extends the compliance deadline for existing buildings from July 1, 2007 to October 1, 2009.

The bill allows the commission to define "exposure category C" within the code, and implement an expedited code development process for specified categories of amendments. The bill restricts interpretations of the Florida Accessibility Code for building construction. The bill revises certain requirements relating to the use of private providers for building inspection services.

The bill revises the existing Building Code development process to enable the Building Commission to amend the code through a streamlined amendatory procedure.

The bill revises the existing Florida Fire Prevention Code development process to enable the State Fire Marshal to amend the code through a streamlined amendatory procedure.

The bill requires the inspection of fire hydrants installed in public and private properties, except one-family or two-family dwellings. The inspection must use the nationally recognized inspection, testing, and maintenance standards NFPA-24 and NFPA-25 adopted by the State Fire Marshal. The bill requires that the hydrant owner must provide a copy of the inspection report to the local authority having jurisdiction. It requires the testing and inspection of fire hydrants and marking those hydrants that are no longer functional.

This bill substantially amends sections 399.15, 553.71, 553.73, 553.775, 553.791, 633.0215, 633.021, and 633.082, Florida Statutes. The bill repeals section 633.5391, Florida Statutes. This bill also creates an unnumbered section of the Florida Statutes.

II. Present Situation:

The Florida Building Commission is authorized to adopt and maintain the Florida Building Code as the technical regulation of construction activity throughout the state. The commission's charge includes annual amendments and triennial updates wherein the commission integrates previously adopted amendments, local amendments meeting a statutory threshold, and its declaratory statements with the newest edition of the model code upon which the Florida Building Code is based. The first triennial update of the code (the "2004 Florida Building Code") became effective in October of 2005. The commission is also charged with several means of interpreting the code.

Design Standards for Wind Resistance

For protection against hurricane winds, the code adopts the national model building code engineering standard (American Society of Civil Engineers Standard 7 or "ASCE 7").¹ This standard provides that buildings constructed in regions that are expected to experience hurricane winds of less than 120 mph must be designed to withstand external wind pressures identified for their location. Buildings constructed in regions that are expected to experience hurricane winds of 120 mph or greater must not only be able to withstand external wind pressures but also internal pressures that may result inside a building when a window or door is broken or a hole is created in its walls or roof by large debris. Areas within one mile of the coast that experience at least 110 mph winds are also required to meet the 120 mph standards for external and internal pressures.

The code requires that new homes throughout the state be designed to resist external wind speeds that the ASCE 7 standard predicts these homes will experience sometime within a 50 to 100-year time period. In November of 1999, the commission agreed with the developers of ASCE 7 and applied additional requirements regarding protection of window and doors in what is called the "wind-borne debris region" to ensure that buildings inside this region will also be able to withstand internal wind pressure caused by the penetration of flying debris.² This region includes

¹ At the time of adoption of the 2001 Building Code, the relevant ASCE 7 standard was the 1998 Edition. Pursuant to CS/CS/CS/SB 442 (ch. 2005-147, L.O.F.), the Commission was authorized to amend the 2004 Building Code to reference the 2002 Edition of ASCE 7.

² Generally, the code requires shutters, impact resistant glass and openings, or design for internal pressure in all areas of the State that are exposed to wind speeds in excess of 120 miles per hour as designated on a map within the Code. Additionally,

areas expected to experience winds of 120 mph or greater as well as areas within one mile of the coast that experience at least 110 mph winds.

The ASCE 7 standard considers both wind speeds that can be developed by hurricanes and factors such as terrain and shielding by other buildings which affect the strength of those winds when they impact buildings. *Exposure A* is characteristic of large cities with large expanses of tall buildings. *Exposure B* is characteristic of suburban areas with large expanses of short and medium height buildings and wooded areas. *Exposure C* is characteristic of areas of exposed expanses of open terrain or open water. Section 553.71, F.S., defines "exposure category C" to mean, except in the high velocity hurricane zone, that area which lies within 1,500 feet of the coastal construction control line, or within 1,500 feet of the mean high tide line, whichever is less. On barrier islands, exposure category C is applicable in the coastal building zone set forth in s. 161.55(5), F.S.

The Panhandle Exception

Subsection (3) of s. 109 of ch. 2000-141, L.O.F., directs the commission to adopt for areas of the state not within the high velocity hurricane zone (Broward and Miami-Dade counties), pursuant to s. 553.73, F.S., the wind protection requirements of the ASCE, Standard 7, 1998 edition, as modified by the commission in its February 15, 2000, adoption of the Florida Building Code.³ However, the Legislature stipulated that from the eastern border of Franklin County to the Florida-Alabama line, only land within 1 mile of the coast is subject to the 120 mph windborne-debris requirements adopted by the commission. This subsection (often referred to as the "Panhandle exception") provides for the exact location of wind speed lines to be established by ordinance using specified physical landmarks, and provides that buildings constructed within the windborne debris region must be either designed for internal pressures resulting from a broken window or door or a hole in the walls or roof, or be designed with protected openings (i.e., use of shutters or impact resistant glass). The subsection further provides that except in the high velocity hurricane zone, local governments may not prohibit the option of designing buildings to resist internal pressures.

Commission Recommendations

the standard requires enhanced structural design for buildings that are exposed to the unimpeded approach of wind, whether the surrounding terrain is open, flat land, inland waterway or coastal.

³ Subsection (3), section 109, Ch. 2000-141, L.O.F., states:

For areas of the state not within the high velocity hurricane zone, the commission shall adopt, pursuant to s. 553.73, Florida Statutes, the wind protection requirements of the American Society of Civil Engineers, Standard 7, 1998 edition as implemented by the International Building Code, 2000 edition, and as modified by the commission in its February 15, 2000, adoption of the Florida Building Code for rule adoption by reference in Rule 9B-3.047, Florida Administrative Code. However, from the eastern border of Franklin County to the Florida-Alabama line, only land within 1 mile of the coast shall be subject to the windborne-debris requirements adopted by the commission. The exact location of wind speed lines shall be established by local ordinance, using recognized physical landmarks such as major roads, canals, rivers, and lake shores, wherever possible. Buildings constructed in the windborne debris region must be either designed for internal pressures that may result inside a building when a window or door is broken or a hole is created in its walls or roof by large debris, or be designed with protected openings. Except in the high velocity hurricane zone, local governments may not prohibit the option of designing buildings to resist internal pressures.

In January of 2005, the commission issued a report entitled, *The Florida Building Code Commission Report to the 2005 Legislature*. This report contained a number of recommendations to improve the effectiveness of the code. The report included the following specific recommendations relating to wind protection provisions:

- Eliminate the edition designation and referenced amendments of the ASCE Standard 7 currently in section 109, ch. 2000-141, L.O.F., and allow updated editions of the standard to be adopted through updates to the code.
- Eliminate the designation of the wind-borne debris region for the Panhandle region of Florida from ch. 2000-141, L.O.F., and allow the wind-borne debris region for that area to be determined by the code.
- Eliminate the definition of the wind exposure class C from s. 553.73, F.S., and allow the definition of ASCE 7, as adopted by the code, to be used.
- Authorize the commission to make determinations related to designing for internal pressures.

Changes Enacted During the 2005 Session

During the 2005 Regular Session, the Legislature addressed several issues relating to wind-design standards. CS/CS/CS/CS/SB 442 (ch. 2005-147, L.O.F.) directed the commission to update the code with the most recent and relevant design standards for wind resistance of buildings issued by the ASCE, notwithstanding subsection (3) of section 109, ch. 2000-141, L.O.F. However, the bill specified that this provision was intended to *explicitly supersede only the first sentence of that law* (see footnote 3). As a result, the bill effectively exempted the Panhandle region from the requirement that the commission utilize the most current edition of the wind protection requirements contained in ASCE 7.

The bill also instructed the commission and local building officials to evaluate the damage from Hurricane Ivan and make recommendations to the Legislature for changes to the code as it relates to the region from the eastern border of Franklin County to the Florida-Alabama line. Finally, the bill required the commission to evaluate the definition of “exposure category C” as currently defined in s. 553.71(10), F.S., and make recommendations for a new definition that more accurately depicts the Florida-specific conditions prior to the 2006 Legislative Session.

Post-Session Commission Deliberations

Pursuant to the requirements of CS/CS/CS/CS/SB 442, the commission convened several workshops to solicit input from local building officials and other stakeholders in the Panhandle region of the state. Much of the discussion centered on the extent to which property damage resulted from hurricane-related storm surges versus wind-borne debris. Similarly, considerable discussion focused on the impact of revised windborne debris protection requirements on the costs of housing in the region. At the conclusion of the initial workshop, there was consensus for the strategy of conducting a study on the treed environment effects and historical wind data

affects, prior to making recommendations to the Legislature regarding the existing definition and whether to recommend changes.⁴

At the second workshop, the commission representatives voted unanimously to contract with a consultant to conduct an engineering-based risk assessment of hurricane windborne debris protection options for the Panhandle in order to analyze the risks, costs, and benefits of windborne debris protection for the region. The research would focus on factors unique to the Panhandle region including treed areas inland of the coast, and consider historical wind data affects. The requested funding authorization was approved, and the preliminary research results will be presented to the commission in March of 2006, and subsequently input will be solicited at a follow-up workshop. Following the workshop, the commission will use the study results and stakeholder input, to make its recommendations to the 2006 Legislature as required by law.⁵

Accessibility Code

Prior to its integration into the Florida Building Code in 2002, the Accessibility Code was statutorily adopted within ch. 553, F.S. Avenues of interpretation of the code were specifically and definitively restrictive based on concerns by advocates for the disabled that the authority to interpret conferred the power to limit the implementation of the accessibility provisions within that Code. Upon its integration, however, the Accessibility Code became subject to interpretation by Declaratory Statement by the commission, and subsequently by non-binding and binding opinion by a third-party.

Emergency Elevator Access

Section 399.15, F.S., requires that all elevators that allow public access, including freight elevators, in buildings that are least six stories high and on which construction is begun after June 30, 2006 must be keyed to allow all elevators within each of the seven state emergency response regions to operate in fire emergency situations with one master elevator key. Existing buildings of six or more stories must comply with this requirement by July 1, 2007.

Private Providers of Inspection Services

Section 553.791, F.S., authorizes a fee owner or the fee owner's contractor to use a private provider to provide code inspection services. This section specifies that the owner or contractor must notify the local building official at the time of permit application, or no less than 7 business days prior to the first scheduled inspection by the local building official or building code enforcement agency for a private provider performing required inspections of construction on a form to be adopted by the commission. This section also specifies information which must be included in the required notice.

Inspection of Fire Protection Systems

Section 633.082, F.S., requires the inspection of fire protection systems installed in public and

⁴ *Report to the Florida Building Commission, Florida Panhandle Windborne Debris Region Workshop I, September 14, 2005.*

⁵ *Report to the Florida Building Commission, Florida Panhandle Windborne Debris Region Workshop II, February 16, 2006.*

private properties, except one-family or two-family dwellings, using the nationally recognized inspection, testing, and maintenance standard NFPA-25⁶ adopted by the State Fire Marshal. It requires quarterly, annual, three-year, and five-year inspections. A copy of the inspection report must be provided to the building owner and to the local authority having jurisdiction. The maintenance of fire sprinkler systems and any corrective actions required are the responsibility of the property owner. Section 633.082(3), F.S., provides that this provision is not intended to limit the inspection and enforcement authority of government entities.

III. Effect of Proposed Changes:

Section 1. The bill authorizes the Florida Building Commission to amend the wind design standards contained in the Florida Building Code subject to the amendatory requirements contained in s. 553.73, F.S. In addition, the bill specifically authorizes the commission to identify within the code those areas of the state from the eastern border of Franklin County to the Florida-Alabama line (the Panhandle region) that are subject to the windborne debris requirements of the code. The commission's initial designation of windlines for this region must address the results of the Florida Panhandle Windborne Debris Region study and is only subject to the rule adoption procedures contained in ch. 120, F.S. The bill stipulates that new windborne debris requirements for the Panhandle region may not take effect for six months following completion of rule-making or May 31, 2007, whichever is sooner. This authorization expressly supersedes the limitations contained in section 109 of ch. 2000-141, L.O.F.

The bill would allow the commission to eliminate or revise the existing "Panhandle exception" (limiting wind-borne debris requirements to within 1 mile of the coast) and amend the wind design standards applicable to the Panhandle region to incorporate the current edition of the national model building code engineering standard (American Society of Civil Engineers Standard 7, 2002 Edition). This would subject new construction in the Panhandle region to the same windborne debris requirements (enhanced door and window protection) applicable to other areas of the state. The bill also authorizes the commission to utilize expedited rule-making procedures (ch. 120, F.S., rather than s. 553.73, F.S.) in implementing this provision.

Section 2. The bill amends s. 399.15, F.S., to extend from June 30, 2006 to September 30, 2006, the date by which all elevators that allow public access in buildings that are least six stories high, must be keyed to allow operation with a master key in fire emergency situations. This provision applies to buildings on which a building permit has been issued. The bill removes the provision that provides that the requirement applies to buildings upon which construction has begun.

The bill also extends the compliance deadline for existing buildings from July 1, 2007 to October 1, 2009.

Section 3. The bill amends s. 553.71, F.S., to delete the current definition of "Exposure category C." This provision would allow the commission to define this category through its code development processes.

⁶ The National Fire Protection Association (NFPA) develops codes and standards related to fire safety. NFPA-25 is entitled "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems."

Section 4. The bill amends s. 553.73, F.S., to delete the general reference to adoption by the International Code Council and replaces that reference with the general "model code entity" to account for the National Fire Prevention Association's adoption of the National Electrical Code.

In addition, the bill revises the existing code development process to enable the commission to address certain issues through streamlined amendatory procedures. Under this proposal, the commission would be authorized to amend the code subject only to the rule adoption procedures of ch. 120, F.S. (rather than the more time-consuming requirements of ch. 553, F.S.). Following Commission approval and publication on the Commission's website, authorities having jurisdiction to enforce the code would be authorized to enforce the amendments. The bill specifies that the Commission may use this expedited process for amendments that are needed to address:

- Conflicts within the updated code;
- Conflicts between the updated code and the Florida Fire Prevention Code;
- The omission of Florida-specific amendments that were previously adopted in the code if the omission is not supported by a specific recommendation of a technical advisory or a particular action by the commission; or
- Unintended results from the integration of Florida-specific amendments that were previously adopted by the model code.

Section 5. The bill amends s. 553.775, F.S., to restrict interpretations of the Florida Accessibility Code for Building Construction. Based on the historical practice and present concerns of advocates for the disabled, the commission has recommended restricting interpretation of the accessibility provisions.

Section 6. The bill amends s. 553.791, F.S., to provide that after construction has commenced and if the local building official is unable to provide inspection services in a timely manner, the building owner or his or her contractor may elect to use a private provider for building inspection services. The owner or contractor must notify the local building official of their intention to use a private provider at least seven business days prior to the next scheduled inspection and must comply with existing notice requirements.

Section 7. The bill amends s. 633.0215, F.S., to revise the existing Florida Fire Prevention Code development process to enable the State Fire Marshal to amend the Florida Fire Prevention Code through a streamlined amendatory procedure. The bill authorizes the State Fire Marshal to amend the Fire Prevention Code subject only to the rule adoption procedures of ch. 120, F.S. (rather than the more time-consuming requirements of ch. 633, F.S.). Following State Fire Marshal approval and publication on the State Fire Marshal's website, authorities having jurisdiction to enforce the Florida Fire Prevention Code would be authorized to enforce the amendments. The bill specifies that the State Fire Marshal may use this expedited process for amendments that are needed to address:

- Conflicts within the updated Florida Fire Prevention Code;
- Conflicts between the updated Florida Fire Prevention Code and the Florida Building Code;

- The omission of Florida-specific amendments that were previously adopted in the Florida Fire Prevention Code if the omission is not supported by a specific recommendation of a technical advisory or a particular action by the commission; or
- Unintended results from the integration of Florida-specific amendments that were previously adopted by the model code.

The bill deletes the provision that authorized the State Fire Marshal to approve technical amendments to the fire code if a threat to life existed that would warrant such action. These amendments were subject to ch.120, F.S., rulemaking procedures.

Section 8. The bill amends s. 633.021, F.S., to define the term “fire hydrant” to mean:

a connection to a water main, elevated water tank, or other source of water for the purpose of supplying water to a fire hose or other fire protection apparatus for fire-suppression operations.

Section 9. The bill amends s. 633.082, F.S., to require the inspection of fire hydrants installed in public and private properties, except one-family or two-family dwellings. The inspection must follow the nationally recognized inspection, testing, and maintenance standards NFPA-24⁷ and NFPA-25 adopted by the State Fire Marshal. Current law only references the NFPA-25 standard.

The inspector must provide a copy of the inspection report to the hydrant owner and the local authority having jurisdiction.

The bill requires that the maintenance of fire hydrant and fire protection systems and any corrective actions required are the responsibility of the owner of the system or hydrant. Current law does not reference the fire hydrant.

The bill requires that each fire hydrant must be opened fully each year for at least one minute for the purpose of clearing all foreign materials from the hydrant. It also requires that fire hydrant that have been made nonfunctional by the closing of the water supply valve must be immediately tagged with a red tag that is boldly marked “nonfunctional.” The local fire authority must be notified that the hydrant is nonfunctional.

Section 10. The bill repeals s. 633.5391, F.S., which requires that fire hydrant backflow prevention assemblies must be inspected once every three years.

Section 11. The bill provides that this act is to take effect July 1, 2006.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

⁷ See note 6, *supra*. NFPA-24 is entitled “Standard for the Installation of Private Fire Service Mains and Their Appurtenances.”

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

V. Economic Impact and Fiscal Note:**A. Tax/Fee Issues:**

None.

B. Private Sector Impact:

The Department of Community Affairs estimates the bill will result in an increase in the cost of construction, but this increase will vary depending on the commission's utilization of the authority granted. The department indicated design and construction to withstand internal pressure results in minimal cost increase of a home, and use of shutters and other impact resistant openings can likely be achieved at a cost of approximately \$2,000 per home. These costs will ultimately be passed on to the consumer in the sales price of the building, but will likely be offset over time by savings on insurance.

The Florida Homebuilders Association has previously indicated that requiring new construction in the Panhandle region to comply with windborne-debris requirements could increase the cost of new homes in the region by 5 percent or more.

C. Government Sector Impact:

None.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Summary of Amendments:

None.

This Senate staff analysis does not reflect the intent or official position of the bill's sponsor or the Florida Senate.
