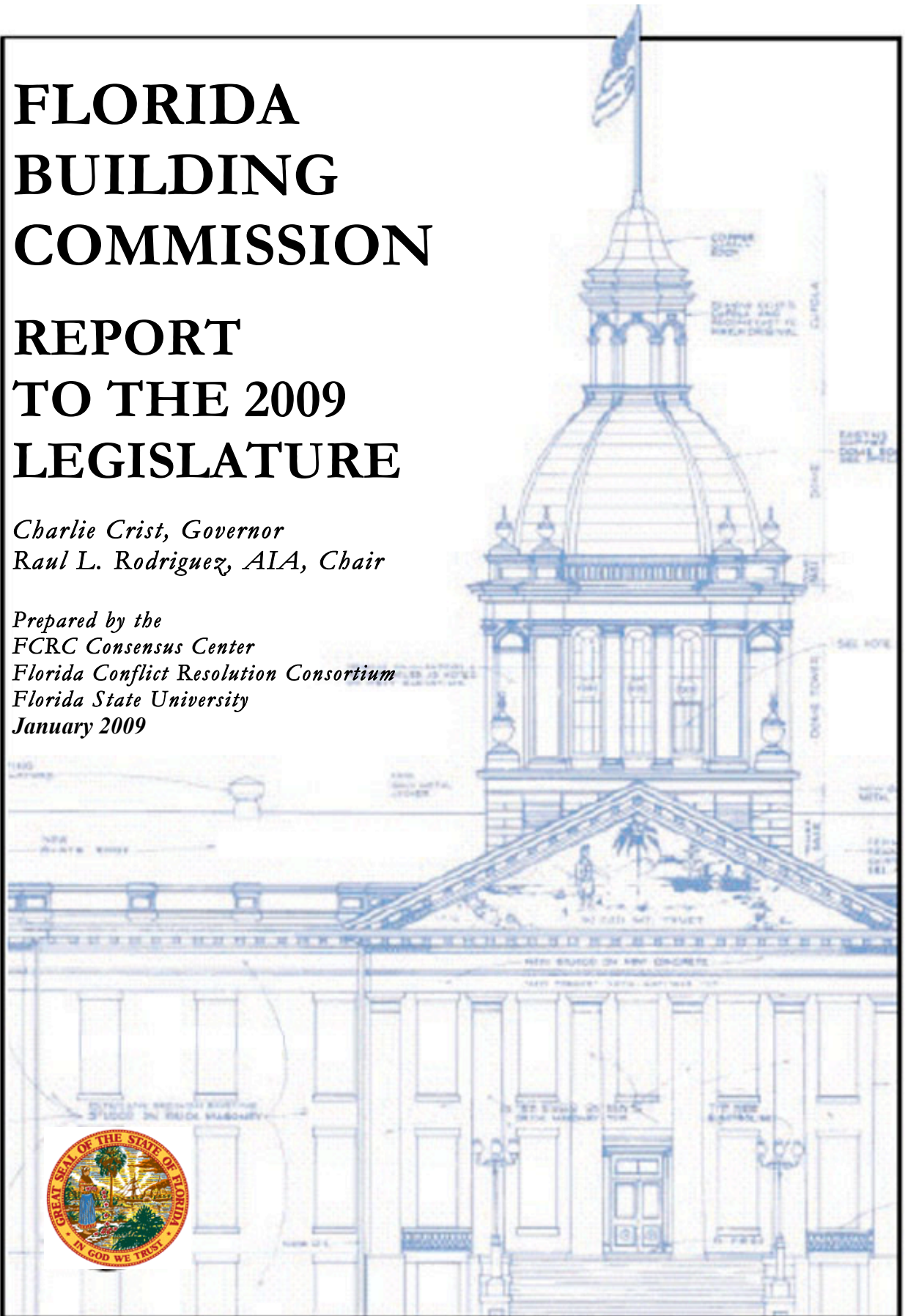


# FLORIDA BUILDING COMMISSION

## REPORT TO THE 2009 LEGISLATURE

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FLORIDA BUILDING COMMISSION REPORT  
AND RECOMMENDATIONS TO THE 2009  
FLORIDA LEGISLATURE

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# 1. Executive Summary and Recommendations

The primary focus of the Florida Building Commission during 2008 was the adoption of Glitch Amendments to the 2007 Edition of the Building Code and adoption of the 2007 Florida Energy Code implementing provisions necessary to comply with the Governor's 15% efficiency increase for thermal efficiency requirements. In addition to efficiency increases to the Florida Energy Code, major components of the Code Update process include enhancements to the wind, water intrusion and hurricane protection provisions of the Florida Building Code. To provide ample time for training and education on the Updated Code and due to delays caused by Hurricane Fay, the Commission voted to make the effective date of the 2007 Florida Building Code, the 2009 Supplement to the 2007 Florida Building Code to implement glitch code amendments, and the 2007 Florida Energy Code March 1, 2009.

In addition, the Commission convened numerous workgroups comprised of affected stakeholder interests to develop recommendations on septic system sizing, soffit system performance and labeling, the window wall interface, humidity and moisture control in buildings, wind mitigation requirements, carbon monoxide detector requirements, and code assembly for the 2010 Code Update process.

During 2008 the Commission once again focused on consensus-building efforts regarding the implementation of Commission policy, with extensive input from stakeholders and interests affected by Commission policy. Chairman Raul L. Rodriguez, AIA, encouraged and led the Commission's consensus-building initiatives. In addition, as required by the 2008 Legislature, the Commission developed a list of evaluation entities and evaluated the elimination of gravel roofing systems. Finally, the Commission continued with its focus of developing storm damage investigations and research and adopting code amendments related to making Florida's structures, and the products that comprise them, more storm resistant.

The Florida Building Code System was developed after Hurricane Andrew to streamline statewide adoption and enforcement of improved hurricane protection standards. Hurricanes Charley, Frances, Ivan and Jeanne in 2004 and Dennis, Katrina and Wilma in 2005 demonstrated the overall effectiveness of the Code, and identified areas that need additional refinements. Analyses of these storms were conducted throughout 2005, 2006, 2007 and 2008 and will continue during the coming year. Assessments indicate the design wind speeds required by the Code were adequate and buildings built to the new code did not experience nearly as severe damage as older buildings. While some new building technologies did have weaknesses, the major structural systems failures seen in older buildings were avoided in buildings complying with the Florida Building Code. The Commission addressed many of the weaknesses through implementation of the expedited code amendments authorized by the 2005 Legislature, the code enhancements adopted during the 2006 annual interim amendment process, and the adoption of the 2007 Edition of the Code, which will be effective on March 1, 2009. With the continuing work of the Hurricane Research Advisory Committee and various building component specific workgroups, the Commission remains committed to addressing building and product weaknesses. Working with industry, the Commission identified and funded research, and implemented additional code amendments designed to strengthen the Code's building envelope protection.

The Code establishes minimum requirements to protect buildings and their occupants from wind, rain, flood and storm surge based on well-researched and continually-evolving engineering standards for buildings and the products that go into their construction. It is important that the Commission be able to quickly integrate these standards into the Code to keep pace with changes in building technology and advances in the sciences of storm dynamics and building performance.

The Commission is required by Florida law to update the Florida Building Code every three years, and the 2007 Edition represented the second update and third edition of the Code. The update process is based on the code development cycle of the national model building codes, which serve as the “foundation” codes for the Florida Building Code. With the implementation of the 2004 Edition of the Code, Florida developed a new code specific to existing buildings based on the International Existing Buildings Code, the Existing Building Code, and the addition of a new code specific to one and two family homes and townhouses based on the International Residential Code, the Residential Code. During 2006, the Commission implemented code amendments to enhance the high wind provisions of the Residential Code, and initiated the 2007 Update process by selecting the 2006 I Codes as foundation for the 2007, Florida Building Code. During 2007 the Commission evaluated proposed code amendments culminating in the adoption of the 2007 Edition of the Florida Building Code. In 2008, the Commission conducted a Glitch Code amendment process to the 2007 Code, and initiated the development process for the 2010 Code Update cycle.

The Code is a complex interrelated document consisting of thousands of pages and containing myriad related standards and references that must be evaluated and updated on an ongoing basis. In the case of editorial and unintended glitches, it is important for the Commission to correct these non-controversial glitch and correlation issues as quickly as possible in order to prevent unintended consequences and unnecessary delays and complications for all of the building code system participants. With the new expedited code amendment authority, the Commission is now capable of updating standards as needed. In 2008, using new Glitch Amendment authority the Commission used administrative rules to ensure the 2007 Edition of the Code was as error free as possible before becoming effective.

The product approval system is an Internet-based system administered by a contracted Product Approval Administrator. With major consensus-based revisions to the system implemented through rule development in 2007, the system is processing hundreds of applications monthly with efficiency and satisfaction by the product manufacturers who use the system. The Commission’s Product Approval Program Oversight Committee (POC) convenes at every Commission meeting to review product and entity applications, address petitions for declaratory statements, and consider enhancements to the product approval system. Since the system went into effect in October 2003, the Commission has approved 9,243 product applications and 40,376 products for statewide use within limitations established by the approvals, as well as approved 144 product approval entities.

With the hiring of an Education System Administrator in 2006, the Commission’s Education Product Oversight Committee now receives technical assistance in establishing course development guidelines and conducting the oversight function of the Building Code Education Accreditation System. With the repeal of the Building Codes Education and Outreach Council in 2007, a workgroup was formed composed of representatives of the Florida Building Commission, related licensing boards, industry licensee organizations, education providers, and accreditors. The workgroup meets quarterly, and provides the Commission’s Education POC with recommendations on procedural issues as well as on subjects for education and training on the Florida Building Code.

Education is one of the cornerstones of the Building Code System, and the effectiveness of the Building Code depends on the knowledge of professionals who design and construct buildings. The Commission continues to work with the Department of Business and Professional Regulation and representatives of the licensing boards to establish a cooperative system for approving building code courses and integrating building code continuing education into licensing requirements. In collaboration with the Education Workgroup and the System Administrator, the Commission is working to ensure the accountability and efficacy of the Education System.

The Commission's commitment to consensus-building on substantive issues was spotlighted during 2008, with Chairman Rodriguez appointing facilitated workgroups of Commission members and representative stakeholders to reach agreement on packages of recommendations in their respective subject areas. The workgroups convened during 2008 include: the Hurricane Research Advisory Committee, Bedroom Definition Workgroup, Soffit Systems Workgroup, Window Wall Workgroup, Humidity and Moisture Control Workgroup, Wind Mitigation Workgroup, and the CO Detector Workgroup. Each of these groups worked with stakeholders to identify issues, evaluate a full range of options, and submit consensus recommendations to the Florida Building Commission on their respective topics. In addition, the Chair convened an ad hoc committee of Commissioners to work on code assembly for the 2010 Florida Building Code.

The 2008 Legislature assigned the Commission a variety of projects, including developing recommendations for evaluation entities to be recognized in law, and gravel roof requirements for the 2007 Code. The Commission, working with affected interests, has developed recommendations and/or implemented all of their legislative assignments, and the Commission's recommendations and resulting actions are detailed in this report.

Monitoring the building code system and determining refinements that will make it more efficacious is a primary responsibility of the Commission, and consequently the Commission is continually effecting refinements to the building code system by administrative rule amendment(s) where the statutes provide authority. However, the building code system is established in law, requiring that some refinements must be implemented through changes to law. The Commission's recommendations for 2009 legislative actions designed to improve the system's effectiveness are summarized below.

**The Florida Building Commission's Recommendations for Legislative Actions Designed to Improve the System's Effectiveness are Summarized as Follows:**

*The Commission seeks clarification and has recommendations regarding the Legislature's intent (section 509.211 and section 553.885 F.S.) for Carbon Monoxide (CO) Detector requirements in the Florida Building Code. They are as follows:*

- 1. Clarify the responsibilities of the Division of State Fire Marshal (DSFM) and the Department of Business and Professional Regulation (DBPR) under Chapter 509.211 F.S. regarding CO detectors in hotels and motels.*
- 2. Clarify the scope of what was intended by the term: "new construction" in section 553.885 F.S.*
- 3. Provide legislative authority for the Commission to review and determine the appropriate location(s) for CO detectors.*
- 4. Clarify that the requirement applies to all fuel sources that emit carbon monoxide and not only fossil fuels.*

*The Commission recommends and seeks statutory clarification that TAC members may serve on TAC's despite their personal or associates' appearance before the Commission or appendages on matters unrelated to TAC service. The Commission supports DCA's initiative seeking legislative authority for the Department to administer the manufactured building program as follows:*

- 1. Contract for the Manufactured Building administrative responsibilities;*
- 2. Manufacturers to pay the administrator directly for plans review and inspections services via the Building Code Information System (BCIS);*
- 3. Department to establish plans review and inspection fees.*

*The Commission recommends and requests specific statutory authority for manufactures/entities to pay the administrator of the Product Approval Program (vendor) directly via the BCIS.*

*The Commission recommends the Legislature expand Glitch Code criteria in Chapter 553.73(7) F.S to include recognizing equivalency of standards in the Florida Building Code (i.e., design standards).*

*The Commission requests Legislative authority for the Commission to charge a fee for issuing non-binding interpretations and for parties requesting interpretations to pay the interpretations contractor directly for the service.*

*The Commission recommends incorporating its 75% voting threshold requirement for all substantive Commission decisions in statute.*

### **The Florida Building Commission's Recommendations Regarding Legislative Assignments are Summarized as Follows:**

*The Commission recommends amending the list of evaluation entities in law as follows:*

- (1) Include LAPMO Evaluation Service (ES) in the law as an approved evaluation entity as indicated below.*
- (2) Recommend changing the law to read as follows (update list to eliminate entities no longer in existence, add LAPMO ES, and alphabetize the list of approved evaluation entities):*

**(a)** Evaluation entities that meet the criteria for approval adopted by the commission by rule. The commission shall specifically approve the, the International Association of Plumbing and Mechanical Officials Evaluation Service, the International Code Council Evaluation Services, and the Miami-Dade County Building Code Compliance Office Product Control ~~and National Evaluation Service~~, ~~the international Conference of Building Officials Evaluation Services~~, ~~the Building Officials and Code Administrators International Evaluation Services~~, ~~the Southern Building Code Congress International Evaluation Services~~. Architects and engineers licensed in this state are also approved to conduct product evaluations as provided in subsection (5).

## 2. Introduction

In 1974, Florida adopted a state minimum building code law requiring all local governments to adopt and enforce a building code. The system provided four separate model codes that local governments could consider and adopt to establish minimum standards of health and life safety for the public. In that system the state's role was limited to adopting all or relevant parts of new editions of the four model codes. Local governments could amend and enforce their local codes as they saw fit.

Hurricane Andrew demonstrated in 1992 that this system of local codes did not provide the level of public protection that was necessary, in light of the fact that a local code that was universally acknowledged to set the strongest standard for hurricane protection essentially failed. The resulting problems had impacts well beyond southern Miami-Dade County. The state filled the property insurer void left by failed and fleeing private insurance companies and the federal government poured billions of dollars of aid into the disaster area. It became starkly apparent the state had a significant interest in the effectiveness of building codes.

After Andrew, Miami-Dade County conducted an exhaustive review of its building code and made significant changes to both the code and support systems for code enforcement. In other areas of the state the Florida Board of Building Codes and Standards (predecessor to the Florida Building Commission) adopted significant upgrades to the wind resistance standards of the model state minimum code that was used by the majority of other local governments. The state also began licensing local governments' building code enforcement personnel. These steps proved critical in leading to the building codes that produced improved building performance in the 2004 hurricane season.

Like Miami-Dade County, the state went beyond just modernizing the minimum building codes. In 1996 a study commission was appointed to review the system of local codes created by the 1974 law and make recommendations for modernizing the entire system. The 1998 Legislature adopted the study commission's recommendations for a single state building code and an enhanced oversight role for the state in local code enforcement. The 2000 Legislature authorized implementation of the Florida Building Code, and the first edition replaced all local codes on March 1, 2002.

To implement the new Florida Building Code, the Florida Building Commission was established in law. The Florida Building Commission, originally a 23 member, is now a 25 member Governor-appointed stakeholder group who successfully created, implemented, and maintains the statewide Florida Building Code, which became effective in 2002. The Commission is comprised of the Governor's Chair, and 24 members representing various industries and governmental interests as follows: four code officials, two state government representatives, a local government representative, a representative of persons with disability, and a representative of the green building industry; an architect, a structural engineer, a mechanical or electrical engineer, representatives of fire protection technology, the building management industry, and the insurance industry; and a general contractor, residential contractor, mechanical or air conditioning contractor, plumbing contractor, electrical



contractor, roofing/sheet metal contractor, a manufactured building representative, a building product manufacturer, and a swimming pool contractor.

The first major tests of the building code enhancements put in place after Hurricane Andrew came with 2004's Hurricanes Charley, Frances, Ivan and Jeanne. All but Hurricane Charley produced winds below the design speeds required by the Code but they were long in duration and produced extensive rainfall. Hurricane Charley was a design wind speed storm that moved quickly across the state and produced less rainfall. Hurricane Ivan, similar to Hurricane Opal in 1995, was a category 4-5 storm in the Gulf but its winds diminished dramatically when it approached land, lowering winds below building code design wind speeds, but maintaining storm surges that wreaked havoc along barrier islands and mainland waterways. Each storm provided different kinds of tests and exposed different types of building failures. The difference in the building failures experienced by buildings built to older codes and those built to the new Florida Building Code was that older buildings had major damage to property and proved to be unsafe shelters. In contrast, buildings built to the Code had less property damage and provided safe shelter. The testimony of homeowners, who in 2002 were skeptical of the new code requirements and their added costs, was that they felt safe in their homes and found value in the additional costs associated with complying with the Florida Building Code.

During 2005 the code was again tested when Florida was battered by another series of hurricanes. Although Hurricanes Dennis, Katrina, and Wilma were devastating to the citizens of the state, they added further evidence that the Florida Building Code is working. In addition, the observations, investigations and research regarding storm-related damage provided additional insight on how to improve the products and construction methods used in Florida. The Commission continues to study how to enhance the Code through the work of its Hurricane Research Advisory Committee.

Engineering standards progress as new real-world tests like hurricanes provide the laboratory for expanding knowledge. It is essential that Florida maintain pace with the evolving standards because its coastal exposure and rapidly expanding population create a major risk and limit options for ensuring the safety of its citizens. The Commission keeps pace by amending the Code to adopt updated national codes and reference standards, and by implementing enhancements coming from its research and consensus-building standards development projects.

The Florida Building Commission's Hurricane Research Advisory Committee continues to meet to review research and make recommendations to the Commission regarding proposed code enhancements. Some of the Committee's recommendations were implemented in a specially authorized "expedited" code amendment process conducted in 2005. Other recommendations that required additional development effort were adopted with the Glitch Code amendments in 2006, and with adoption of the 2007 Edition of the Florida Building Code. The Committee continues to recommend and monitor research projects designed to enhance the performance of Florida's buildings during storms.

A primary focus for the Commission during 2008 was amending the Florida Energy Code to require 15% more efficiency in buildings. The Commission reviewed energy related code amendments adopted in the 2007 Florida Building Code Update to determine their cumulative level of increased efficiency, and adopted additional amendments required to achieve Governor Crist's directive of 15% increased efficiency. During 2008 the Energy Code was amended by administrative rule and then the revised Energy Code was adopted into the 2007 Florida Building Code during the 2008 "glitch" cycle. It will take effect March 1, 2009 concurrent with the 2007 Florida Building Code. Working with stakeholders using consensus-building workgroups, the Commission was able to achieve the 15% increase in efficiency in buildings and implement code amendments that are efficient, consistent, understandable and enforceable for the full spectrum of Energy Code users.

The Florida Building Commission seeks to develop consensus decisions on its recommendations and policy decisions. Consensus is a participatory process whereby, on matters of substance, the members strive for agreements they all can accept, support, live with or agree not to oppose. In instances where unanimity is not possible, final decision on substantive decisions, and the Commission finds that 100% acceptance or support is not achievable, final decisions require at least 75% favorable vote of all members present and voting. This super-majority decision rule underscores the importance of actively developing consensus throughout the process on substantive issues. The Commission's consensus process is conducted as an open public process with multiple opportunities for the public to provide input to the Commission on substantive issues.

At each Commission meeting, the public is provided opportunity to speak during the public comment period provided for each substantive issue under consideration, as well as during general public comment periods provided at the end of each day's meeting. In addition, most substantive issues before the Commission go through a workgroup process where consensus recommendations are developed by appointed representative stakeholder groups, providing additional opportunities for public input. Workgroup recommendations approved by the Commission usually require rule development to implement, affording at least two additional opportunities for public comment.

Since its formation in July 1998, the Commission has demonstrated a commitment to working with affected interests to build consensus on complex issues. The adoption of the first edition of the Florida Building Code (2001 Edition), developed from September 1998 through January 2001, involved 27 Commission meetings, dozens of facilitated public workshops, and hundreds of Technical Advisory Council meetings. The Commission consistently works with all affected interests in building the best possible consensus-based decisions for the citizens of Florida.

Through its committees and workgroups of experts, the Commission develops its decisions on the results of the best engineering-based science available. Although the Code is by law a minimum building code, the Florida Building Code is the strongest consensus and science-based building code in the country.

In summary, the Florida Building Commission provides a forum for stakeholders representing different interests to participate in a consensus-building process where issues affecting the construction industry are discussed and evaluated on both their technical merits and cost-benefits to the citizens of the State of Florida.

*(Appendix B—Commission Process Enhancements)*

### 3. Legislative Assignments

The 2008 Florida Legislature through the passage of a number of bills during the 2008 session, charged the Commission with a range of assignments including Energy Code enhancements, wind protections, and revising specific Building Code provisions.

In response, the Commission worked with stakeholders and affected interests to address each of the legislative assignments through facilitated processes yielding consensus-based recommendations and Commission decisions. The Commission's actions are detailed in the following section of this report. The recommendations are organized into two categories: code related recommendations and energy related recommendations.

#### 2008 Code Related Assignments

##### Recommendation to 2009 Legislature for Entities to be Recognized in Law

Section 16, SB 697 requires the Commission to address approval of additional evaluation entities for product approval:

*"(17)(a) The Florida Building Commission shall review the list of evaluation entities in subsection (8) and, in the annual report required under s. 553.77, shall either recommend amendments to the list to add evaluation entities the commission determines should be authorized to perform product evaluations or shall report on the criteria adopted by rule or to be adopted 938 by rule allowing the commission to approve evaluation entities that use the commission's product evaluation process. If the commission adopts criteria by rule, the rulemaking process must be completed by July 1, 2009."*

The Commission's Product Approval Program Oversight Committee reviewed and developed recommendations which were adopted by the Commission at the December 2008 meeting. Following are the Commission's recommendations to the 2009 Florida Legislature:

The Commission recommends amending the list of evaluation entities in law as follows:

(1) Include IAPMO Evaluation Service (ES) in the law as an approved evaluation entity as indicated below..

(2) Recommend changing the law to read as follows (*update list to eliminate entities no longer in existence, add IAPMO ES, and alphabetize the list of approved evaluation entities*):

**(a)** Evaluation entities that meet the criteria for approval adopted by the commission by rule. The commission shall specifically approve the, the International Association of Plumbing and Mechanical Officials Evaluation Service, the International Code Council Evaluation Services, the Miami-Dade County Building Code Compliance Office Product Control and National Evaluation Service, ~~the international Conference of Building Officials Evaluation Services, the Building Officials and Code Administrators International Evaluation Services, the Southern Building Code Congress International Evaluation Services.~~ Architects and engineers licensed in this state are also approved to conduct product evaluations as provided in subsection (5).

### **Mitigation Techniques for Retrofit of Existing Site-Built Residential Buildings**

In response to legislation required by Chapter 2007-126 LOF, during the summer of 2007 the Commission completed rule development (Rule 9B-3.0475) by adopting the first edition of prescriptive techniques for hurricane mitigation retrofit of existing site-built single family residential structures providing for deck nailing, secondary water barriers installation, and roof-to-wall connections enhancement when a roof is replaced, opening protection for buildings located in the wind borne debris region with building permit for improvement at a value of \$50,000 or more and insured value of \$750,000 or more, and voluntary gable end bracing in order to comply with the Legislature's mandated implementation date of October 1, 2007. The Commission's Wind Mitigation Workgroup continued working with industry groups and other stakeholders during 2008 to propose amendments to enhance the efficacy of the Rule. The focus of the Workgroup was to ensure the Rule provides protections for homeowners, is enforceable by building officials, and understandable and implementable by industry. Code amendments integrating the provisions of Rule 9B-3.0475 were evaluated and adopted into the 2007 Florida Building Code during the 2008 Glitch Amendment process.

*(Appendix I—Wind Mitigation Workgroup)*

### **Evaluation of the Elimination of Gravel and Stone Roofing Systems**

Gravel roof systems are a source of wind-borne debris in hurricane prone regions. The 2006 International Building Code prohibits their use in Florida and the 2007 Legislature directed the Commission to determine whether this elimination was necessary before implementing it in the 2007 Florida Building Code.

The Commission contracted with the University of Florida to conduct a literature review regarding gravel roof coverings in order to assist the Commission in completing their legislative assignment regarding whether gravel or stone roofing systems should be eliminated from the Code per the 2006 International Building Code. The Commission documented and evaluated the following issues for determining whether to eliminate the systems from Code:

- Scientific basis or reason for elimination,
- An available alternative equivalent in cost and durability,
- Whether elimination will unnecessarily restrict or eliminate business or consumer choice in roofing systems,
- And in coordination with Fish and Wildlife Conservation Commission, whether elimination will negatively affect the nesting habitat of any species of nesting bird.

Throughout 2008 the Commission's Wind Mitigation Workgroup worked with researchers and stakeholders to evaluate a range of options and recommendations for adoption in the 2007 Edition of the Florida Building Code. The decision was not to prohibit gravel roof systems entirely but instead to impose the High Velocity Hurricane Zone requirements for those systems throughout Florida in the near term. The Commission received assurances that the Florida Roofing and Sheet Metal Association is committed to determining how to improve the systems to limit their potential for developing wind-borne debris. As a part of the Glitch Code amendments to the 2007 FBC, the Commission adopted the following Code Amendments:

“Aggregate shall be permitted as roof surfacing when installed on slopes of 3:12 or less, not less than 400 pound (182 kg) of roofing gravel or 300 pounds (145 kg) of slag per square shall be applied. A minimum of 50 percent of the total aggregate shall be embedded in the flood coat of bitumen or installed in accordance with its product approval. Aggregate shall be dry and free from dirt and shall

be in compliance with the sizing requirements set forth in ASTM D 1863. A building official may request a test to confirm compliance with these requirements.”

**AGGREGATE.** In roofing, crushed stone, crushed slag or water-worn gravel used for surfacing for roof coverings.

**BALLAST.** In roofing, ballast comes in the form of large stones or paver systems or light-weight interlocking paver systems and is used to provide uplift resistance for roofing systems that are not adhered or mechanically attached to the roof deck.

The Commission will work with industry to evaluate criteria for consideration during the 2010 Code Update process.

### **Electrical Bonding and Grounding for Swimming Pool Decks**

The 2007 Florida Legislature directed adoption of the alternative pool bonding requirements by non-Code rule in 2007 and adoption in the 2007 Florida Building Code. The Commission’s Electrical TAC worked with stakeholders to evaluate alternative techniques and made recommendations to adopt the electrical bonding provisions for pools of the 2008 National Electrical Code which were adopted by Rule 9B-3.0477, effective October 18, 2007. In addition, the provisions of Rule 9B-3.0477 were being integrated in the 2007 FBC as part of the Glitch amendments.

### **Requirements of Law for Carbon Monoxide Detectors Implementation**

The 2007 Florida Legislature directed the Commission to adopt carbon monoxide detector requirements written into law as a separate non-Code rule to take effect July 1, 2008 and to adopt the requirements from the law as part of the 2007 Code. The Commission’s Mechanical TAC worked with stakeholders to develop recommendations for consideration by the Commission during the 2007 Code Adoption process which were adopted by Rule 9B-3.0472 effective July 1, 2008. In addition, the Commission integrated the CO detector provisions of Rule 9B-3.0472 into the 2007 Edition of the Code as a part of the Glitch Amendment process. The recommendations are as follows:

The Commission seeks clarification and has recommendations regarding the Legislature’s intent (Chapter 509.211 and 553.885 F.S.) for Carbon Monoxide (CO) Detector requirements in the Florida Building Code. They are as follows:

1. Clarify the responsibilities of the Division of State Fire Marshal (DSFM) and the Department of Business and Professional Regulation (DBPR) under Chapter 509.211 F.S.
2. Clarify the scope of what was intended by the term: “new construction”.
3. Provide legislative authority for the Commission to review and determine the appropriate location(s) for CO detectors.
4. Clarify that the requirement applies to all fuel sources that emit carbon monoxide and not only fossil fuels.

*(Appendix J—CO Detector Workgroup)*

## **2008 Energy Assignments**

Governor Crist directed the Commission to increase building energy efficiency requirements by 15% in his July 2007 Executive Order 127. In addition, the 2008 Legislature through passage of The Energy Act of 2008 created a suite of energy related assignments for the Building Commission. The Energy Code provisions were a major focus of the Commission during 2008, and the Commission increased the thermal efficiency requirements for the Florida Energy Code by 15% then integrated the enhanced requirements into the 2007 Florida Building Code. The Commission reviewed energy related code amendments adopted in the 2007 Florida Building Code Update to determine their cumulative level of increased efficiency, and adopted additional amendments required to achieve Governor Crist's directive of 15% increased efficiency. During 2008 the Energy Code was amended by administrative rule and then the revised Energy Code was adopted into the 2007 Florida Building Code during the 2008 "glitch" cycle concurrently with the March 1, 2009 effective date for the 2007 Florida Building Code. Working with stakeholders using consensus-building workgroups, the Commission was able to achieve the 15% increase in efficiency in buildings and implement code amendments that are efficient, consistent, understandable and enforceable for the full spectrum of Energy Code users.

The Legislature's other Energy Code related assignments will be addressed during 2009 in preparation for the 2010 edition of the Code. A workgroup was formed to address these issues and develop recommendations for the Commission. The Commission's energy related tasks for 2009 are summarized in this section of the Report.

### **Study Energy Conservation Measures and Develop a Plan for 20% Increased Efficiency Requirement for 2010 FBC—Develop Plan to Implement Legislated Energy Efficiency Increases**

Section 109, HB 7153 establishes a schedule for increases in building energy efficiency requirements. This task expands the study of energy conservation measures for residential buildings to investigation of efficiency options for commercial buildings and the development of a plan to implement the requirements of the new law. Section 553.9061 "Scheduled increases in thermal efficiency standards." was created to establish percent increases in efficiency to be implemented in the 2010, 2013, 2016 and 2019 Code.

With the adoption of the Glitch Amendments to the 2007 Edition of the Florida Building Code and the revisions to Rule 9B-13 Thermal Efficiency Standards, the Commission implemented a strategy for increasing the energy efficiency provisions of the Code by 15%. The Commission's Energy Code Workgroup and Energy TAC are working with stakeholders to evaluate options for achieving an additional 5% increase for the 2010 Edition of the Code, and for achieving the progressive increases in efficiency required for subsequent editions of the code.

### **Develop Rule for Energy Code Cost Effectiveness Test**

Section 109, HB 7135 directs the Commission to develop a rule for determining cost effectiveness of energy conservation measures to be considered for inclusion in the Florida Energy Code. The rule must be completed and applied to the update of the energy provisions of the 2010 Florida Building Code.

*“(3) The Florida Building Commission shall, prior to implementing the goals established in subsection (1), adopt by rule and implement a cost-effectiveness test for proposed increases in energy efficiency. The cost-effectiveness test shall measure cost-effectiveness and shall ensure that energy efficiency increases result in a positive net financial impact.”*

The Commission will be working with stakeholders during 2009 to develop cost effectiveness test criteria to be applied to justification for increased residential building energy efficiency requirements. The Commission will conclude rule making in time for the adopted rule to be effective prior to the 2010 Code adoption process.

### **Identify Specific Building Options to Achieve the Energy Efficiency Improvements**

The Energy Act of 2008 (HB 7135) directs the Commission to include, as a minimum, certain technologies for achieving enhanced building efficiency targets established by the Act in the Florida Energy Code. The Building Code Act of 2008 (HB 697) directs the Commission to facilitate and promote the use of certain renewable energy technologies.

The Commission’s Energy Code Workgroup will work with stakeholders beginning in early 2009 on a comprehensive evaluation of options for achieving energy efficiency initiatives for the Florida Building Code including: mandated increases in energy efficiencies for subsequent editions of the Code, criteria for cost effectiveness test for increases in energy efficiency, studying energy conservation measures for replacement of air conditioning equipment, investigating humidity and moisture control problems for hot and humid climates, and evaluating rainwater collection and reuse and waste water recycling techniques.

## 4. The Florida Building Code

The Commission is required by law to update the Florida Building Code (FBC) every three years, and the 2007 Edition represents the second update and third edition of the Code. The update process is based on the code development cycle of the national model building codes, which serve as the “foundation” codes for the Florida Building Code. National model building codes and most engineering standards are updated every three years and the intent is to keep the Code up-to-date with evolving national standards of health, safety and welfare of the public.

The model building codes on which the Florida Building Code is based have undergone a major transformation since work began on the Florida Building Code in 1998. In 1998 there were three model code organizations, each with a separate model code that included a “building” code for structural, fire safety and general building design requirements and separate plumbing, mechanical (heating, cooling and ventilation) and fuel gas sub-codes. The code for electrical systems is a reference standard and is developed by a separate organization. During the late 1990s the three regional model code organizations transitioned into a single organization, the International Code Council, which was to develop a single national model code. When that code was completed and the organizations merged, the three prior model codes were abandoned. In late 1998 when the Commission selected a model code to provide the base requirements for the Florida Building Code, the International Plumbing, Mechanical and Fuel Gas sub-codes were in place but the “Building” Code was still under development. The first edition of the Florida Building Code was based on the International sub-codes and the Standard Building Code, which was used by Florida counties, municipalities and state agencies since the mid-1970s, for the “building” volume. The last edition of the Standard code was published in 1999. The first edition of the new International Building Code was in place by 2000 and has since been updated with a second edition, the 2003 International Building Code. With the adoption of the Second Edition of the Florida Building Code, the Code is now based on the International Family of Codes, modified with Florida-specific amendments. Florida-specific amendments go through a rigorous review process including posting to the Building Code Information System (BCIS) for 45 days prior to a review by the Commission’s Technical Advisory Committees (TAC), posting the TAC’s recommendations for 45 days prior to Commission consideration, and then the Chapter 120 rule development process. The Commission provides multiple input opportunities for public comment, and once the code is published six months must pass before the Code’s effective date.

The adoption of the 2007 Florida Building Code represented the second update and third edition of the Code. This was a major focus of the Commission in 2007 and represented initiation of the triennial code update process for the 2007 Edition of the FBC. The 2006 Edition of the International Building Code (IBC) was published in March of 2006, and the Commission’s process—which by law could not begin until six months after the printing and availability of the IBC—commenced in October of 2006 with selection of the 2006 I Codes as foundation for the 2007 Florida Building Code.

Florida Statute, Chapter 553.73(6), requires the Commission to update the Florida Building Code every 3 years; by selecting the most current version of the International Family of Codes; the



commission may modify any portion of the foundation codes only as needed to accommodate the specific needs of this state, maintaining Florida-specific amendments previously adopted by the commission and not addressed by the updated foundation code. The Commission complied with this statutory requirement by selecting 2006 Editions of the respective I-Codes as the foundation code for the 2007 Code (Building, Residential, Mechanical, Plumbing, Fuel Gas, and Existing Building Codes). The foundation for the electrical code component of the Florida Building Code is based on NFPA 70: National Electrical Code, which was updated in 2008 and as a result was not available for selection with the other codes during the Commission's 2007 Code Update process. Adoption of updates to this code through glitch amendments was authorized by changes to law in 2008, and the Commission will review and adopt the 2008 NEC as a glitch amendment during 2009.

In order to minimize confusion and maximize efficacy, the Commission opted for a 2007 Code with Glitch amendments fully integrated prior to implementation, with a single effective date for the Building and Energy codes. The 2007 Edition of the Florida Building Code, the 2009 Supplement to the 2007 Florida Building Code to implement glitch code amendments, and the 2007 Florida Energy Code will become effective on March 1, 2009.

### **Glitch Amendments to the 2007 Florida Building Code**

The primary focus of the Commission during 2008 was to adopt Glitch Amendments to the 2007 Florida Building Code. The Commission provided an opportunity for members of the public to submit proposed Glitch Code Amendments with an initial submittal deadline of June 1, 2008 that was extended to July 15, 2008. The Commission's technical advisory committees (TAC) reviewed and developed recommendations on proposed amendments throughout the summer and fall of 2008. Work was interrupted in August when Hurricane Faye caused cancellation of key TAC meetings and a scheduled Rule Development Workshop in Naples. The Commission conducted a Rule Development Workshop in October and a Rule Adoption Hearing in December of 2008. As a result of delays created by Hurricane Faye necessitating the cancellation of the Commission's August 2008 meeting and rescheduling rule proceedings, the Commission voted to make the effective date of the 2007 Florida Building Code, the 2008 Supplement to the 2007 Florida Building Code to implement glitch code amendments, and the 2007 Florida Energy Code March 1, 2009. The 2007 Edition of the Florida Building Code represents significant increases in energy efficiency, enhanced wind and water infiltration requirements, additional structural integrity requirements, and includes updated standards for product approvals.

### **Adoption of the 2008 National Electric Code by Separate 2009 Glitch Amendment**

At the October 2008 Rule Development Workshop conducted for the purpose of considering amendments to Rule 9B-3.047 Glitch Amendments, the Commission considered whether to adopt the 2008 National Electrical Code as a Glitch Amendment. The criteria provided in Chapter 553.73(7) F.S for considering Glitch Amendments specifies the Commission may consider updates to the NEC if delay of implementing the updated edition causes undue hardship to stakeholders, or otherwise threatens the public health, safety and welfare. The Commission considered testimony on both sides and decided to defer action on deciding whether to consider adoption of the 2008 NEC as a Glitch Amendment, and to set a schedule for a separate rulemaking to implement the Commission's actions relative to adopting the 2008 NEC, by July 1, 2009. The NEC will be reviewed by the Electrical TAC and recommendations provided to the Commission prior to completing rulemaking.

## **Legislative Recommendation for Building Code Carbon Monoxide Detector Requirements**

The 2007 Legislature established CO detector requirements to be enforced through the Code. The detector placement requirements established in law were developed based on consideration of deaths in single family homes and hotels/motels and applied globally to all occupancies which have sleeping rooms. Hospitals and nursing home organizations proposed changes to the law for institutional occupancies but the 2008 Legislature elected not to expand tailoring of requirements to other occupancies and suggested in response to Commission inquiries that the Commission develop recommendations to be brought back to the 2009 Legislature if further changes are necessary. The Commission convened a Workgroup for the purpose of making recommendations to the Commission. At the December 2008 meeting the Commission voted to make the following recommendations to the 2009 Florida Legislature:

The Commission seeks clarification and has recommendations regarding the Legislature's intent (section 509.211 and section 553.885 F.S.) for Carbon Monoxide (CO) Detector requirements in the Florida Building Code. They are as follows:

1. Clarify the responsibilities of the Division of State Fire Marshal (DSFM) and the Department of Business and Professional Regulation (DBPR) under Chapter 509.211 F.S. regarding CO detectors in hotels and motels.
2. Clarify the scope of what was intended by the term: "new construction" in section 553.885 F.S.
3. Provide legislative authority for the Commission to review and determine the appropriate location(s) for CO detectors.
4. Clarify that the requirement applies to all fuel sources that emit carbon monoxide and not only fossil fuels.

*(Appendix J—CO Detector Workgroup)*

## **Development Process for the 2010 Florida Building Code**

The Commission is required by law to update the Florida Building Code (Code) every three years, and the 2007 Edition represents the second update and third edition of the Code. The update process is based on the code development cycle of the national model building codes which serve as the "foundation" codes for the Florida Building Code. National model building codes and most engineering standards are updated every three years and the intent is to keep the Code up-to-date with evolving national standards of health, safety and welfare of the public. After each update to the Code the Commission conducts a review of the update process and determines what modifications would make the next process run smoother and more efficiently and the committee will make recommendations to enhance the code update process. In early 2009 Chairman Rodriguez will appoint a study committee to develop recommendations which the Commission will consider and adopt following a public hearing conducted in April of 2009. The Commission will begin development of the 2010 Florida Building Code in the Spring of 2009.

## **Code Assembly for the 2010 Florida Building Code**

The Chair convened an Ad Hoc committee of senior Commissioners to consider a DCA staff proposal for assembling the 2010 Florida Building Code. Staff proposed that the 2009 I Code changes to the 2006 I Code be integrated into the 2007 FBC to create a starting draft of the 2010 Florida Building Code. The Ad Hoc met in December 2008 and developed recommendations that the Commission will consider at the February 2009 meeting. The Ad Hoc recommended that the Commission adopt DCA staff's proposal to use the 2007 FBC Code document as the template for the 2010 Code assembly process.

### **Integration of Florida Accessibility Law into the New ADAAG Being Adopted by the US Department of Justice**

The Commission's Accessibility TAC recommended and the Commission approved convening a workgroup to evaluate and develop recommendations regarding the integration of the Florida Accessibility Law into the new ADAAG that is being adopted by the U.S. Department of Justice. The Commission convened a 2010 Florida Energy Code Workgroup in December 2008 and the Workgroup will develop recommendations to the Commission during 2009. The Commission will adopt recommendations to the Governor and Legislature in the 2010 Report to the Legislature.

## 5. Energy Efficiency Initiatives and Code Changes

Governor Crist issued Executive Order 07-127 establishing actions to reduce greenhouse gas emissions within Florida, and a component of the EO has an impact on the energy performance requirements of the Florida Energy Code. DCA Secretary Tom Pelham attended the Commission's October 2007 meeting to detail the Governor's requirements. Secretary Pelham reported that Governor Crist has committed his Administration to charting a new direction in energy policy in Florida. The Secretary stated that in Executive Order 07-127 the Governor made two statements that require immediate attention:

“Global climate change is one of the most important issues facing the State of Florida this century” and, “Immediate actions are available and required to reduce emissions of green house gases within Florida.” The executive order directs the Department of Community Affairs and the Florida Building Commission to work together to revise the Florida Energy Efficiency Code for Building Construction to increase the energy performance of new construction in Florida by at least 15 percent. It also instructs DCA to initiate rulemaking on Florida appliance efficiency standards, with the objective of increasing the efficiency of appliances by 15 %. The Governor charged DCA and the Commission with accomplishing these tasks by 2009.

The Commission reviewed energy related code amendments adopted in the 2007 Florida Building Code Update to determine their cumulative level of increased efficiency, and adopted additional amendments required to achieve Governor Crist's directive of 15% increased efficiency using procedures of Part VI, Chapter 553, F.S. During 2008 the Energy Code was amended by administrative rule authorized by that part then the revised Energy Code was adopted into the 2007 Florida Building Code during the 2008 “glitch” cycle and concurrently with the March 1, 2009 effective date for the 2007 Florida Building Code.

### **Florida Energy Code Amended to Require 15% More Efficiency in Buildings**

A primary focus for the Commission during 2008 was amending the Florida Energy Code requiring 15% more efficiency in buildings. At the March 2008 meeting the Commission conducted a rule development workshop on Rule 9B-13, for the purpose of amending the Energy Code to implement provisions necessary to comply with the Governor's 15% efficiency increase for the Florida Energy Code. At that meeting the Commission voted to require 85 points for demonstrating compliance by the residential and commercial building performance methods (instead of the current 100 points required), with no changes to the prescriptive methods. At the May 2008 meeting the Commission conducted a rule adoption hearing and voted to adopt additional clarifying provisions, to publish a notice of change integrating the approved changes and to file the Rule for adoption without an additional hearing.

Subsequent to the May Rule Adoption hearing DCA staff compiled the provisions proposed to implement the Commission's Energy Code amendments, and identified several issues that required additional evaluation by the Commission. As a result, the Commission conducted a supplementary rule adoption hearing, originally scheduled for the August 2008 meeting but delayed by Hurricane

Fay until the October meeting, for the purpose of TAC and public review of the comprehensive package of Commission Energy Code amendments, and to complete rulemaking for Rule 9B-13, the Energy Code.

At the October 2008 meeting the Commission's Energy TAC conducted a review of the Commission's Code amendments regarding renovations and equipment change-outs for existing buildings and Method B requirements for commercial buildings, and developed recommendations for the Commission's consideration. At the October Supplemental Rule Adoption Hearing the Commission adopted the Energy TAC's consensus recommendations to enhance amendments already adopted and moved to file the rule. The Commission was able to achieve the 15% increase in efficiency in buildings and implement code amendments that are efficient, consistent, understandable and enforceable for the full spectrum of Energy Code users.

Following are the enhancements implemented in the 2007 Energy Code:

### **General**

- Removed the “.2” performance-based requirements from both Subchapter 13-4 and 13-6 of the code and put them into Appendices 13-B and 13-C.
- Deleted the exception in Section 13-103.1.1.1 that typed names and registration numbers may be provided in lieu of a design professional's signature where all relevant information has been included on signed and sealed plans.
- Revised the exceptions to code compliance in Section 13-101.5.7 for 1) buildings containing a system designed and sold for dehumidification purposes only and 5) electrical equipment switching buildings in which no-one works on a regular basis to require that the electric power provisions of Section 13-413 shall apply.
- Revised standards in Subchapter 13-3 to ASHRAE 90.1-2004. Revised ASHRAE 62 to 62.1-2004 for consistency with *FBC-Mechanical*.
- In Section 13-101.6, added criteria for demonstrating the efficiency of mechanical systems undergoing alteration.

### **Commercial and High-Rise Residential**

- Updated Subchapter 13-4 of the code to ASHRAE 90.1-2004 and simplified the text by moving performance criteria to Appendix 13-B.
- Changed climate zones to ASHRAE Climate Zone 1 (Broward, Miami-Dade, and Monroe counties) and ASHRAE Climate Zone 2 (the rest of the State)
- Revised the Subchapter 13-4 Baseline features (ASHRAE 90.1-2004) to utilize a 0.85 multiplier, making the commercial energy code provisions 15 percent more stringent.
- Deleted Methods B and C because of difficulty in making them 15 percent more stringent.
- Added a new commercial compliance Method B (and Form 400B-08) for shell buildings, renovations, equipment change-outs and other instances where specific components shall meet code for that item(s) alone.
- Shell buildings shall meet compliance Method A at final build-out to demonstrate that the 15 percent overall increase in code stringency has been met for equipment and lighting as well.

- Added an exception under Section 13-407.AB.2.4 Off-hour controls, for HVAC systems having a design heating capacity and cooling capacity less than 15,000 Btu/h that are equipped with readily accessible manual on/off controls.
- Clarified Section 13-407.AB.3.1.1 Equipment efficiency verification criteria per ASHRAE 90.1-2004.
- Consolidated the water-cooled centrifugal water-chilling package criteria in Section 13-407.AB.3.2.2 into three tables by size of chiller.
- Deleted Section 13-407.1.ABC.3.4.2, Fan speed control.
- Clarified Table 13-409.AB.3.3, Maximum damper leakage.
- Revised Table 13-410.AB.2.2, Minimum Duct Insulation R-values, fixed the R-value for ducts in unconditioned spaces, and deleted the R-8 duct requirement for unvented attic spaces in Broward, Miami-Dade and Monroe counties.

## **Residential**

- Revised Subchapter 13-6, the Method A code compliance methodology for multiple-family residential up to and including 3 stories and simplified the text by moving performance criteria to Appendix 13-C.
- Moved the residential provisions of Chapter 13 of the *Florida Building Code, Building*, into Chapter 11 of the *FBC-Residential* for one and two-family dwellings.
- Switched to the EnergyGauge USA Fla/Res computer program, which uses hourly simulation modeling, as the Method A residential energy code compliance tool.
- Moved the Method A Baselines to Table 13-613.A.1-1 [N1113.A.1-1]. The Baselines are similar to the Standard Reference Design in Table 404.5.2(1) of the 2006 *International Energy Conservation Code (IECC)*.
- Revised the “2007” Baselines with a 0.85 multiplier to make the residential energy code 15 percent more stringent in the “2008” energy code provisions.
- Revised the compliance Method B provisions to reflect the 15 percent increase in stringency, including U-0.65, SHGC 0.35 glazing, with a maximum of 16 percent glass to conditioned floor area, and ducts either interior to conditioned space or tested to demonstrate they are “air tight”.
- Deleted compliance Method C in its entirety. Renovations, equipment change-outs, and small additions were moved to compliance with the component efficiencies in Method B.
- Kept the old Residential Points System Method (Form 600A) only as a hand calculation; it also has a 0.85 multiplier on the Baseline and can be found in Appendix G-C of the *FBC-Residential* and in Appendix 13-2C of the *FBC-Building*.
- Revised treatment of gas and electric hot water and conditioning systems; they will be compared to the same fuel type Baseline.
- Added that HVAC sizing calculations shall account for directional orientation of the building.
- Eliminated the restriction of using the rooftop for outside air intake.

## **Commission Energy Efficiency Enhancement Focus for 2009**

All of the following energy related tasks are a part of the Commission’s comprehensive effort to evaluate and enhance energy efficiencies in the Florida Building Code. The Commission’s Energy Code Workgroup will develop recommendations regarding energy conservation measures for increasing efficiency requirements in the 2010 FBC by 20% as required by law. In addition, the Commission will implement additional efficiency measures with the 2010 Code Update process.

### **Work With DCA to Evaluate Updated Energy Efficiency Standards for Energy Using Products**

This project is a directive of Governor's Executive Order 127 to the Department of Community Affairs to achieve 15% energy efficiency requirement improvement for products. The law requires the Code to follow the product efficiency requirements established by the product standards established by the department. The department recommended efficiency criteria for the Commission's approval as a cooperative approach.

### **Develop Design Criteria for Energy Efficient Pool Systems**

The Energy act of 2008 (HB 7135) directs adoption of pool pump efficiencies in the 2010 Code. During discussions with the Florida Spa and Pool Association regarding energy efficiency requirements for pool pumps, members suggested improved efficiency could be achieved through criteria for pool hydronic system design. This initiative would be conducted in coordination with the national industry and other state's initiatives currently underway. This task will be evaluated during 2009 as a part of the Commission's comprehensive review of energy efficiency initiatives.

### **Investigate Humidity Control Problems for Hot and Humid Climates**

At the recommendation of the Energy TAC, the Commission convened a Regional AC Efficiency Workgroup since the USDOE now has authority to develop and adopt regional AC efficiency standards. The Workgroup was charged with developing recommendations on whether the Commission and DCA should recommend to the United States Department of Energy (USDOE) regional AC efficiency standards for the hot and humid climate, and if determined a regional standard is a good strategy, then to develop recommendations for the technical requirements. The Workgroup worked with affected stakeholder interests in a facilitated workgroup process. The Workgroup investigated the feasibility of a hot-and-humid climate regional efficiency rating for air-conditioner and heat-pump systems, and recommended that the Commission should develop recommendations regarding AC equipments' role in controlling humidity and moisture in buildings in a hot and humid climate.

Following the first meeting, the scope of the Workgroup was changed to develop recommendations regarding AC equipments' role in controlling humidity and moisture in buildings in a hot and humid climate. The Workgroup is tasked with considering a range of issues and options regarding the manufacturing, design and installation of AC equipment in controlling moisture and preventing mold and mildew in the hot and humid Florida climate.

In addition, air conditioning contractors raised the concern that building energy efficiency optimization, commodity grade air conditioning systems and mechanical systems construction practices are combining to cause indoor humidity control problems. This task will be evaluated during 2009 as a part of the Commission's comprehensive review of energy efficiency initiatives.

*(Appendix H—Humidity and Moisture Control Workgroup)*

### **Study Energy Conservation Measures for Replacement of Air Conditioning Equipment**

This task is a recommendation of the Commission's Energy TAC resulting from consideration of Energy Code amendment proposals regarding replacement air-conditioning systems at the October 2008 meeting. The task was approved by the Commission at the October 2008 meeting, and will be evaluated during 2009 as a part of the Commission's comprehensive review of energy efficiency initiatives.

## 6. Hurricane Responses and Code Changes

Developing the scientific foundation for the building code is fundamental to solving hurricane problems in the most efficient and effective ways. To support code development and other legislative assignments the Commission contracted with the University of Florida and Applied Research Associates for studies in 2007 to address wind-borne debris risks, water intrusion, wind resistance of roof systems and “code plus” requirements that go beyond the Code minimums for coastal buildings.

As a result of hurricanes affecting Florida during the 2004 and 2005 seasons, the Florida Building Commission’s Hurricane Research Advisory Committee (HRAC) continues to meet at most Commission meetings to review research and make recommendations to the Commission regarding proposed code enhancements and research needs. Many of the Committee’s recommendations were adopted in a special legislatively authorized amendment process in 2005. Other recommendations were adopted with the 2006 Code amendments to the 2004 Code and during the 2007 Code Update cycle. The Committee continues to consider enhancements to the Florida Building Code based on sound science. In addition, the Committee recommended research to advance the science and allow the Commission to continually study and update the storm protection provisions of the Florida Building Code. The Committee is continuously monitoring current research and recommending the development of standards and installation practices related to protecting against wind damage and water infiltration.

### **Research for Hurricane Resistance Code Enhancements**

During 2007, the Committee prioritized for funding of research: sealing of masonry walls, soffit systems, window water infiltration standards, aggregate roof blow-off, testing procedures for hurricane zones, lightening protection systems, and tile roof systems. During 2008 the Committee recommended and the Commission approved funding a variety of research projects including window/wall leakage, the window/wall interface, and soffit system performance. This research is being conducted in cooperation with related product manufacturers and provided to standards development initiatives.

During 2008 the Committee has:

- Reviewed the University of Florida/National Science Foundation research project on window performance.
- Considered and developed recommendations for allocation of FY 2007-08 research contract resources to work supporting Code development for new construction and mitigation of existing buildings.
- Reviewed the status of 2004-2005 Hurricanes Response Initiative.
- Considered reports by University of Florida on 2007-2008 research and 2008 hurricanes.
- Considered reports by ARA on Load Side—Wind Pressure Research.
- Considered reports by ARA on 2008 Loss Costs Relativity Study Conducted for Florida Office of Insurance Regulation.



- Considered reports on Proposed ASCE 7- 2010 Design Wind Speed and Windborne Debris Criteria.
- Discussed additional research supporting hurricane resistant construction standards development.

The Committee will meet during 2009 to receive updates on ongoing research projects, and to continue developing consensus on recommendations to the Commission for additional code enhancements for consideration during the 2010 Code Update process.

Of particular note was the extensive opportunity for public input during Hurricane Research Advisory Committee and Commission meetings. In addition, each Hurricane Research Advisory Committee meeting provided opportunities for individuals and entities to present the results of their observations, studies, and research regarding the effects of the 2004, 2005 and 2008 hurricanes on the citizens of Florida and the built environment.

*(Appendix G—Window Wall Workgroup)*

#### **Load Side Wind Pressure Research**

Research sponsored by the Commission on wind-borne debris identified potential weaknesses in design pressure requirements in national standards and the Code. Subsequent research was conducted to provide the base of improved roof edge design pressure requirements. The HRAC is in the process of evaluating the research and will evaluate possible code amendments for the 2010 Code Update process.

#### **Resistance Side Component and Cladding and MWFRS Research**

The Commission's Hurricane Research Advisory Committee (HRAC) identified building failures from the 2004 and 2005 hurricanes and made quick fix recommendations for the Code, as well as research needs before additional standards and code amendments can be developed. Research directed to resolving water intrusion problems of building components and evaluating the adequacy of window protection is being conducted and the HRAC continues to review the research prior to developing recommendations for code enhancements for the 2010 Code Update process.

#### **Hurricane Wind Pressure and Wind Driven Rain Criteria for Soffit Systems Evaluation and Establishing Labeling Requirements**

Soffit industry manufacturers requested that the Commission organize a process paralleling the processes it conducted for developing criteria for labeling of windows, shutters and garage doors for inclusion in the Code. The Commission convened a Soffit Systems Workgroup for the purpose of evaluating and building consensus on recommendations regarding labeling and performance requirements for soffit systems in the Florida Building Code. The goal is to develop recommendations for the 2010 Code Update process.

*(Appendix F—Soffit Systems Workgroup)*

*(Appendix D—Hurricane Research Advisory Committee Project)*

## 7. Product Approval

The Florida Building Code establishes standards for products integrated into buildings in addition to standards for the design of buildings themselves. Where compliance with prescriptive standards such as location of fire exits can be determined by reviewing building plans and onsite inspections during construction, how well products such as windows perform cannot be determined by review of drawings or inspection of the product alone. Yet compliance of the individual products is fundamental to compliance of the overall building. To determine whether products and building systems comply, the building official must rely on engineers and testing laboratories to evaluate performance then rely on the manufacturers to maintain quality control of production to ensure that production products perform like the ones tested. The product approval system framed in law and implemented through rule requires accreditation of the product evaluators and quality assurance monitors and standardizes the information that must be provided to demonstrate code compliance.

The Commission directed a major part of its efforts since its inception in 1998 to developing a standardized system for public regulation from the many combinations of product evaluation and quality control monitoring services provided by private companies. The diversity of approaches used in different industries for product evaluation and quality control monitoring make standardization particularly difficult, and a considerable amount of time and effort have been dedicated to this task. Patience and hard work characterize the contributions of all parties.

With the significant enhancements to the Product Approval system implemented through revisions to Rule 9B-72, State Product Approval—details of the revisions were described in the 2006 and 2007 Reports to the Legislature—and the hiring of a Product Approval administrator to process applications, the Product Approval System is functioning more efficiently and user satisfaction, as determined by surveys, is very high.

During 2008 the Commission revoked product approvals for products that no longer complied with the requirements of their product approvals. The ability to determine the need for product revocation demonstrates the efficacy of the Product Approval System.

Since inception, the Commission has approved 5,593 product applications under the 2004 Florida Building Code, and 1,411 product applications under the 2007 Florida Building Code. In addition, the Commission approved seven accreditation bodies, 33 certification agencies, six evaluation entities, 62 quality assurance entities, 135 testing laboratories, and 48 validation entities. In addition, the Commission has approved 22,575 products under the 2004 Code, and 7,310 products under the 2007 Code. Following are relevant product approval system statistics:

**Product Approval and Entities Statistics Report**

Entities	Accreditation Body	Certification Agency	Evaluation Entity	Quality Assurance Entity	Testing Laboratory	Validation Entity	Totals
Approved	6	14	6	28	49	14	117
Pending	0	0	0	0	0	0	0
Pending Accreditation	0	0	0	0	2	0	2
Denied	0	0	0	0	0	0	0
Suspended	0	0	0	0	0	1	1
Expired	1	4	0	8	25	14	52
Renewed / Revised	0	15	0	26	59	19	119
<b>Totals</b>	<b>7</b>	<b>33</b>	<b>6</b>	<b>62</b>	<b>135</b>	<b>48</b>	<b>291</b>

CODE VERSION	2004		2007	
	Applications	Products	Applications	Products
Approved	5,593	22,575	1411	7310
Applied For	31	39	158	868
Denied	154	482	1	1
Validated	15	28	187	514
Suspended	0	0	0	0
Re-Apply	3	3	24	88
Pending FBC Approval	1	1	15	682
Revoked	6	17	0	0
Archived	528	1828	156	654
Over 180 Days Old and Not Approved, Denied, Validated, or Pending Status	3	7	11	20
<b>Totals</b>	<b>6334</b>	<b>24,980</b>	<b>1963</b>	<b>10,137</b>

## 8. Building Code Training Program

The state building code system, first established in 1974, was overhauled in 1998 to improve its effectiveness. The Legislature recognized that the effectiveness of the Florida Building Code depended on the various participants' knowledge of the codes. The Building Code Training Program was intended to improve compliance and enforcement by providing a focus for code-related education through coordination of existing training resources, including those of universities, community colleges, vocational technical schools, private construction schools and industry and professional associations.

During 2008, the Commission's Education Program Oversight Committee (POC), working with the program administrator and other entities, implemented education and outreach initiatives developed in 2007. These initiatives relate to the Florida construction and design industries to ensure these licensees are informed about Florida Building Code requirements and aware of related specific duties.

The Commission defined, designed, developed, and prepared for deployment a significant update to the Building Code Information System. The update was necessitated by changes made to the Commission's education system and requirements first adopted in 2000-2001. This system is the mechanism used to submit courses for approval, applications for course provider approval, and applications for course accreditor approval. Through this system, courses and related materials are processed and tracked. Ultimately, approved courses, accreditors, and providers are entered into the system, and this information is made available for licensees and any other interested parties.

The Commission coordinated the development of a clearinghouse to bring together information on available and approved continuing education courses, course and education process and approval requirements, and access to underlying information (such as building code and other changes) that is relevant to the need for new or updated courses. The clearinghouse development included research and determination of the most useful structure and level of information as well as the most efficient way to maintain current information and resources on an on-going basis. This clearinghouse may be accessed at: <http://www.buildingasaferflorida.org>.

The Commission also coordinated the development of the Design and Construction Forum to serve as a quarterly (at least) workgroup composed of individuals with expertise from a wide variety of subject areas that apply to the building code education and outreach needs of licensees and the public. This forum serves to bridge the education gap between licensing boards and the Commission and is structured to be flexible and open to encourage input from any interested party and discussion intended to facilitate the development of solutions to technical and practical problems. This forum is intentionally not structured to make recommendations or decisions, but rather to serve as a source of information, share and discuss concerns, and consider solutions.

Through the education administrator, the Commission addressed specific education and outreach needs as follows:

- Developed building code summaries and comparisons for changes between the 2004 and 2007 Florida Building Code and related codes.
- Conducted education provider training to educate new providers and update and inform existing providers.
- Conducted extensive training for building department personnel on building code updates and specific subject areas.
- Developed and disseminated a public awareness campaign on green building and design, including development of a list of experts for distribution to media sources; development of three fact sheets to serve as a resource on green building and design; and completion of an outreach project directed at builders and building officials relating to available green products and systems.
- Developed and updated fact sheets available for use by the public and licensees.
- Administered the meetings and tasks of the Commission's Education Program Oversight Committee, including conducting meetings, managing course applications, review, and approval, handling inquiries from licensees, providers, and the public; and development of guidelines and information on course development and processing.

## 9. Florida Building Code System—Updates on 2008 Commission Actions

### FLORIDA BUILDING CODE SYSTEM

Florida Statute, Chapter 553.77(1)(b), requires the Commission to make a continual study of the Florida Building Code and related laws and on a triennial basis report findings and recommendations to the Legislature for provisions of law that should be changed. In 2005 the Commission conducted, and reported to the 2006 Legislature, the results of the Building Code System assessment, which resulted in the 2006 Legislature granting the Commission authority to conduct expedited code amendments. Following are 2007 Commission initiatives and actions related to the Florida Building Code System:

**The Florida Building Code and the Code Development Process.** The new Florida Building Code is a statewide code implemented in 2001 and updated every three years. The Florida Building Commission developed the Florida Building Code from 1999 through 2001, and is responsible for maintaining the Code through annual interim amendments and a triennial foundation code update. In 2006, the Commission selected the 2006 I Codes as foundation for the 2007 Florida Building Code, and during 2007, it developed and adopted the 2007 Edition of the Code, representing the second update and Third Edition of the Florida Building Code. The Commission amended its rules to develop criteria ensuring that annual amendments are restricted to issues that are urgent and cannot wait for the triennial code updates, such as life-safety issues, and updating standards and changes to state and federal law(s). The Commission also developed rules for Technical Advisory Committee (TAC) proposed code amendments to include TAC comments on the its review of amendments to ensure the Commission has additional input from its technical experts.

**The Commission.** The Commission is an appointed representative stakeholder body that develops, amends and updates the Code. The Commission is composed of members representing each of the key interests in the Building Code System. The Commission meets every six weeks and, in addition to its code development responsibilities, regularly considers petitions for declaratory statements, accessibility waiver requests, the approval of products and entities, and the approval of education courses and course accreditors. The Commission also monitors the Building Code System and reports to the Legislature annually with its recommendations for changes to statute and law.

**Local Administration of the Code.** Florida Law requires that the Code be administered and enforced by local government building and fire officials. The Commission has certain authorities in this respect such as the number and type of required inspections. In 2007, the Commission conducted an assessment survey to review and address the code administration needs of local governments with consideration of measures to improve uniform and effective enforcement of the Code. The Commission identified a need to address the code administration needs of local governments with an emphasis on identifying measures to improve uniform and effective enforcement of the Code. During 2008 the Commission convened the Commission's Code Administration Technical Advisory Committee to develop recommendations to enhance the functioning of this important component of the Building Code System.

**Strengthening Compliance and Enforcement.** Compliance and enforcement of the Code is a critical component of the system, and the Commission’s emphasis in this regard is on education and training. During 2008, the Commission’s Education Program Oversight Committee (POC), working with the program administrator and other entities, implemented initiatives collaboratively to ensure Florida construction and design industries licensees are informed about Florida Building Code requirements and aware of related specific duties.

**Product Evaluation and Approval.** To promote innovation and new technologies, a product and evaluation system was determined to be the fifth cornerstone of an effective Building Code System. The product approval process should have specific criteria and strong steps to determine that a product or system is appropriately tested and complies with the Code. Quality control should be performed by independent agencies and testing laboratories that meet stated criteria and are periodically inspected. A quality assurance program was also deemed essential. The Commission adopted a Product Approval System by rule and currently approves products for state approval and product approval entities. Local product approval remains under the purview of local building officials a part of the building permit approval process.

**Manufactured (Modular) Buildings Program**

The Manufactured (Modular) Buildings Program is authorized under Chapter 553, Part I, Florida Statute, and Rule 9B-1, Florida Administrative Code, to regulate factory-built buildings constructed to the Florida Building Code. All approved buildings bear a Department of Community Affairs (DCA) insignia, which attests to compliance with the Florida Building Code.

Certification of manufacturing facilities, quality control manuals, plan reviews, product approval and in-plant inspections are conducted by private agencies, acting as agents for the Department of Community Affairs. Agency personnel are licensed by the Department of Business and Professional Regulation.

The Department issued 33,716 modular building insignias during Fiscal Year 2007-2008:

**Insignias Issued**

Storage Sheds	24,723
Portable Classrooms	6,040
Residential	757
Commercial	2,196

In 2008, the Department initiated changes to Rule 9B-1, F.A.C., Manufactured Building Program, to clarify programmatic procedures for onsite modifications of previously approved manufactured buildings, documentation required for code-related items not installed at the manufacturing facility, and recertification of previously approved manufactured buildings.

The Department of Community Affairs and Department of Business and Professional Regulation staff conducted a comprehensive review and update of the Modular Plans Review and Inspector licensing examinations in 2008. The updated examinations, in coordination with previous changes to the Building Code Administrators and Inspectors Board rules, should increase the number of individuals licensed to conduct modular building plan reviews and inspections.

The Codes and Standards Section has been targeted for a reduction of four Full-Time Employees (FTEs) in Fiscal Year 2009-2010. The staff reductions, plus additional budget cuts, will negatively impact the Department's ability to continue the current management structure of the Manufactured (Modular) Buildings Program. Legislative authority allowing the Department to contract the administrative responsibilities to a private vendor is necessary to insure a continued viable Manufactured (Modular) Buildings Program. As with the Product Evaluation and Approval System, the Department and Florida Building Commission will maintain the responsibility for program oversight.

The Department and the Commission request legislative authority as follows:

- (1) Contract for the Manufactured (Modular) Building administrative responsibilities;
- (2) Manufacturers to pay the administrator directly for plans review and inspection services via the Building Code Information System (BCIS);
- (3) Department to establish plans review and inspection fees.

## **2008 COMMISSION ACTIONS**

*(Appendix A—Commission 2008 Milestones)*

## **COMMISSION 2008 POLICY IMPLEMENTATIONS**

The following are policy decisions by the Commission implemented during 2008 with existing Commission authority through administrative rule development:

### **Amend 9B-72.180 on Product Approval Equivalency Standards and Rule 9B-72.090 on Product Approval Self Affirmation**

Manufacturers requested the Product Approval POC evaluate limitations on self affirmation currently in Rule 9B-72 to determine if the Rule could be modified to facilitate affirming compliance of products approved under the 2004 FBC with the 2007 FBC. As a result, the Commission voted to initiate rulemaking on product approval self affirmation and equivalency of standards. At the December 15, 2008 Rule Development Workshop the Commission voted unanimously to allow the upload of an attachment for the self-affirmation method in the Building Code Information System, providing a method for the entity or individual who originally certified that the product complied with the requirement of one Edition of the Code complies with the Updated Edition of the Code, and to proceed with Rule Adoption on Rule 9B-72.090 by conducting a Rule Adoption Hearing at the February 2009 Commission meeting.

In addition, the Commission voted unanimously to recognize the following standards as equivalent: ANSI/DASMA108-02 Standard Method for Testing Sectional Garage Doors and Rolling Doors: Determination of Structural Performance under Uniform Static Air Pressure Difference is equivalent to ANSI/DASMA 108-05; TPI 1-02 National Design Standards for Metal-Plate-Connected Wood Truss Construction is equivalent to TPI 1-07; and,



ASTM E 1300-02 Practice for Determining Load Resistance of Glass in Buildings is equivalent to ASTM E 1300-04; and, to proceed with Rule Adoption on Rule 9B-72.180 by conducting a Rule Adoption Hearing at the February 2009 Commission meeting.

#### **Design Charette for Hotel Room Accessibility**

The Accessibility TAC identified the design charette as a way to address shortcomings in the accessibility of remodeled hotel and motel sleeping rooms. Prior charettes on theater seating and miniature golf sponsored by the Commission provided much needed clarification and guidelines for improving the accessibility of those facilities and limited the incidence of noncompliance and petitions for waiver of the Florida Accessibility Code. The Commission convened a design charette during the December 2008 meeting for hotel room accessibility that was well attended and well received.

#### **Evaluate Swimming Pool Entrapment Standards Application to Existing Pools**

The Plumbing TAC recommended the Commission evaluate how swimming pool entrapment protections could be addressed for future editions of the Code. The request was initiated in response to a failed glitch amendment proposal to the 2007 FBC by the National Spa and Pool Association representatives.

#### **Evaluate Need for 4 Hour Bldg Code Core Course as Licensing Requirement**

The Education POC recommended, based on public input, that the Commission evaluate whether a core course on the building code was still needed. The requirement was originally enacted in law when the Florida Building Code replaced all local codes.

#### **Evaluate Adoption of Flood Standards in the Florida Building Code**

At the request of the Division of Emergency Management (DEM) the Commission convened a Flood Standards Workgroup charged with developing recommendations for integrating the IBC flood damage-resistant provisions in the Florida Building Code. FEMA is providing funding to support the workgroup, and has worked with ICC for past 10 years on flood standards for buildings that would satisfy the needs of the National Flood Insurance Program, and is now satisfied with the standards in the IBC. When the 2001 Florida Building Code was developed the decision was made, primarily for administrative reasons, to eliminate flood standards from the foundation model code and continue the practice of building standards being adopted through Flood Plain Management Ordinances of communities participating in National Flood Insurance Program. In addition, the State is requesting that the policy be reviewed to resolve any identified administrative issues and the IBC flood standards be retained in the 2010 FBC. The Commission will conduct this process during 2009.

## COMMISSION 2008 INTERAGENCY COLLABORATION INITIATIVES

### **Investigate A Consistent Definition of “Bedroom” for Department of Health On-site Septic System Sizing Regulations**

The Commission convened a facilitated joint workgroup process with the Florida Department of Health (DOH) to develop recommendations regarding requirements for the sizing of septic systems. The purpose of the Workgroup is to develop recommendations regarding an acceptable definition of “Bedrooms” used for the sizing of septic systems. The definition should work from the Florida Building Code (FBC) and Department of Health (DOH) perspectives. This initiative is a cooperative effort with the Florida Department of Health directed to improving the definition used by the DOH rule for septic system sizing.

The Workgroup voted unanimously to recommend in concept the following strategy for sizing septic systems:

- Use census definition of rooms for calculating system sizes,
- All rooms that meet the “Room” definition are counted as a room,
- Use 70 square feet as minimum room size, and
- Use a conversion factor of 50 gallons per day/room for sizing septic systems.
- The proposal will be submitted to the Department of Health’s (DOH) Technical Review and Advisory Panel (TRAP) for evaluation and feedback.
- DOH should also evaluate the 50gpd/room and 70 square foot criteria to ensure they are the best numbers to use in the formula for calculating septic system sizing.
- The Workgroup will meet a final time once TRAP has evaluated the Workgroup’s consensus recommendations regarding a strategy for method for the sizing of septic systems.

*(Appendix E—Bedroom Definition Workgroup)*

### **Evaluate Rainwater Collection and Reuse for Process Water and Other “Green” Technologies in Coordination with DOH, Health Officials, DEP and Other Water Management Agencies**

The Plumbing TAC identified rainwater collection as a growing “Green Building” practice that should be evaluated by building and health regulators. It is expected that appropriate requirements would facilitate implementation of the practice, and the Commission will convene a workgroup during 2009 to address this issue.

### **Evaluate In-Home Waste Water Recycling in Coordination with Department of Health and Department of Environmental Protection**

This task was originated at the request of the Florida Department of Health and Florida Department of Environmental Protection. It was first addressed for the 2007 Code and resulted in the inclusion of the Florida Department of Health requirements for home grey water capture and reuse for irrigation outside homes. This task will be further evaluated for the 2010 Code Update process.

## OTHER COMMISSION 2008 INITIATIVES

### Code Administration Assessment Project

Local administration and enforcement of the Code is one of the key foundations of the Building Code System, and during 2007 the Commission sought the views of local jurisdictions—of all sizes and in all geographic regions of the State—on their perspectives and needs regarding the local administration of the Code, as well as their recommendations for measures to improve the uniform and effective enforcement of the Code, including how the Commission could best assist local jurisdictions relative to the administration of the Florida Building Code. The Florida Conflict Resolution Consortium at Florida State University (<http://consensus.fsu.edu/>) designed and conducted an on-line survey ensuring that the needs and views of the broadest possible spectrum of local jurisdictions were considered during the survey which was linked to BOAF's Web site and distributed to BOAF's members. The Survey was completed and reviewed with the Commission at the October 2008 meeting. Subsequently the Commission's Code Administration TAC, met over several meetings and developed recommendations for the Commission. The Commission reviewed the recommendations at the May 2008 meeting and DCA staff is researching implementation costs and will report back at a subsequent meeting.

Following are the TAC's recommendations:

- *Provide a compilation of the rationale for Code changes as soon as possible after adoption.*
- *Provide regular updates and notices to local jurisdictions, and construction and design professionals, including designing and using a clearer and easier to use Web site and electronic notices, on Commission legal interpretations, declaratory statements, Code interpretations, Code changes, and policy decisions.*
- *E-mail link to Commission minutes to interested parties with option to unsubscribe.*
- *The Commission should encourage local officials to attend Commission meetings so they are informed of the Commission's work.*
- *Web cast live Commission meetings.*
- *Video tape meetings and archive Commission meetings.*
- *Provide outreach to citizens/public to make them aware of the permits required for repairs or alterations to their homes.*
- *Seek Legislative authority for the Commission to issue Accessibility Code interpretations.*
- *Encourage local building departments to regularly establish measurable performance standards for customer service based on volume and ability to do the work.*

*(Appendix C—Code Administration Recommendations)*

### Workplan Prioritization Ranking Exercise Results

Each year the Commission conducts a Workplan Prioritization Exercise to focus resources on Commission priorities. Commissioners were asked to rank each of the twenty (20) Workplan Tasks on a five point continuum/scale where a five equals the highest level of priority and a one equals the lowest level of priority. Members were asked to rank the priority of each topic independently and not in relation to the other topics. Each Workplan Task's rankings were tallied and arranged in order of highest priority (1) to lowest priority (20).

Following are the results of the Commission's prioritization exercise for 2008:

<b>WORKPLAN PRIORITIZATION EXERCISE RESULTS CONDUCTED OCTOBER 15, 2008</b>	
<b>WORKPLAN TASK</b>	<b>OVERALL RANKING</b>
39.) Energy conservation measures	1
1.) Report to 2009 Legislature	2
22.) 2010 Code development process	3
9./10.) Research for hurricane resistance Code enhancements <ul style="list-style-type: none"> <li>• window/water leakage</li> <li>• window/wall interface</li> <li>• soffit performance</li> </ul>	4
28.) CO detectors recommendations	5
35.) Develop plan to implement legislated energy efficiency increases	6
27.) Criteria for cost effectiveness test for increases in energy efficiency	7
30.) Develop list of evaluation entities & report to Legislature, or develop criteria for approving evaluation entities by rule	8
26./11.) Indoor Humidity & Moisture Control	9
16.) Efficiency standards for energy using products	10
38.) Evaluate adoption of flood standards in FBC (DEM, FEMA)	11
25.) Bedroom definition for septic tank sizing with DOH	12
33.) Entrapment standards for existing pools	13
37.) Evaluate equivalency of ASTM E 1300-02 and 04 & self affirmation for PA Rule 9B-72	14
24.) Soffit system labeling requirements	14
32.) Design charette for hotel room accessibility	16
31.) Develop enhancements for gravel roof systems	17
34.) Evaluate rainwater collection and use with DOH	18
36.) Evaluate need for Code Core Course requirement for licensing	19
29.) Criteria for energy efficient pool systems	20

## APPENDIX A

### COMMISSION MILESTONES FOR 2008

<http://consensus.fsu.edu/FBC/index.html>

#### January 2008

Commission adopts Green Building Model Ordinance and Public Awareness Campaign. Commission approves Report and Recommendations to 2008 Legislature. Commission conducts rule adoption hearings on Rule 9B-72, Product Approval, and Rule 9B-70, Education. Commission conducts annual effectiveness assessment survey.

#### March 2008

Commission votes to seek legislative authority to issue declaratory statements on the Florida Accessibility Code, based on Accessibility TAC and Accessibility Code Interpretation workshop participant recommendations. Commission conducts rule development workshops on Rule 9B-13, Energy Code, Rule 9B-3.050, Amendments to Florida Building Code, and Rule 9B-3.053, Alternative Plans Review and Inspection Form. Commission conducts rule adoption hearings on Rule 9B-7.042, Accessibility Code, and Rule 9B-70 Education. Commission Chair creates and appoints Soffit System Workgroup and Septic System Sizing Workgroup. Chair creates Regional AC Efficiency Workgroup. Commission hears presentation on state of the construction industry sector of the economy.

#### May 2008

Commission conducts rule adoption hearings on Rule 9B-13, Energy Code, Rule 9B-3.050, Amendments to Florida Building Code, and Rule 9B-3.053, Alternative Plans Review and Inspection Form. Commission voted to notice changes for Rule 9B-70.002, Commission Approval and Accreditation of Advanced Building Code Training Course. Commission voted to send a letter to Governor requesting the preservation of the Commission's funding within the DCA Operating Trust Fund. Commission voted to delay implementation date of adopted Energy Code amendments until January 1, 2009, and notices changes to the proposed rule to achieve 15% increased efficiency and to file the rule with the Department of State for adoption. Any additional Energy Code Amendments will be considered during the 2010 Code Update process. Commission receives final report and recommendations from the Code Administration Assessment project.

#### June 2008

Commission votes to make the effective date of the 2007 Florida Building Code and 2007 Florida Energy Code December 31, 2008, and to extend the deadline for submitting Glitch changes to July 15, 2008. TAC's begin process of commenting on proposed Glitch Amendments to the 2007 Florida Building Code. Commission votes to consider all Glitch Amendments during a rule development workshop on Rule 9B-3.047, Florida Building Code Glitch Amendments, to be conducted at the August 2008 meeting. The Commission will conduct a rule adoption hearing at the October 2008 meeting for Glitch Amendments. Commission votes to conduct rule development on Rule 9B-72 for Self-Affirmation (9B-72.090) and for Equivalency of Standards (9B-72.180) between ASTM E 1300-02 and 1300-04.

- August 2008** August 2008 Commission meeting cancelled due to travel risks associated with Hurricane Fay.
- September 2008** Commission conducts teleconference meeting and votes to make effective date of 2007 Florida Building Code, the 2008 Supplement to the 2007 Florida Building Code to implement glitch code amendments, and the 2007 Florida Energy Code March 1, 2009.
- October 2008** Commission creates a Flood Standards Workgroup charged with developing recommendations for integrating the IBC flood damage-resistant provisions in the Florida Building Code. Commission votes to convene a CO Detector Workgroup charged with developing recommendations regarding implementation of the 2008 statutory requirements for CO detectors. Commission conducts a supplementary rule adoption hearing for Rule 9B-13, the Energy Code Rule and votes to adopt amendments that implement the Governor’s Executive Order 127 directive to increase building efficiency requirements by 15 percent, and to proceed with rule adoption by filing the rule. Commission conducts a rule development workshop for Rule 9B-70, Education, to develop amendments for on-line forms for the Education Program. Commission conducts a rule development workshop on Rule 9B-3.047, Florida Building Code, Glitch Amendments, and votes to integrate and notice the approved amendments, and to conduct a rule adoption hearing at the December 2008 meeting. Commission votes to initiate rulemaking to amend Rule 9B-72 to recognize the Equivalency of Standards between ASTM E 1300-02 and ASTM E 1300-04. Commission votes to set a schedule for rulemaking to implement the Commission’s actions relative to adopting the 2008 NEC, by July 1, 2009. Commission votes to adopt a Commission policy requiring that Commission programs shall be required to be self-supporting for all costs, and fees will be adjusted to reflect the true cost of administering the program(s).
- December 2008** Commission adopts summary of issues and recommendations for inclusion in the 2009 Report to the Legislature. Commission conducts rule adoption hearings and votes to adopt and file with the Secretary of State Rule 9B-70, Education, and Rule 9B-3.047, Florida Building Code, Glitch Amendments. Commission agrees to settle rule challenge to Rule 9B-3.047 by voting that the interior decorator amendment (3176) is a Glitch Amendment and to initiate a separate rulemaking on Rule 9B-3.047 to specifically recognize in the Code interior decorators’ authority to sign and seal construction documents for permitting, to be completed by July 1, 2009. With the adoption of the 2007 Edition of the Florida Building Code, the Commission votes to initiate rulemaking to repeal Rule 9B-3.0477, Electrical Bonding of Pool Decks, Rule 9B-3.0475, Wind Mitigation Retrofits, and Rule 9B-3.0472, Carbon Monoxide Detectors. Commission conducts an accessibility design charette for hotel sleeping room renovations. Commission convenes 2010 Florida Energy Code Workgroup and 2010 Florida Accessibility Code Workgroup, and agrees to convene a Green Roofs Workgroup. Commission conducts teleconference rule development workshops on Rule 9B-72.090, Product Approval Self Affirmation, and Rule 9B-72.180, Product Approval Equivalency of Standards.

## **APPENDIX B**

### **COMMISSION PROCESS ENHANCEMENTS**

(Adopted Unanimously October 14, 2008)

[http://consensus.fsu.edu/FBC/fbc\\_documents.html](http://consensus.fsu.edu/FBC/fbc_documents.html)

### **FBC TELECONFERENCE PROCESS**

#### **ATTENDANCE**

- Facilitator will ask Commissioner or committee members to identify themselves.
- Members will offer their names one at a time. To avoid confusion and to ensure accuracy, please wait until facilitator repeats and confirms a name before offering another.
- Once attendance is complete, the agenda will be reviewed and approved by the Commission or Committee.
- Commission or committee members should announce if they have to sign-off before the teleconference meeting is complete, to ensure a quorum and accurate count of votes.

#### **PARTICIPANT ETIQUETTE**

- Background noise from participants is picked-up and amplified on the conference leader's phone, especially if you are on a speaker-phone.
- Please place your phone on mute unless speaking, to cut down on ambient background noise.

#### **DISCUSSION PROCESS**

- Chair/Facilitator will introduce discussion item or presenter.
- Presenter will provide overview of issue and recommendation(s) for Commission or committee action.
- Hold questions until presentation is complete.
- Once presentation is complete, Chair/Facilitator will ask if Commissioners or committee members have clarifying questions on the issue, create a speaker's list, and call on members in-turn for clarification.
- Chair/Facilitator will ask if anyone from the public wishes to discuss the issue or propose alternative options, create a speaker's list, and call on participants in-turn for discussion.
- Chair/Facilitator will ask if any Commissioner or committee member wishes to discuss the issue or propose alternative options, create a speaker's list, and call on members in-turn for discussion.
- Once clarification and discussion is complete, Chair/Facilitator will ask if a Commissioner or committee member wishes to make a motion on the issue.
- Following a second for the motion, Chair/Facilitator will ask if there is any additional discussion.
- If the motion involves an option the public has already provided input on, then the vote is taken following any additional Commission or committee discussion; if the proposed action (motion) is materially different from what was previously discussed, an additional opportunity is provided for public comment, and then the Commission or committee votes on the motion.

## **FLORIDA BUILDING COMMISSION**

### **CONSENSUS-BUILDING AND DISCUSSION PROCESS**

The Commission seeks to develop consensus-based policy decisions and recommendations. General consensus is a participatory process whereby, on matters of substance, the members strive for agreements which all of the members can accept, support, live with or agree not to oppose. In instances where, after vigorously exploring possible ways to enhance the members' support for a final decision on an issue and the Commission finds that 100% acceptance or support is not achievable, final decisions will require at least 75% favorable vote of all members present and voting. This super majority decision rule underscores the importance of actively developing consensus throughout the process on substantive issues with the participation of all members and which all can live with. In instances where the Commission finds that even 75% acceptance or support is not achievable, publication of recommendations will include documentation of the differences and the options that were considered for which there is more than 50% support from the Commission.

The Commission develops its decisions and recommendations using consensus-building techniques with the assistance of the Facilitator (i.e., brainstorming, acceptability ranking, prioritization, etc). The Commission's consensus process is conducted as an open process consistent with applicable law and rule. Commission members, staff, and facilitator are the only participants seated at the table, and only Commission members may vote on proposals and recommendations. To the extent reasonable, on each substantive issue the Commission shall identify and evaluate the full range of options prior to offering a formal motion. This ensures that the Commission makes the best possible decision informed by the public's and Commissioner's perspective on the issue and range of alternatives.

#### **Substantive Discussion Issue Process Overview**

- Issue is presented to the Commission,
- TAC, POC, Workgroup, Ad Hoc, or staff recommendations are presented,
- Commission asks clarifying questions (addresses a specific point that is not understood),
- Commission identifies any additional options they want discussed/evaluated,
- Public is provided an opportunity to comment on the options, and/or to offer alternative options for Commission consideration,
- Commission discusses the range of options,
- A motion is made for a specific action on the issue,
- Commissioners may, through the Chair or Facilitator, request clarification from the public,
- If the motion involves an option the public has already provided input on, then the vote is taken following any additional Commission discussion; if the proposed action (motion) is materially different from what was previously discussed, an additional opportunity is provided for public comment, and then the Commission votes on the motion.

To enhance the possibility of constructive discussions as members educate themselves on the issues and engage in consensus-building, members agree to refrain from public statements that may prejudice the outcome of the Commission's consensus process. In discussing the Commission process with the media, members agree to be careful to present only their own views and not the views or statements of other participants. In addition, in order to provide balance to the Commission process, members agree to represent and consult with their stakeholder interest groups to the extent feasible.



## **FLORIDA BUILDING COMMISSION**

### **PUBLIC INPUT ON COMMISSION DISCUSSION PROCESS**

Discussion item is introduced and any background information provided. If there is a specific action requested of the Commission, the proposal is summarized and any rationale provided.

Chair or Facilitator asks Commission members only for clarifying questions (a clarifying question addresses a specific point that is not understood, and should not indicate support or opposition to the proposal).

After questions, the Chair or Facilitator opens the issue up for discussion. All Commission members wishing to speak must raise their hand(s) and be acknowledged by the Chair/Facilitator prior to speaking. Commission adopted meeting guidelines are in effect at all times.

Following Commission's preliminary discussion on a substantive issue, the Chair or Facilitator asks if any members of the public wishes to address the Commission on the current issue under Commission consideration. Members of the public will be provided one opportunity to comment per discussion/agenda item, and may be time limited depending on number of people wishing to speak and number of issues on the agenda. The Facilitator serves as the moderator for public input. The Facilitator asks for those who wish to speak in favor of the proposal or topic under discussion to offer brief comments, others who wish to speak in favor are asked to offer new points or simply state agreement with previous speakers. The same opportunity and requirements are offered for those who wish to speak in opposition to the proposal or topic under discussion. In addition, the public may offer alternative options for Commission consideration. The Facilitator ensures that the full range of views are expressed and similar views are not repeated. Members may, through the Chair/Facilitator, ask clarifying questions to members of the public offering comments. This process is used for substantive issues and not for procedural matters before the Commission.

After discussion and public comment, a Commission member may offer a motion for an action on the issue. If there is a second to the motion the Chair/Facilitator calls for discussion. Once a motion is made and seconded, the discussion is restricted to only Commission members unless the Chair/Facilitator requests specific clarification from a member of the public. Commission members may request specific clarification from a member of the public through the Chair/Facilitator at any time. A member may wish to second a motion for the purpose of Commission discussion and not necessarily as a show of support for the motion. If the motion involves an option that the public has already commented on, then the vote is taken, if the proposed action (motion) is materially different from what was previously discussed, an additional opportunity is provided for public comment, and then the Commission votes on the motion.

Only motions to approve are considered. If there is no motion after discussion the requested action is not approved, and "dies" for a lack of a second.

In addition, members of the public are welcome to provide input to the Commission during the public comment period provided at each meeting, and all comments submitted on the blue "Public Comment" forms provided at each meeting are included in the Facilitator's summary reports.

## APPENDIX C

### CODE ADMINISTRATION PROJECT

#### Overview

One of the Florida Building Commission's responsibilities is making a continual study of the Florida Building Code and related laws, and on a triennial basis reporting findings and recommendations to the Legislature. The first triennial assessment was conducted in 2005 and recommendations were reported to the 2006 Legislature. A variety of issues were identified during the course of the assessment survey and ad hoc committee review process, and one of the recommendations developed and adopted by the Commission was to conduct an assessment of local building officials on their needs regarding administration of the Florida Building Code (Code). Some of the key issues identified during the review process included training and education, communication and outreach, staffing and qualifications, interpretations and appeals, funding, and state oversight.

Local administration and enforcement of the Code is one of the key foundations of the Building Code System, and the Commission, through an on-line assessment survey, sought the views of local jurisdictions—of all sizes and in all geographic regions of the State—on their perspectives and needs regarding the local administration of the Code, as well as their recommendations for measures to improve the uniform and effective enforcement of the Code, including how the Commission could best assist local jurisdictions relative to the administration of the Florida Building Code.

Following are the Code Administration TAC's recommendations to the Commission. DCA staff is researching implementation factors including costs relative to each recommendation:

- *Provide a compilation of the rationale for Code changes as soon as possible after adoption.*
- *Provide regular updates and notices to local jurisdictions, and construction and design professionals, including designing and using a clearer and easier to use website and electronic notices, on Commission legal interpretations, declaratory statements, Code interpretations, Code changes, and policy decisions.*
- *E-mail link to Commission minutes to interested parties with option to unsubscribe.*
- *The Commission should encourage local officials to attend Commission meetings, ensuring awareness of Commission actions.*
- *Provide live web-castings of Commission meetings.*
- *Video tape Commission meetings and archive the tapes.*
- *Provide outreach to citizens/public to make them aware of permits required for repairs or alterations to their homes.*
- *Seek Legislative authority for the Commission to issue Accessibility Code interpretations.*
- *Encourage local bldg dept to regularly establish measurable performance standards for customer service based on volume and ability to do the work.*

#### Meeting Facilitation

The project was facilitated by Jeff Blair from the Florida Conflict Resolution Consortium at Florida State University. Information at: <http://consensus.fsu.edu/>

#### Project Web Page

Information on the project, including agenda packets, meeting reports, and related documents may be found in downloadable formats at the project web page below:

[http://consensus.fsu.edu/FBC/fbc\\_survey.html](http://consensus.fsu.edu/FBC/fbc_survey.html)

## APPENDIX D

### HURRICANE RESEARCH ADVISORY COMMITTEE

#### Overview

At the January 26, 2005 Commission meeting, Chairman Rodriguez appointed a small coordinating group consisting of Commissioners and other stakeholder representatives, charged with identifying what research is being conducted related to building failure issues resulting from the 2004 hurricanes, identifying any research gaps on key issues identified but not being researched, and finally, to ensure that the Commission is provided with all relevant research findings on each of the major issues, prior to the Commission considering code enhancements resulting from lessons learned. The Committee has been instrumental in evaluating and making recommendations to the Commission on a broad suite of proposals regarding Building Code enhancements and research projects.

As a result of hurricanes affecting Florida during the 2004 and 2005 seasons, the Florida Building Commission's Hurricane Research Advisory Committee (HRAC) continues to meet at most Commission meetings to review research and make recommendations to the Commission regarding proposed code enhancements and research needs. Some of the Committee's recommendations were adopted with the 2006 Glitch Code amendments to the 2004 Code and others were adopted during the 2007 Code Update cycle, and still others will be implemented during the 2008 "Glitch" code annual interim amendment process. The Committee continues to consider enhancements to the Florida Building Code based on sound science. In addition, the Committee has recommended research to advance the science and allow the Commission to continually study and update the storm protection provisions of the Florida Building Code. The Committee is continuously monitoring current research and recommending the development of standards and installation practices related to protecting against wind damage and water infiltration, and the development of hurricane resistant construction standards.

During 2008 the Committee focused on evaluating Code enhancements regarding the window/wall interface and soffit labeling and performance standards. Current research initiatives includes:

- Evaluation of fenestration installation techniques.
- Evaluation of secondary water protection options.
- Quantification of tile missile impacts.
- Evaluation of the window/wall interface.
- 2008 hurricane deployment initiatives.

The Committee recommended that research is needed in the following topical areas:

- Wall penetrations for water intrusion.
- Secondary barrier performance standards for the mitigation rule.

## HRAC RESEARCH TOPIC STATUS

Recommendation	Actions	Targeted Code Change	Action Plan and Assignment
A bond break be provided between primary drainage planes and stucco renderings in drained assemblies. In simple terms this will require two layers of building paper or a layer of building paper over a plastic housewrap.	HRAC recommended Expedited Amendment Commission approved Expedited	Expedited Amendments 11/1/05	Completed
The specification, rating and testing of WRB's be consistent with their installed exposure – i.e. tested and rated as part of a stucco assembly. Appropriate performance specifications need to be developed for WRB's used with stucco renderings and the Florida Building Code altered to require them.	HRAC recommended Expedited Amendment  Commission approved Expedited	Expedited Amendments 11/1/05	Completed
The Florida Building Code be altered to come into compliance with the International Residential Code to explicitly allow for the construction of unvented roof assemblies.	HRAC recommended Expedited Amendment Commission approved Expedited	Expedited Amendments 11/1/05	Completed
Require application of exterior surface coatings to <del>appropriate standard or</del> manufacturer's specification.	HRAC recommended Expedited Amendment Commission approved Expedited	Expedited Amendments 11/1/05	Completed
Require wood, metal or other structural support "ridge board" for tile attachment methods 1, 2 and 4A	HRAC recommended Expedited Amendment Commission approved Expedited	Expedited Amendments 11/1/05	Completed

<b>Recommendation</b>	<b>Actions</b>	<b>Targeted Code Change</b>	<b>Action Plan and Assignment</b>
Require FBC approved pre-bagged mortar to attach hip and ridge tiles attachment methods 3 and 4B (pre-bagged mortar requirement applies to systems where mortar is the attachment component not systems utilizing ridge board and mechanical or adhesive-set)	HRAC recommended Expedited Amendment  Commission approved Expedited	Expedited Amendments 11/1/05	Completed
Require testing of ridge attachment systems according to SSTD 11 to establish wind up-lift resistance.	HRAC recommended Expedited Amendment Commission approved Expedited	Expedited Amendments 11/1/05	Completed
Utilize an additional tile factor of 2-1 above that specified in SSTD 11 or TAS 101 to determine the “allowable overturning moment” or “attachment resistance expressed as a moment (Mf)”	HRAC recommended Expedited Amendment Commission approved Expedited	Expedited Amendments 11/1/05	Completed
Prohibit component substitution without proper laboratory testing and FBC Product Approval	HRAC recommended Expedited Amendment Commission approved Expedited	Expedited Amendments 11/1/05	Completed
Allow hip and ridge attachment systems with demonstrated performance equal or superior to that required by the identified systems	HRAC recommended Expedited Amendment Commission approved Expedited	Expedited Amendments 11/1/05	Completed
Address requirements for installation instructions via Product Approval Workgroup Recommendations	HRAC recommended Expedited Amendment Commission approved Expedited	Expedited Amendments 11/1/05	Completed

<b>Recommendation</b>	<b>Actions</b>	<b>Targeted Code Change</b>	<b>Action Plan and Assignment</b>
The moisture storage capacity of mass walls be increased by providing a “seat” at the base of these assemblies.	HRAC recommended expedited amendment Commission rejected	None	Referred back to FHBA (recommendation was from FHBA water intrusion report)
Define the terms “weather resistant” and “weather protection”	HRAC recommended expedited amendment Commission rejected	None	Referred back to Central Florida BOAF Chapter to pursue its recommendation
Delete the criteria of chapter 14 that deems walls constructed according to the masonry chapter and concrete chapter requirements to be weather resistant.	HRAC recommended expedited amendment Commission rejected	None	Referred back to Central Florida BOAF Chapter to pursue its recommendation
Require compliance with ANSI/SPRI ES-1 for edge flashings and copings.	HRAC recommended expedited amendment Commission deferred to glitch amendments	Glitch Amendments 12/23/06	Completed
Require compliance with ASTM E-1592 for testing the uplift resistance of metal panel roof systems. (Note: Require ASTM E-1592 for structural metal panel roof systems and UL 580 for non-structural metal panel roof systems)	HRAC recommended expedited amendment Commission deferred to glitch amendments	Glitch Amendments 12/23/06	Completed
Require asphalt shingles to comply with UL 2390 testing and rating based on wind speed categories	HRAC recommended expedited amendment Commission deferred to glitch amendments	Glitch Amendments 12/23/06	Completed

<b>Recommendation</b>	<b>Actions</b>	<b>Targeted Code Change</b>	<b>Action Plan and Assignment</b>
Require removal of existing roof covering down to the deck and replacement of deteriorated sheathing in areas where basic wind speed is 110 mph or greater. If existing sheathing attachment does not comply with loads derived from Chapter 16, require installation of additional fasteners to meet the loads.	HRAC recommended expedited amendment Commission deferred to glitch amendments	Glitch Amendments 12/23/06	Completed
Make the requirements of 2001 FBC Section 1522 (Rooftop Mounted Equipment) applicable throughout the state for all wind speeds. Include in Mechanical Volume also.	HRAC recommended expedited amendment Commission deferred to glitch amendments	Glitch Amendments 12/23/06	Completed
Add criteria regarding wind and wind driven rain resistance of ridge vents. Attachment criteria require development but TAS 100A could be referenced for rain resistance.	HRAC recommended adoption in post “expedited” amendment	Deferred to further research	
Criteria for wind resistance of soffits should be developed and added.	HRAC recommended adoption in post “expedited” amendment	Glitch Amendments 12/23/06	Completed Further research also
Criteria for wind-driven rain resistance of soffits should be developed and added.	HRAC recommended adoption in post “expedited” amendment	Long range – post 2007 FBC update.	Conduct R&D to establish criteria. Budget authority requested for 2007-08
Water managed window and door installation requirements be developed and the Florida Building Code altered to require them.	HRAC recommended adoption in post “expedited” amendment	2007 FBC Update 10/1/08	Prescriptive default criteria developed by 3 national window groups and submitted for 2007 FBC Update

Recommendation	Actions	Targeted Code Change	Action Plan and Assignment
Windows and doors be correctly rated and tested according to ANSI/AAMA 101. Muller window units, double windows or composite windows be tested and held to the same requirements as single units.	HRAC recommended adoption in post “expedited” amendment	Glitch	Completed
Water managed window and door installation requirements be developed and the Florida Building Code altered to require them.	HRAC recommended adoption in post “expedited” amendment	2007 FBC Update 10/1/08	Prescriptive default criteria developed by 3 national window groups and submitted for 2007 FBC Update. <b>Not adopted for 2007 FBC</b>
Water managed details for dryer vents, electrical panel boxes, electrical boxes, vent fan hoods be developed and the Florida Building Code Altered to require them.	HRAC recommended adoption in post “expedited” amendment	Long range – post 2007 FBC update.	Conduct R&D to establish criteria. FY 07-08 project.
Remove the partially enclosed design option at the next code cycle.	HRAC recommended adoption in post “expedited” amendment	Special FBC amendment 1/1/07	Automatically enacted by adoption of 2006 IRC as required by 2005 SB 442. Implemented early-Jan 2007 via HB 1-A
Adopt ASCE 24-05 for elevation requirements and flood resistant materials, equipment.	HRAC recommended adoption in post “expedited” amendment	Out of Commission’s jurisdiction	FEMA and Florida DCA coordination. Special project for 2010 FBC.
Re-evaluate the hazard identification/mapping approaches in Coastal A/V Zones.	HRAC recommended adoption in post “expedited” amendment	Out of Commission’s jurisdiction	FEMA and Florida DCA coordination. Prepare and submit amendment.



For hurricane shelters and EHPA, adopt wind speed recommended by Florida DCA in the State Emergency Shelter Program and the ASCE 7-02/2001 FBC wind speed map design wind speed plus 40 mph using Performance Criteria 3.	HRAC recommended adoption in post “expedited” amendment	Out of Commission’s jurisdiction	Florida DCA, DOE and School Board Association negotiation. <b>Not adopted for 2007 FBC</b>
<b>Recommendation</b>	<b>Actions</b>	<b>Targeted Code Change</b>	<b>Action Plan and Assignment</b>
Pressure relieved/baffled soffit assemblies be developed for vented roof assemblies and the Florida Building Code altered to require them.	HRAC recommended adoption in post “expedited” amendment	Long range – post 2007 FBC update.	Conduct R&D to evaluate soffit water intrusion control methods.
It is unlikely that a practical paint specification can be developed in the short term to address micro-cracking stucco issues as the relationships among water vapor permeability, mil thickness and elasticity are not known. It is recommended that these relationships be explored and that until these relationships are understood the Florida Building Code not be altered to require “elastomeric paints” on stucco renderings.	HRAC recommended adoption in post “expedited” amendment	Long range – post 2007 FBC update.	Conduct R&D on water penetration, absorption and transport through concrete and masonry wall assemblies to establish criteria for coatings or other water control measures.
Add technically-based criteria regarding blow-off resistance of aggregate on built-up and sprayed polyurethane foam roofs (Roof Coverings for Roofs with Slopes Less than 2:12).	HRAC recommended adoption in post “expedited” amendment	Long range supported by R&D	Conduct R&D to establish criteria.
Develop window water leakage test and performance criteria specific to hurricane prone regions.	HRAC recommended adoption in post “expedited” amendment	Long range supported by R&D	Conduct R&D in support of AAMA standard development. Windows Work Group/UF research project

Develop criteria that pertain to attaching lightning protection systems. Include in the Electrical Volume also.	HRAC recommended adoption in post “expedited” amendment	Long range supported by R&D	Support industry standard development activity. Tom Smith/FEMA
Revise the Florida panhandle criteria to match ASCE 7 wind borne debris region.	HRAC recommended adoption in post “expedited” amendment	Legislature must change the law- Done Amend FBC by 7/1/07	Completed <i>(Conducted Study as directed by 2005 Legislature. Issue decided legislatively. Code amended effective July 1, 2007.)</i>

*Note: Red text indicates recommendations for expedited amendments to FBC  
Black text indicates deferral to glitch amendment proceeding decided 6/28/05  
Blue text indicates deferral to glitch amendment proceeding decided 5/10/05  
Purple text indicates Commission deferral of HRAC recommended expedited amendments, to the glitch amendment proceeding.*

### Meeting Facilitation

The project was facilitated by Jeff Blair from the Florida Conflict Resolution Consortium at Florida State University. Information at: <http://consensus.fsu.edu/>



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<http://consensus.fsu.edu/FBC/hrac.html>

## APPENDIX E

### BEDROOM DEFINITION WORKGROUP

The purpose of the Bedroom Definition Workgroup is to develop recommendations regarding an acceptable methodology for sizing septic systems. The Workgroup reviewed the strategy of using “Bedrooms” for the sizing of septic systems, and evaluated a universal bedroom definition that works from the Florida Building Code (FBC) and Department of Health (DOH) perspectives.

The Workgroup evaluated a range of options and voted unanimously, to recommend the Commission support in concept, the following strategy for sizing septic systems:

- Use census definition of rooms for calculating system sizes,
- All rooms that meet the “Room” definition are counted as a room,
- Use 70 square feet as minimum room size, and
- Use a conversion factor of 50 gallons per day/room for sizing septic systems.

The Workgroup identified the following additional considerations and next steps:

- The proposal should be reviewed by DOH’s TRAP for feedback.
- DOH should evaluate the formula’s factors to ensure they are accurate.
- DOH should analyze additional floor plans to ensure the methodology works.
- The effects of additions should be evaluated to ensure the formula still works.

#### Meeting Facilitation

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## APPENDIX F

### SOFFIT SYSTEMS WORKGROUP

The purpose of the Soffits Systems Workgroup is to evaluate and build consensus on recommendations regarding labeling and performance requirements for soffit systems in the Florida Building Code.

Workgroup members were asked to identify key topical issues that should be evaluated for developing soffit systems labeling recommendations for the Florida Building Code.

Following are the key topical issues identified by the Workgroup:

- **Format**
- **Content** (what should be provided on the label)
- **Inspection Needs** (providing on-site what the building inspector needs to ensure the product complies with the Code)
- **Performance Standards** (product/material types and prescriptive requirements)
- **Installation Instructions**

The Workgroup will continue meeting in 2009 and deliver recommendations to the Commission for implementation in the Code.

#### **Meeting Facilitation**

The project was facilitated by Jeff Blair from the Florida Conflict Resolution Consortium at Florida State University. Information at: <http://consensus.fsu.edu/>



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Information on the project, including agenda packets, meeting reports, and related documents may be found in downloadable formats at the project web page below:

<http://consensus.fsu.edu/FBC/soffit.html>

## APPENDIX G

### WINDOW WALL WORKGROUP

The Window Wall Workgroup was formed out of the work conducted by the Hurricane Research Advisory Committee and the Window Workgroup. The Window Workgroup developed recommendations for enhancing the performance of windows and identified the need for research on water infiltration regarding the window wall interface. The Workgroup is working in collaboration with the HRAC, and in January 2008 identified research issues needed to develop recommendations for code enhancements. The Workgroup identified the following topics for research:

- Origin, path and mechanisms of water intrusion.
- Validation of water intrusion test and window installation specifications.
- Innovation of new mitigation technologies for fenestration.
- Mitigation of existing window/wall systems.

Research on the window/wall interface is currently being conducted by the University of Florida in cooperation with industry stakeholders. The HRAC and Window/Wall workgroup continues to review and evaluate the research results with the goal of developing code recommendations for the 2010 Code Update process.

#### Meeting Facilitation

The project was facilitated by Jeff Blair from the Florida Conflict Resolution Consortium at Florida State University. Information at: <http://consensus.fsu.edu/>



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## APPENDIX H

### AC EFFICIENCY AND HUMIDITY AND MOISTURE CONTROL

At the recommendation of the Energy TAC the Commission convened a Regional AC Efficiency Workgroup. The Workgroup was charged with developing recommendations on whether the Commission and DCA should recommend to the United States Department of Energy (USDOE) regional AC efficiency standards for the hot and humid climate. The USDOE now has authority to develop and adopt regional AC efficiency standards. The Workgroup worked with affected stakeholder interests in a facilitated workgroup process. The Workgroup investigated the feasibility of a hot-and-humid climate regional efficiency rating for air-conditioner and heat-pump systems and if determined a regional standard is a good strategy, then to develop recommendations for the technical requirements.

Following the first meeting, the scope of the Workgroup was changed to develop recommendations regarding AC equipments' role in controlling humidity and moisture in buildings in a hot and humid climate. The Workgroup is tasked with considering a range of issues and options regarding the manufacturing, design and installation of AC equipment in controlling moisture and preventing mold and mildew in the hot and humid Florida climate.

#### **Prioritization of Near-Term Options**

Members were asked to rank each of the short-term options for controlling indoor moisture and humidity on their importance for achieving control of indoor humidity and moisture on a five-point scale, where five is the highest level of importance and one the lowest level of importance.

Following are the results of the prioritization exercise regarding level of importance for controlling indoor humidity and moisture control:

TOPIC	RANK
Airtight air distribution system	1
Use of ECM's/TXV	2
Location of ductwork-encourage conditioned space	3
Outside air ventilation	4
Humidity control devices	4
Envelope performance	6
Fan overrun/settings	7
Aux. dehumidification equipment in high performance buildings	7
Startup commissioning of equipment	9

TOPIC	RANK
Source control	10
Maintenance of equipment	10
Code mandated design criteria	10
Power consumption/testing at multiple points/dehumidification performance	13

### Identification and Discussion of Long-Term Issues and Action Plan

Members were asked to identify options that should be evaluated in the long-term regarding controlling indoor building humidity and moisture in a hot and humid climate.

Following are the issues/options identified during the meeting:

- Commercial building moisture control should be evaluated.
- Have the ARI directories list the moisture removal of equipment.
- Incorporate humidity removal in regional methodology for efficiency of AC.
- Consider a regional AC efficiency rating for the hot-and-humid climate.
- Come up with a humidity removal number label or rating as it relates to energy consumption.
- Proper enforcement of energy code could eliminate many of the problems.
- Review whether humidity control features are better located in mechanical code or energy code, or both.
- Have trained and certified system designers.

### Meeting Facilitation

The project was facilitated by Jeff Blair from the Florida Conflict Resolution Consortium at Florida State University. Information at: <http://consensus.fsu.edu/>



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## APPENDIX I

### WIND MITIGATION WORKGROUP

#### **Overview (Wind Mitigation Retrofits—Rule 9B-3.0475)**

At the June 2007 meeting the Commission conducted a rule development workshop on wind mitigation retrofits in order to implement the 2007 legislative direction regarding developing mitigation techniques for the retrofit of existing site-built residential buildings. In addition, at the request of stakeholders the Commission conducted a facilitated workshop in Tampa on August 8, 2007 and participants provided recommendations for the Commission's consideration regarding the legislative directive. At the August 2007 meeting, the Commission conducted a rule adoption hearing and voted to adopt the first edition of prescriptive techniques for required hurricane mitigation retrofit of homes by deck nailing, secondary water barriers installation, and roof-to-wall connections enhancement when a roof is replaced and voluntary gable end bracing in time for the Legislature's mandated implementation date of October 1, 2007. The Commission also voted to support the Florida Roofing and Sheet Metal Association's request that the Legislature delay implementation of the mitigation requirements. The Commission recommended that the Florida Legislature delay the implementation date to October 1, 2008 allowing adoption of the rule through the Commission's Glitch Amendments to the 2007 Florida Building Code process. The reason(s) for the recommended delay included the issues identified by stakeholders during the rule adoption hearing (i.e., licensure issues, permitting issues, liability issues, inspection and enforcement issues, structural efficacy issues regarding the roof-to-wall requirements, and the need to conduct a comprehensive review and development of recommendations working with all interested stakeholders). To comply with the 2007 Legislature's direction for an October 1, 2007 implementation date, at the August 2007 Commission meeting the Commission adopted Rule 9B-3.0475, Wind Mitigation retrofits. However, during the rule development process the public identified numerous concerns with some of the Rule's requirement including the roof-to-wall connection provisions, and as a result the Commission acknowledged that the current draft needs enhancements and the Commission committed to working with stakeholders during the Glitch Code process to consider enhancements to the Rule. As a result Chairman Rodriguez appointed a Wind Mitigation Workgroup to develop recommendations to the Commission on the wind mitigation provisions for implementation during the glitch code amendment process. The Workgroup met throughout 2008 and developed recommendations that were adopted by the Commission in the 2008 Glitch Amendment process.

#### **Meeting Facilitation**

The project was facilitated by Jeff Blair from the Florida Conflict Resolution Consortium at Florida State University. Information at: <http://consensus.fsu.edu/>



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## APPENDIX J

### CO DETECTOR WORKGROUP

The 2007 Florida Legislature directed the Commission to adopt carbon monoxide detector requirements written into law as a separate non-Code rule to take effect July 1, 2008 and to adopt the requirements from the law as part of the 2007 Code. The Commission's Mechanical TAC worked with stakeholders to develop recommendations for consideration by the Commission during the 2007 Code Adoption process which were adopted by Rule 9B-3.0472 effective July 1, 2008. In addition, the Commission integrated the CO detector provisions of Rule 9B-3.0472 into the 2007 Edition of the Code as a part of the Glitch Amendment process. As a result of the adopted Code requirements the Commission is making recommendations to the 2009 Legislature based on stakeholder input developed from the Commission's CO Detector Workgroup process. The recommendations are as follows:

The Commission seeks clarification and has recommendations regarding the Legislature's intent (Chapter 509.211 and 553.885 F.S.) for Carbon Monoxide (CO) Detector requirements in the Florida Building Code. They are as follows:

1. Clarify the responsibilities of the Division of State Fire Marshal (DSFM) and the Department of Business and Professional Regulation (DBPR) under Chapter 509.211 F.S.
2. Clarify the scope of what was intended by the term: "new construction".
3. Provide legislative authority for the Commission to review and determine the appropriate location(s) for CO detectors.
4. Clarify that the requirement applies to all fuel sources that emit carbon monoxide and not only fossil fuels.

#### **Meeting Facilitation**

The project was facilitated by Jeff Blair from the Florida Conflict Resolution Consortium at Florida State University. Information at: <http://consensus.fsu.edu/>



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