

**FLORIDA BUILDING COMMISSION  
 FLOOD RESISTANT STANDARDS WORKGROUP  
 MAY 29, 2009—MEETING III  
 OPTIONS/RECOMMENDATIONS EVALUATION  
 WORKSHEET**

**ACCEPTABILITY RANKING EXERCISE**

During the meeting(s) members will be asked to propose any additional option(s) they would like the Workgroup to evaluate, and to develop and rank options, and following discussions and refinements, may be asked to do additional rankings of the options if requested by a Workgroup member. Members should be prepared to offer specific refinements to address their reservations. The following scale will be utilized for the ranking exercises:

<b>Acceptability Ranking Scale</b>	<b>4 = acceptable, I agree</b>	<b>3 = acceptable, I agree with <i>minor</i> reservations</b>	<b>2 = not acceptable, I don't agree unless <i>major</i> reservations addressed</b>	<b>1 = not acceptable</b>
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**WORKGROUP'S OPTIONS EVALUATION PROCESS OVERVIEW**

For each key topical issue area the following format will be used:

- ☛ Research/data presentation(s) will be given (if any on the topic),
- ☛ Questions and answers on the presentation(s),
- ☛ General discussion with Workgroup members on the topic/issue,
- ☛ Identification of new options (if any),
- ☛ Refinements proposed to existing options (to enhance option's acceptability, if possible),
- ☛ Acceptability ranking of options (new, those with some level of support from previous meeting(s), and those a Workgroup member proposes to be re-evaluated),
- ☛ Additional data/research needs identified, as needed.

*During Workgroup Meetings:*

For each of the key topical issue areas, members will be asked to review existing options and invited to propose additional options for Workgroup consideration. The worksheet is organized, by key topical issue areas with relevant options for each, to address key issues for incorporating flood resistant standards into the 2010 Florida Building Code. A preliminary list of options was drafted, and the Workgroup may add any additional options they deem appropriate. When available, staff will provide relevant information from data collections, research studies, and other pertinent sources. Members should request any information they feel necessary for evaluating an issue, option or range of options. Once ranked by the Workgroup, options will be listed within relevant key topical issue areas, in descending order of initial support as indicated by the initial acceptability ranking. Options with 75% or greater number of 4's and 3's in proportion to 2's and 1's shall be considered consensus draft recommendations.

The Worksheet is organized as follows: overview of threshold issues, Florida-specific requirements, higher standards, coordination with local ordinances, administrative issues, and CCCL and V Zone requirements.

## OVERVIEW

At the request of the Florida Division of Emergency Management (DEM) the Florida Building Commission convened a Flood Resistant Standards Workgroup charged with developing recommendations for integrating the International Code Series (I-Codes: IBC, IRC, etc.) flood damage-resistant provisions (for buildings and structures) in the Florida Building Code. FEMA has worked with ICC for the past 10 years on flood standards for buildings that are consistent with the requirements of the National Flood Insurance Program (NFIP), and the current I-Codes reflects these standards. When the 2001 Florida Building Code (First Edition) was developed a policy decision was made, primarily for administrative reasons, to eliminate flood standards from the foundation model code and continue the practice of relying on Floodplain Management Ordinances adopted by communities participating in the National Flood Insurance Program. In addition, the DEM has requested that the policy be reviewed, that identified administrative issues be resolved, and that the I-Code flood standards be retained in the 2010 FBC. The Commission will conduct this facilitated stakeholder process beginning in March of 2009, with adopted recommendations submitted as code amendments for the 2010 Florida Building Code Update process.

In Florida, flood-resistant construction requirements are located primarily in community floodplain management ordinances and in Chapter 31 of the Florida Building Code (Section 3109: for buildings seaward of the CCCL\*). With some exceptions\*\*, the Code defers most requirements related to flood-resistant construction to community floodplain management ordinances, and the Code does not reference ASCE 24. The Code uses ASCE 7 as the methodology for wind load analysis to calculate wind loads, and states that flood loads shall be determined by the provisions of ASCE 7 (1605.2.2).

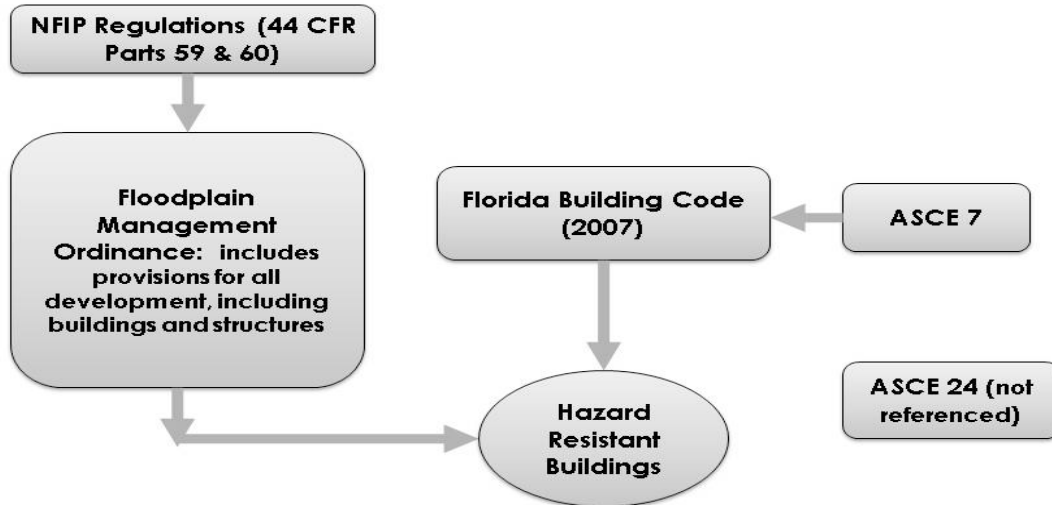
The National Flood Insurance Program (NFIP) requires that minimum development standards must be applied to all development (including development activities other than buildings) in special flood areas designated on maps prepared by the program. A code that applies only to buildings and structures does not fulfill all of the requirements for participation in the NFIP, and compliance would require a combination of the code and another ordinance that together address all development (FEMA describes this combination as the “comprehensive approach”).

*\* The CCCL is established by the FDEP and describes the landward boundary of “that portion of the beach-dune system which is subject to severe fluctuations based on a 100-year storm surge, storm waves, or other predictable weather event”.*

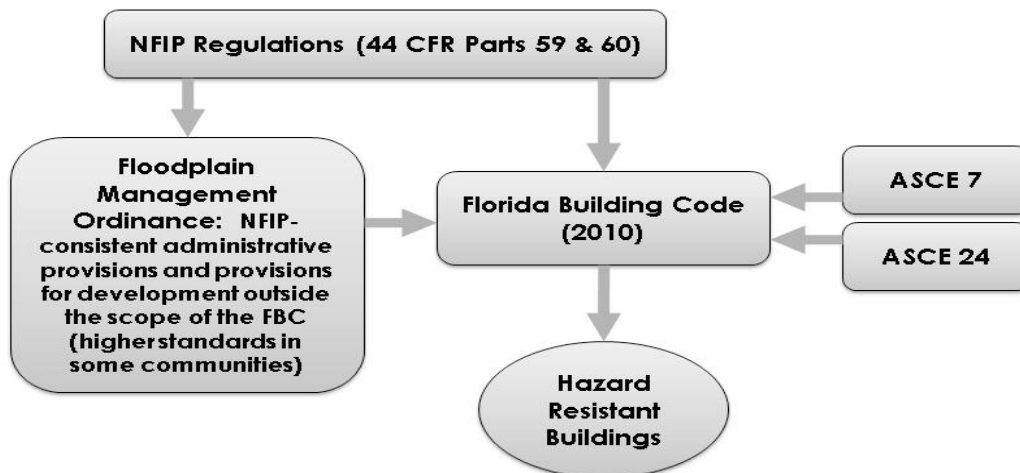
*\*\* The Code address siting requirements for nursing homes, hospitals, educational facilities, and shelters as well as general flood-resistant design requirements.*

<b>Key to Abbreviations</b>	
ASCE	American Society of Civil Engineers
BFE	Base Flood Elevation
CFR	Code of Federal Regulations
CCCL	Coastal Construction Control Line
Code or FBC	Florida Building Code
Commission	Florida Building Commission
CRS	Community Rating System
FBC	Florida Building Code
FEMA	Federal Emergency Management Agency
HVHZ	High Velocity Hurricane Zone
IBC/IRC	International Building/Residential Code
I-Codes	International Code Series (Family of Codes)
ICC	International Code Council
NFIP	National Flood Insurance Program

## ENFORCEMENT OF FLOOD RESISTANT STANDARDS—CURRENT PROCESS



## FLOOD RESISTANT STANDARDS INCORPORATED INTO THE FLORIDA BUILDING CODE—POSSIBLE STRATEGY



## THRESHOLD ISSUES REGARDING INCORPORATING FLOOD RESISTANT STANDARDS INTO THE FLORIDA BUILDING CODE

### Threshold Issues Evaluation Results

*On balance, should the Commission adopt/incorporate Flood Resistant Standards into the Florida Building Code.  
Summary of Member's Discussions:*

Members felt that the Commission should incorporate flood resistant standards into the Florida Building Code—within each of the respective codes.

*What should the Base Code for FBC Flood Provisions be—Should the base standards be the provisions found in the IBC including ASCE 24.*

*Summary of Member's Discussions:*

Members felt that the I-Code provisions should be used as the basis for inclusion of flood provisions relevant to buildings and structures into each of the respective codes (FBC). In addition, Members supported adopting ASCE 24 (Flood Resistant Design and Construction Standards) by reference as the flood provisions in each of the codes (FBC).

*Should the Workgroup focus on only buildings and structures for the 2010 Code Cycle.*

*Summary of Member's Discussions:*

Members felt the Code should only contain provisions for building and structures and other flood provisions should be handled at the local level via a local companion ordinance.

*How should Appendix G (IBC—Flood Resistant Construction) be handled.*

*Summary of Member's Discussions:*

Members felt that on balance this is an issue for local jurisdictions and would be handled between the Code flood standards provisions and the companion ordinance approach.

*Should local jurisdictions be allowed to adopt higher standards than the base standards.*

*Summary of Member's Discussions:*

Members supported allowing local jurisdictions to adopt higher standards for flood resistance provision to address local concerns within the Code (based on local flood studies), to ensure local's ability to be eligible for the NFIP's Community Rating System.

*What should the strategy be for handling inconsistencies between the Coastal Construction Control Line (CCCL) and flood provisions.*

*Summary of Member's Discussions:*

Members felt that inconsistencies between the CCCL and V Zone requirements shall continue to be resolved at the local level, and on a case-by-case basis.

*Should variances to flood resistant standards be allowed, and if so how.*

*Summary of Member's Discussions:*

Members agreed that the Code does not allow variances, and local jurisdictions would handle this within the context of the companion ordinance approach.

*Should it be permissible for flood resistant standards to be administered outside of building departments.*

*Summary of Member's Discussions:*

Members felt that on balance this is an issue for local jurisdictions and it would be handled by the combination between flood standards provisions incorporated in the Code and the companion ordinance.

## 1. FLORIDA SPECIFIC REQUIREMENTS—SPECIFIC CODE PROVISIONS

### *Options Evaluated by the Workgroup with equal to or more than a 75% Level of Support*

The I-Code provisions should be used as the basis for inclusion of flood provisions relevant to buildings and structures into each of the respective codes (FBC).

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking</i> <i>3/25/09</i>	9	1	0	0

Adopt ASCE 24 (Flood Resistant Design and Construction Standards) by reference as the flood provisions in each of the codes (FBC).

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking</i> <i>3/25/09</i>	7	3	0	0

## 2. HIGHER STANDARDS (EXCEEDING NFIP MINIMUM REQUIREMENTS)

### *Options Evaluated by the Workgroup with equal to or more than a 75% Level of Support*

Allow local jurisdictions to adopt higher standards for flood resistance provision to address local concerns within the Code (based on local flood studies), to ensure local's ability to be eligible for the NFIP's Community Rating System.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking</i> <i>3/25/09</i>	7	3	0	0

Seek a legislative exception so that local CRS (higher flood resistant standards) would not be subject to the local technical amendment requirements of the Code, subject to a consistency review with updated editions of the code.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 3/25/05 w/consistency review</i>	2	8	0	0
<i>Initial Ranking 3/25/09</i>	9	1	0	0
<i>Revised</i>	10	0	0	0

### 3. COORDINATION WITH LOCAL ORDINANCES

*Options Evaluated by the Workgroup with equal to or more than a 75% Level of Support*

Develop a model “companion” ordinance that includes NFIP-consistent administrative provisions and includes NFIP requirements for development other than buildings and structures that are not within the scope of the Code. Also, include a list of more stringent requirements that local jurisdictions could consider for possible adoption.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 3/25/09</i>	10	0	0	0

Adoption of flood maps and administrative procedures shall be at the local level.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 4/29/09</i>	11	0	0	0

### 4. COASTAL CONSTRUCTION CONTROL LINE AND V ZONE REQUIREMENTS

*Options Evaluated by the Workgroup with equal to or more than a 75% Level of Support*

Inconsistencies between the CCCL and V Zone requirements shall continue to be resolved at the local level, and on a case-by-case basis.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 3/25/09</i>	8	1	0	0

An interagency committee should develop a strategy for determining whether any inconsistencies between the CCCL and V Zone requirements can be resolved by code changes in the next code cycle (i.e., coordination between FBC, DEP, DEM, FEMA).

	<i>4=acceptable</i>	<i>3=minor reservation</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 3/25/09 w/2013</i>	6	3	0	0
<i>Revised 3/25/09</i>	9	0	0	0

**5. DISCUSSION ISSUES**

*Integrate flood resistant standards and ASCE 24 in the High Velocity Hurricane Zone (HVHZ).*

*Integrate swimming pools built in flood hazard areas and designated floodways with the flood provisions of the code.*

*Ensure flood resistant standards in the code are integrated within sections 419, 420 and 423 (state agency standards integration).*

*Provide a tie-back between the Code and the flood maps adopted by local jurisdictions in their floodplain management ordinance.*

*Provide a tie-back between the Code and the floodplain management ordinance adopted by local jurisdictions.  
Provide a definition of Floodplain Management Ordinance.*

*Evaluate the statutory definition of “Substantial Improvement” for impacts regarding adopting flood resistant standards in the Florida Building Code.*

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 5/29/09</i>				