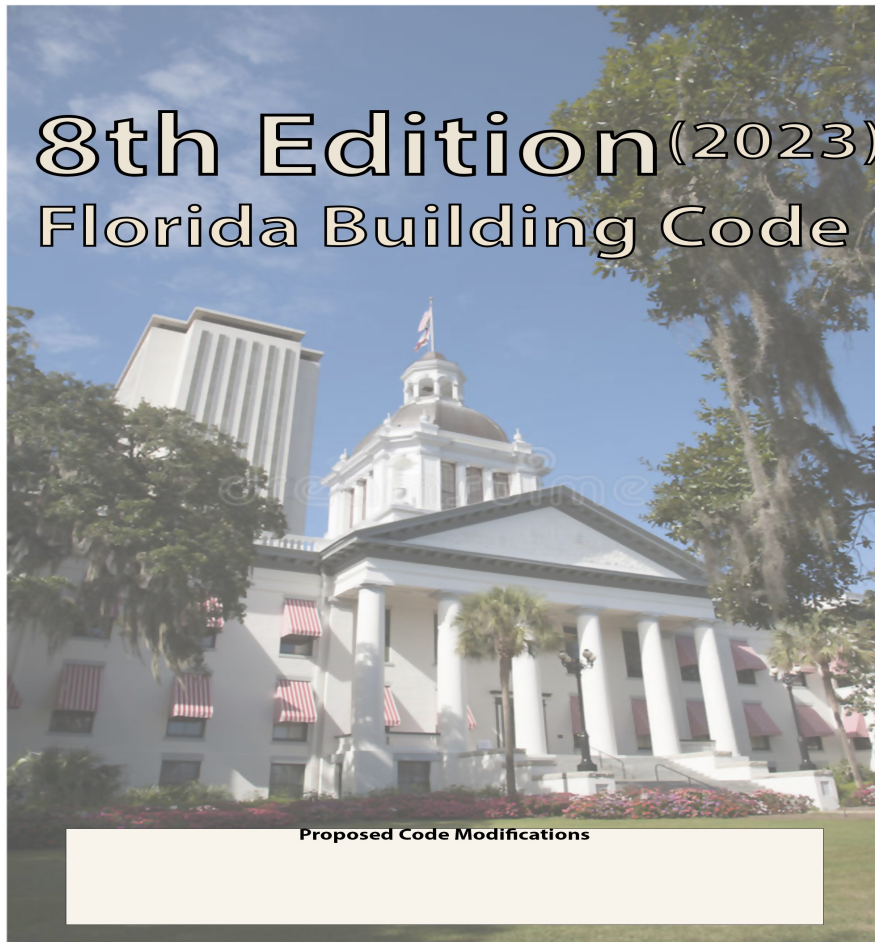


# 8th Edition (2023) Florida Building Code



## ICC 2021 Code Changes

This document created by the Florida Department of Business and Professional Regulation -  
850-487-1824

# TAC: Special Occupancy

Total Mods for **Special Occupancy** in **Approved as Submitted – Consent**: 7

Total Mods for report: 17

## Sub Code: Building

SP9557/S80-19

1

Date Submitted 3/5/2021  
Chapter 16

Section 1612.4  
Affects HVHZ Yes

Proponent Mo Madani

Attachments Yes

TAC Recommendation Approved as Submitted – Consent

Commission Action Pending Review

Staff Classification Flood Requirements

### Comments

General Comments Yes

### Related Modifications

1612.4

Directly correlated

### Summary of Modification

This proposal emphasizes the requirement for a flood emergency plan consistent with ASCE 24 and makes clear that such a plan, when indicated, is to be submitted with other flood hazard documentation.

### Rationale

Reason: This proposal emphasizes the requirement for a flood emergency plan consistent with ASCE 24 and makes clear that such a plan, when indicated, is to be submitted with other flood hazard documentation. ASCE 24 requires the submittal and approval of a flood emergency plan where dry floodproofing measures requiring human intervention are used. ASCE 24 requires flood emergency plans to specify the storage location of the shields, the method of installation, conditions activating installation, maintenance of shields and attachment devices, periodic practice of installing shields, testing sump pumps and other drainage measures, and inspecting necessary material and equipment to activate or implement floodproofing.

The design professional developing dry floodproofing measures that require human intervention should take into consideration the effort needed to effectively deploy such measures. Preparation of a flood emergency plan ensures that the methods specified by the design professional can be installed and implemented within the given warning time. If a design requires more warning time than reasonably available before the onset of flooding, then the designer should interpret that to mean the contemplated dry floodproofing measures must be redesigned, or that dry floodproofing may not be appropriate for the building. Additionally, maintenance, testing, and inspection are critical to ensuring system performance. The possible inability of owners or occupants to implement dry floodproofing due to lack of preparation or maintenance is regarded as an unacceptable risk.

(Please see the uploaded mod S80-19 for the complete text)

## Comment Period History

Proponent Rebecca Quinn obo F Submitted 6/18/2021

Attachments No

### Comment:

Retain this change. It is important that the emergency plan for dry floodproofing that requires human intervention be considered during design of the floodproofing measures. That's the only way the owner/applicant and the community has some assurance the measures can be implemented in the available time and expected personnel and resources available. Designs may need to be changed if implementation is infeasible. See FEMA Technical Bulletin 3.

SP9557-G1

Approved as Submitted

## 2018 International Building Code

### Revise as follows:

**1612.4 Flood hazard documentation.** The following documentation shall be prepared and sealed by a *registered design professional* and submitted to the *building official*:

1. For construction in *flood hazard areas* other than *coastal high hazard areas* or *coastal A zones*:
  - 1.1. The elevation of the lowest floor, including the basement, as required by the lowest floor elevation inspection in Section 110.3.3 and for the final inspection in Section 110.3.11.1.
  - 1.2. For fully enclosed areas below the design flood elevation where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.7.2.1 of ASCE 24, *construction documents* shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.7.2.2 of ASCE 24.
  - 1.3. For dry floodproofed nonresidential buildings, *construction documents* shall include a statement that the dry floodproofing is designed in accordance with ASCE 24 and shall include the flood emergency plan specified in Chapter 6 of ASCE 24.
2. For construction in *coastal high hazard areas* and *coastal A zones*:
  - 2.1. The elevation of the bottom of the lowest horizontal structural member as required by the lowest floor elevation inspection in Section 110.3.3 and for the final inspection in Section 110.3.11.1.
  - 2.2. *Construction documents* shall include a statement that the building is designed in accordance with ASCE 24, including that the pile or column foundation and building or structure to be attached thereto is designed to be anchored to resist flotation, collapse and lateral movement due to the effects of wind and flood loads acting simultaneously on all building components, and other load requirements of Chapter 16.
  - 2.3. For breakaway walls designed to have a resistance of more than 20 psf (0.96 kN/m<sup>2</sup>) determined using *allowable stress design*, *construction documents* shall include a statement that the breakaway wall is designed in accordance with ASCE 24.

## Code Change No: S80-19

### Original Proposal

#### Section(s): 1612.4

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, RCQuinn Consulting, Inc., representing Federal Emergency Management Agency (rcquinn@earthlink.net)

#### 2018 International Building Code

#### Revise as follows:

**1612.4 Flood hazard documentation.** The following documentation shall be prepared and sealed by a *registered design professional* and submitted to the *building official*:

1. For construction in *flood hazard areas* other than *coastal high hazard areas* or *coastal A zones*:
  - 1.1. The elevation of the lowest floor, including the basement, as required by the lowest floor elevation inspection in Section 110.3.3 and for the final inspection in Section 110.3.11.1.
  - 1.2. For fully enclosed areas below the design flood elevation where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.7.2.1 of ASCE 24, *construction documents* shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.7.2.2 of ASCE 24.
  - 1.3. For dry floodproofed nonresidential buildings, *construction documents* shall include a statement that the dry floodproofing is designed in accordance with ASCE 24 and shall include the flood emergency plan specified in Chapter 6 of ASCE 24.
2. For construction in *coastal high hazard areas* and *coastal A zones*:
  - 2.1. The elevation of the bottom of the lowest horizontal structural member as required by the lowest floor elevation inspection in Section 110.3.3 and for the final inspection in Section 110.3.11.1.
  - 2.2. *Construction documents* shall include a statement that the building is designed in accordance with ASCE 24, including that the pile or column foundation and building or structure to be attached thereto is designed to be anchored to resist flotation, collapse and lateral movement due to the effects of wind and flood loads acting simultaneously on all building components, and other load requirements of Chapter 16.
  - 2.3. For breakaway walls designed to have a resistance of more than 20 psf (0.96 kN/m<sup>2</sup>) determined using *allowable stress design*, *construction documents* shall include a statement that the breakaway wall is designed in accordance with ASCE 24.

**Reason:** This proposal emphasizes the requirement for a flood emergency plan consistent with ASCE 24 and makes clear that such a plan, when indicated, is to be submitted with other flood hazard documentation. ASCE 24 requires the submittal and approval of a flood emergency plan where dry floodproofing measures requiring human intervention are used. ASCE 24 requires flood emergency plans to specify the storage location of the shields, the method of installation, conditions activating installation, maintenance of shields and attachment devices, periodic practice of installing shields, testing sump pumps and other drainage measures, and inspecting necessary material and equipment to activate or implement floodproofing.

The design professional developing dry floodproofing measures that require human intervention should take into consideration the effort needed to effectively deploy such measures. Preparation of a flood emergency plan ensures that the methods specified by the design professional can be installed and implemented within the given warning time. If a design requires more warning time than reasonably available before the onset of flooding, then the designer should interpret that to mean the contemplated dry floodproofing measures must be redesigned, or that dry floodproofing may not be appropriate for the building. Additionally,

maintenance, testing, and inspection are critical to ensuring system performance. The possible inability of owners or occupants to implement dry floodproofing due to lack of preparation or maintenance is regarded as an unacceptable risk.

After Hurricanes Harvey and Irma, FEMA Mitigation Assessment Teams (MATs) observed dry floodproofing measures that failed for a variety of reasons directly related to inadequate deployment or improper maintenance, validating the ASCE 24 requirement. Challenges included systems that required sizeable crews with heavy and specialized equipment to mobilize over a period of several days in advance of the storm to properly install the system. Lack of maintenance of gaskets around doors and flood shields contributed to water intrusion. Lack of inspection and owner/manager awareness of components integral to dry floodproofing meant inadvertent alterations (in one case, a large opening had been cut into a concrete wall to install new utility lines and was not restored to watertight condition). The MATs observed failures and difficulties related to storage (e.g., storage outside where ultraviolet radiation and temperature extremes degrade rubber seals, gaskets, and component identification labels; unsecured storage locations vulnerable to theft and vandalism).

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction  
No additional cost. Flood emergency plans are already required by ASCE 24 when designs for dry floodproofing are prepared.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** This proposal emphasizes the requirement for a flood emergency plan consistent with ASCE 24 and makes clear that such a plan, when indicated, is to be submitted with other flood hazard documentation. ASCE 24 requires the submittal and approval of a flood emergency plan where dry floodproofing measures requiring human intervention are used. ASCE 24 requires flood emergency plans to specify the storage location of the shields, the method of installation, conditions activating installation, maintenance of shields and attachment devices, periodic practice of installing shields, testing sump pumps and other drainage measures, and inspecting necessary material and equipment to activate or implement floodproofing.  
(Vote: 14-0)

**Assembly Action:**

**None**

### Final Action

**S80-19**

**AS**

<b>Date Submitted</b> 3/5/2021	<b>Section</b> 1612.4	<b>Proponent</b> Mo Madani
<b>Chapter</b> 16	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Approved as Submitted – Consent	<b>Staff Classification</b> Flood Requirements	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** Yes**Related Modifications**

1612.4

Directly correlated.

**Summary of Modification**

This proposal specifies that construction documents include certification of engineered openings when used in breakaway walls in coastal high hazard areas and coastal A zones.

**Rationale**

For construction in flood hazard areas, the 2018 IBC refers to the 2014 edition of ASCE 24, Flood Resistant Design and Construction. ASCE 24 requires openings in breakaway walls in all flood hazard areas (as does the IRC, in Section R322.2.2 and R322.3.6). Flood openings may be non-engineered (providing 1 square inch of net open area for each square foot of enclosure area) or engineered. Certification of engineered openings is a requirement of the NFIP (and IRC Section R322.2.2). Currently, Section 1612.4 only requires certification of engineered openings in flood hazard areas other than coastal high hazard areas or coastal A Zones (Item 1 of Section 1612.4).

This proposal specifies that construction documents include certification of engineered openings when used in breakaway walls in coastal high hazard areas and coastal A zones.

**Comment Period History**

<b>Proponent</b> Rebecca Quinn obo F	<b>Submitted</b> 6/18/2021	<b>Attachments</b> No
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**Comment:**

Retain this change. Certification of engineered openings is necessary to determine compliance. This is similar to what is already in 1612.5 (1.2).

Approved as Submitted

## 2018 International Building Code

### Revise as follows:

**1612.4 Flood hazard documentation.** The following documentation shall be prepared and sealed by a *registered design professional* and submitted to the *building official*:

1. For construction in flood hazard areas other than coastal high hazard areas or coastal A zones:
  - 1.1. The elevation of the lowest floor, including the basement, as required by the lowest floor elevation inspection in Section 110.3.3 and for the final inspection in Section 110.3.11.1.
  - 1.2. For fully enclosed areas below the design flood elevation where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.7.2.1 of ASCE 24, construction documents shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.7.2.2 of ASCE 24.
  - 1.3. For dry floodproofed nonresidential buildings, construction documents shall include a statement that the dry floodproofing is designed in accordance with ASCE 24.
2. For construction in coastal high hazard areas and coastal A zones:
  - 2.1. The elevation of the bottom of the lowest horizontal structural member as required by the lowest floor elevation inspection in Section 110.3.3 and for the final inspection in Section 110.3.11.1.
  - 2.2. Construction documents shall include a statement that the building is designed in accordance with ASCE 24, including that the pile or column foundation and building or structure to be attached thereto is designed to be anchored to resist flotation, collapse and lateral movement due to the effects of wind and flood loads acting simultaneously on all building components, and other load requirements of Chapter 16.
  - 2.3. For breakaway walls designed to have a resistance of more than 20 psf (0.96 kN/m<sup>2</sup>) determined using allowable stress design, construction documents shall include a statement that the breakaway wall is designed in accordance with ASCE 24.
  - 2.4. For breakaway walls where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.7.2.1 of ASCE 24, construction documents shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.7.2.2 of ASCE 24.

## Code Change No: S81-19

### Original Proposal

#### Section(s): 1612.4

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

#### 2018 International Building Code

#### Revise as follows:

**1612.4 Flood hazard documentation.** The following documentation shall be prepared and sealed by a *registered design professional* and submitted to the *building official*:

1. For construction in flood hazard areas other than coastal high hazard areas or coastal A zones:
  - 1.1. The elevation of the lowest floor, including the basement, as required by the lowest floor elevation inspection in Section 110.3.3 and for the final inspection in Section 110.3.11.1.
  - 1.2. For fully enclosed areas below the design flood elevation where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.7.2.1 of ASCE 24, construction documents shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.7.2.2 of ASCE 24.
  - 1.3. For dry floodproofed nonresidential buildings, construction documents shall include a statement that the dry floodproofing is designed in accordance with ASCE 24.
2. For construction in coastal high hazard areas and coastal A zones:
  - 2.1. The elevation of the bottom of the lowest horizontal structural member as required by the lowest floor elevation inspection in Section 110.3.3 and for the final inspection in Section 110.3.11.1.
  - 2.2. Construction documents shall include a statement that the building is designed in accordance with ASCE 24, including that the pile or column foundation and building or structure to be attached thereto is designed to be anchored to resist flotation, collapse and lateral movement due to the effects of wind and flood loads acting simultaneously on all building components, and other load requirements of Chapter 16.
  - 2.3. For breakaway walls designed to have a resistance of more than 20 psf (0.96 kN/m<sup>2</sup>) determined using allowable stress design, construction documents shall include a statement that the breakaway wall is designed in accordance with ASCE 24.
  - 2.4. For breakaway walls where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.7.2.1 of ASCE 24, construction documents shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.7.2.2 of ASCE 24.

**Reason:** For construction in flood hazard areas, the 2018 IBC refers to the 2014 edition of ASCE 24, *Flood Resistant Design and Construction*. ASCE 24 requires openings in breakaway walls in all flood hazard areas (as does the IRC, in Section R322.2.2 and R322.3.6). Flood openings may be non-engineered (providing 1 square inch of net open area for each square foot of enclosure area) or engineered. Certification of engineered openings is a requirement of the NFIP (and IRC Section R322.2.2). Currently, Section 1612.4 only requires certification of engineered openings in flood hazard areas other than coastal high hazard areas or coastal A Zones (Item 1 of Section 1612.4).

This proposal specifies that construction documents include certification of engineered openings when used in breakaway walls in coastal high hazard areas and coastal A zones.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction  
No additional cost because certification of engineered openings has always been required by the NFIP.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** For construction in flood hazard areas, the 2018 IBC refers to the 2014 edition of ASCE 24, Flood Resistant Design and Construction. ASCE 24 requires openings in breakaway walls in all flood hazard areas (as does the IRC, in Section R322.2.2 and R322.3.6). Flood openings may be non-engineered (providing 1 square inch of net open area for each square foot of enclosure area) or engineered. Certification of engineered openings is a requirement of the NFIP (and IRC Section R322.2.2). Currently, Section 1612.4 only requires certification of engineered openings in flood hazard areas other than coastal high hazard areas or coastal A Zones (Item 1 of Section 1612.4).

This proposal specifies that construction documents include certification of engineered openings when used in breakaway walls in coastal high hazard areas and coastal A zones.  
(Vote: 14-0)

**Assembly Action:**

**None**

**Final Action**

**S81-19**

**AS**

<b>Date Submitted</b> 3/2/2021	<b>Section</b> 3007.1	<b>Proponent</b> Mo Madani
<b>Chapter</b> 30	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Approved as Submitted – Consent	<b>Staff Classification</b> Correlates Directly	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** No**Related Modifications**

3007.1

**Summary of Modification**

Proposal to align 3007.1 with Section 403.6.1 which addresses occupied floors.

**Rationale**

To align with Section 403.6.1 which addresses occupied floors.

Approved as Submitted

## 2018 International Building Code

### Revise as follows:

**3007.1 General.** Where required by Section 403.6.1, every floor above and including the lowest level of fire department vehicle access of the building shall be served by fire service access elevators complying with Sections 3007.1 through 3007.9. Except as modified in this section, fire service access elevators shall be installed in accordance with this chapter and ASME A17.1/CSA B44.

### ~~Exception~~ Exceptions:

1. Elevators that only service an open or enclosed parking garage and the lobby of the building shall not be required to serve as fire service access elevators.
2. The elevator shall not be required to serve the top floor of a building where that floor is utilized only for equipment for building systems.

## Code Change No: **G142-18**

### Original Proposal

**Section(s):** 3007.1

**Proponent:** Kevin Brinkman, representing National Elevator Industry, Inc. (klbrinkman@neii.org)

**2018 International Building Code**

**Revise as follows:**

**3007.1 General.** Where required by Section 403.6.1, every floor above and including the lowest level of fire department vehicle access of the building shall be served by fire service access elevators complying with Sections 3007.1 through 3007.9. Except as modified in this section, fire service access elevators shall be installed in accordance with this chapter and ASME A17.1/CSA B44.

**Exception Exceptions:**

1. Elevators that only service an open or enclosed parking garage and the lobby of the building shall not be required to serve as fire service access elevators.
2. The elevator shall not be required to serve the top floor of a building where that floor is utilized only for equipment for building systems.

**Reason:** To align with Section 403.6.1 which addresses occupied floors.

**Cost Impact:** The code change proposal will decrease the cost of construction. This would decrease the cost of construction because it would not require an extension on top of the roof of the building so that the elevator could serve an unoccupied floor.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** In many tall buildings there are fire service access elevators. When fire service personnel access a floor, the elevator is typically staged on a floor below, not on the floor they are on. (Vote: 9-5)

**Assembly Action:**

**None**

### Final Action

**G142-18**

**AS**

<b>Date Submitted</b> 3/2/2021	<b>Section</b> 3005.4	<b>Proponent</b> Mo Madani
<b>Chapter</b> 30	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Approved as Submitted – Consent	<b>Staff Classification</b> Correlates Directly	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** No**Related Modifications**

3005.4

**Summary of Modification**

There was some confusion with the current wording that the phrase " outside of but attached to a hoistway that have openings into the hoistway" as to how it relates to machine rooms. Proposal to clarify.

**Rationale**

There was some confusion with the current wording that the phrase &quot; outside of but attached to a hoistway that have openings into the hoistway&quot; as to how it relates to machine rooms. Essentially this could be possibly interpreted that if no openings to the hoistway exist that a fire resistance rated enclosure would not be required. Control rooms and control spaces should be treated no differently for separation requirements so the added phrase is not necessary. This section is essentially an extension of the hoistway protection.

Approved as Submitted

## 2018 International Building Code

### Revise as follows:

**3005.4 Machine rooms, control rooms, machinery spaces, and control spaces.** ~~Elevator machine rooms, control rooms, control spaces and machinery spaces outside of but attached to a hoistway that have openings into the hoistway~~ The following rooms and spaces shall be enclosed with fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or ~~both~~ both:

1. Machine rooms
2. Control rooms
3. Control spaces
4. Machinery spaces outside of the hoistway enclosure

The fire-resistance rating shall be not less than the required rating of the hoistway enclosure served by the machinery. Openings in the fire barriers shall be protected with assemblies having a fire protection rating not less than that required for the hoistway enclosure doors.

### Exceptions:

1. For other than fire service access elevators and occupant evacuation elevators, where machine rooms, machinery spaces, control rooms and control spaces do not abut and do not have openings to the hoistway enclosure they serve, the fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both, shall be permitted to be reduced to a 1-hour fire-resistance rating.
2. For other than fire service access elevators and occupant evacuation elevators, in buildings four stories or less above grade plane where machine room, machinery spaces, control rooms and control spaces do not abut and do not have openings to the hoistway enclosure they serve, the machine room, machinery spaces, control rooms and control spaces are not required to be fire-resistance rated.

## Code Change No: G143-18

### Original Proposal

**Section(s):** 3005.4

**Proponent:** Kevin Brinkman, representing National Elevator Industry, Inc. (klbrinkman@neii.org)

**2018 International Building Code**

**Revise as follows:**

**3005.4 Machine rooms, control rooms, machinery spaces, and control spaces.** ~~Elevator machine rooms, control rooms, control spaces and machinery spaces outside of but attached to a hoistway that have openings into the hoistway.~~ The following rooms and spaces shall be enclosed with fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or ~~both~~ both:

1. Machine rooms
2. Control rooms
3. Control spaces
4. Machinery spaces outside of the hoistway enclosure

The fire-resistance rating shall be not less than the required rating of the hoistway enclosure served by the machinery. Openings in the fire barriers shall be protected with assemblies having a fire protection rating not less than that required for the hoistway enclosure doors.

**Exceptions:**

1. For other than fire service access elevators and occupant evacuation elevators, where machine rooms, machinery spaces, control rooms and control spaces do not abut and do not have openings to the hoistway enclosure they serve, the fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both, shall be permitted to be reduced to a 1-hour fire-resistance rating.
2. For other than fire service access elevators and occupant evacuation elevators, in buildings four stories or less above grade plane where machine room, machinery spaces, control rooms and control spaces do not abut and do not have openings to the hoistway enclosure they serve, the machine room, machinery spaces, control rooms and control spaces are not required to be fire-resistance rated.

**Reason:** There was some confusion with the current wording that the phrase "outside of but attached to a hoistway that have openings into the hoistway" as to how it relates to machine rooms. Essentially this could be possibly interpreted that if no openings to the hoistway exist that a fire resistance rated enclosure would not be required. Control rooms and control spaces should be treated no differently for separation requirements so the added phrase is not necessary. This section is essentially an extension of the hoistway protection.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. There is no impact since this is just a clarification of the language.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** Committee members have experience with these provisions and believe the proposal clarifies the requirements.  
(Vote: 14-0)

**Assembly Action:**

**None**

**Final Action**

**G143-18**

**AS**

## Sub Code: Residential

SP8699/RB141-19

5

Date Submitted 2/9/2021  
Chapter 3

Section 322  
Affects HVHZ Yes

Proponent Mo Madani  
Attachments Yes

TAC Recommendation Approved as Submitted – Consent  
Commission Action Pending Review

Staff Classification Flood Requirements

### Comments

General Comments Yes

### Related Modifications

309

Correlates Directly

### Summary of Modification

The primary aspect of elevated homes in flood hazard areas that contributes to reducing damage is the elevation of the lowest floor (R322.2.1) or lowest horizontal structural member of the lowest floor in Zone V and Coastal A Zones (R322.3.2) relative to the base flood elevation.

### Rationale

Reason: The primary aspect of elevated homes in flood hazard areas that contributes to reducing damage is the elevation of the lowest floor (R322.2.1) or lowest horizontal structural member of the lowest floor in Zone V and Coastal A Zones (R322.3.2) relative to the base flood elevation. The higher the floor, the lower the risk (and the lower are NFIP flood insurance premiums). To ensure the same level of protection is applied to all aspects of dwellings, Section R322.1.6 requires mechanical, plumbing and electrical equipment to be located at or above the required elevations, and R322.1.8 requires use of flood damage-resistant materials below the required elevations. This same level of protection should apply to enclosures and walls below the required elevations. Currently, the level of protection for enclosures and walls is at the design flood elevation, which may be lower than the lowest floor elevations required in R322.2.1 and R322.3.2.

## Comment Period History

Proponent Rebecca Quinn obo F Submitted 6/18/2021 Attachments No

### Comment:

Retain this proposal; it is an important clarification for application of several flood sections.

## Comment Period History

Proponent Brian Walsh - RCCIW Submitted 6/21/2021 Attachments No

### Comment:

This can have cost implications, but would very widely based on the situation and build. I cannot put a dollar amount at this time.

## Comment Period History

SP8699-G3

<b>Proponent</b>	Joseph Belcher	<b>Submitted</b>	6/29/2021	<b>Attachments</b>	No
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### Comment:

The Florida Home Builders Association (FHBA) requests denial of this code change. While the provisions are flood requirements, it is unclear whether adoption of the provisions is necessary to maintain eligibility for federal funding and discounts from the National Flood Insurance Program. It appears there could be a considerable cost involved to comply with the changes and we request more time to consider the full impact.

## Comment Period History

SP8699-G4

<b>Proponent</b>	Joseph Belcher	<b>Submitted</b>	6/29/2021	<b>Attachments</b>	No
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### Comment:

Additional comment from FHBA: Further investigation reveals that the ICC Committee action was AMPC1. The Complete Revision Resource shows a Public Comment 2, but no Public Comment 1. Reviewing the 2021 IRC, First Printing, reveals that the provisions of RB141-19 Public Comment 2 were adopted. Please move denial of this provision to allow interested parties the opportunity to submit in the proper form in Phase II.

**ORIGINAL****AS - APPROVED AS SUBMITTED**

Revise as follows:

**R309.3 Flood hazard areas.**

For buildings located in flood hazard areas as established by Table R301.2(1), garage floors shall be one of the following:

1. Elevated to or above the ~~design flood~~ required lowest floor elevation as determined in accordance with Section R322.
2. Located below the ~~design flood~~ required lowest floor elevation provided that the floors are at or above *grade* on not less than one side, are used solely for parking, building access or storage, meet the requirements of Section R322 and are otherwise constructed in accordance with this code.

**R322.1.6 Protection of mechanical, plumbing and electrical systems.** Electrical systems, *equipment* and components; heating, ventilating, air-conditioning; plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* shall be located at or above the elevation required in Section R322.2 or R322.3. If replaced as part of a substantial improvement, electrical systems, *equipment* and components; heating, ventilating, air-conditioning and plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* shall meet the requirements of this section. Systems, fixtures, and *equipment* and components shall not be mounted on or penetrate through walls intended to break away under flood loads.

**Exception:** Locating electrical systems, *equipment* and components; heating, ventilating, air-conditioning; plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* is permitted below the elevation required in Section R322.2 or R322.3 provided that they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the ~~design flood~~ required elevation in accordance with ASCE 24. Electrical wiring systems are permitted to be located below the required elevation provided that they conform to the provisions of the electrical part of this code for wet locations.

**R322.2.1 Elevation requirements.**

1. Buildings and structures in flood hazard areas, including flood hazard areas designated as Coastal A Zones, shall have the lowest floors elevated to or above the base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.
2. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated to a height above the highest adjacent grade of not less than the depth number specified in feet (mm) on the FIRM plus 1 foot (305 mm), or not less than 3 feet (915 mm) if a depth number is not specified.
3. Basement floors that are below grade on all sides shall be elevated to or above base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.

**Exception:** Enclosed areas below the ~~design flood elevation~~ required in this section, including *basements* with floors that are not below *grade* on all sides, shall meet the requirements of Section R322.2.2.

**R322.2.2 Enclosed area below ~~design flood~~ required elevation.** Enclosed areas, including crawl spaces, that are below the ~~design flood elevation~~ required in Section R322.2.1 shall:

1. Be used solely for parking of vehicles, building access or storage.
2. Be provided with flood openings that meet the following criteria and are installed in accordance with Section R322.2.2.1:
  - 2.1. The total net area of nonengineered openings shall be not less than 1 square inch (645 mm<sup>2</sup>) for each square foot (0.093 m<sup>2</sup>) of enclosed area where the enclosed area is measured on the exterior of the enclosure walls, or the openings shall be designed as engineered openings and the construction documents shall include a statement by a registered design professional that the design of the openings will provide for equalization of hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters as specified in Section 2.7.2.2 of ASCE 24.
  - 2.2. Openings shall be not less than 3 inches (76 mm) in any direction in the plane of the wall.
  - 2.3. The presence of louvers, blades, screens and faceplates or other covers and devices shall allow the automatic flow of floodwater into and out of the enclosed areas and shall be accounted for in the determination of the net open area.

**R322.2.2.1 Installation of openings.** The walls of enclosed areas shall have openings installed such that:

1. There shall be not less than two openings on different sides of each enclosed area; if a building has more than one enclosed area ~~below the design flood elevation~~, each area shall have openings.

2. The bottom of each opening shall be not more than 1 foot (305 mm) above the higher of the final interior grade or floor and the finished exterior grade immediately under each opening.
3. Openings shall be permitted to be installed in doors and windows; doors and windows without installed openings do not meet the requirements of this section.

#### **R322.3.2 Elevation requirements.**

1. Buildings and structures erected within coastal high-hazard areas and Coastal A Zones, shall be elevated so that the bottom of the lowest horizontal structural members supporting the lowest floor, with the exception of piling, pile caps, columns, grade beams and bracing, is elevated to or above the base flood elevation plus 1 foot (305 mm) or the design flood elevation, whichever is higher.
2. Basement floors that are below grade on all sides are prohibited.
3. The use of fill for structural support is prohibited.
4. Minor grading, and the placement of minor quantities of fill, shall be permitted for landscaping and for drainage purposes under and around buildings and for support of parking slabs, pool decks, patios and walkways.
5. Walls and partitions enclosing areas below the ~~design flood~~ elevation required in this section shall meet the requirements of Sections R322.3.5 and R322.3.6.

**R322.3.5 Walls below ~~design flood~~ elevation required.** Walls and partitions are permitted below the ~~elevated floor~~ elevation required in Section R322.3.2, provided that such walls and partitions are not part of the structural support of the building or structure and:

1. Electrical, mechanical and plumbing system components are not to be mounted on or penetrate through walls that are designed to break away under flood loads; and
2. Are constructed with insect screening or open lattice; or
3. Are designed to break away or collapse without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system. Such walls, framing and connections shall have a resistance of not less than 10 (479 Pa) and not more than 20 pounds per square foot (958 Pa) as determined using allowable stress design; or
4. Where wind loading values of this code exceed 20 pounds per square foot (958 Pa), as determined using allowable stress design, the construction documents shall include documentation prepared and sealed by a registered design professional that:
  - 4.1. The walls and partitions below the ~~design flood~~ elevation required elevation have been designed to collapse from a water load less than that which would occur during the base flood.

- 4.2. The elevated portion of the building and supporting foundation system have been designed to withstand the effects of wind and flood loads acting simultaneously on structural and nonstructural building components. Water-loading values used shall be those associated with the design flood. Wind-loading values shall be those required by this code.
5. Walls intended to break away under flood loads as specified in Item 3 or 4 have flood openings that meet the criteria in Section R322.2.2, Item 2.

**R322.3.6 Enclosed areas below ~~design flood~~ required elevation.** Enclosed areas below the ~~design flood~~ elevation required in Section R322.3.2 shall be used solely for parking of vehicles, building access or storage.

**R322.3.7 Stairways and ramps.** Stairways and ramps that are located below the lowest floor elevations specified in Section R322.3.2 shall comply with one or more of the following:

1. Be designed and constructed with open or partially open risers and guards.
2. Stairways and ramps not part of the required means of egress shall be designed and constructed to break away during design flood conditions without causing damage to the building or structure, including foundation.
3. Be retractable, or able to be raised to or above the lowest floor elevation, provided that the ability to be retracted or raised prior to the onset of flooding is not contrary to the means of egress requirements of the code.
4. Be designed and constructed to resist flood loads and minimize transfer of flood loads to the building or structure, including foundation.

Areas below stairways and ramps shall not be enclosed with walls below the ~~design flood~~ elevation required in Section R322.3.2 unless such walls are constructed in accordance with Section R322.3.5.

## Code Change No: **RB141-19**

### Original Proposal

**Section(s):** R309.3, R322.1.6, R322.2.1, R322.2.2, R322.2.2.1, R322.3.2, R322.3.5, R322.3.6, R322.3.7

**Proponents:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

#### 2018 International Residential Code

##### Revise as follows:

##### **R309.3 Flood hazard areas.**

For buildings located in flood hazard areas as established by Table R301.2(1), garage floors shall be one of the following:

1. Elevated to or above the ~~design flood~~ required lowest floor elevation as determined in accordance with Section R322.
2. Located below the ~~design flood~~ required lowest floor elevation provided that the floors are at or above *grade* on not less than one side, are used solely for parking, building access or storage, meet the requirements of Section R322 and are otherwise constructed in accordance with this code.

**R322.1.6 Protection of mechanical, plumbing and electrical systems.** Electrical systems, *equipment* and components; heating, ventilating, air-conditioning; plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* shall be located at or above the elevation required in Section R322.2 or R322.3. If replaced as part of a substantial improvement, electrical systems, *equipment* and components; heating, ventilating, air-conditioning and plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* shall meet the requirements of this section. Systems, fixtures, and *equipment* and components shall not be mounted on or penetrate through walls intended to break away under flood loads.

**Exception:** Locating electrical systems, *equipment* and components; heating, ventilating, air-conditioning; plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* is permitted below the elevation required in Section R322.2 or R322.3 provided that they are designed and installed to prevent water from entering or accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the ~~design flood~~ required elevation in accordance with ASCE 24. Electrical wiring systems are permitted to be located below the required elevation provided that they conform to the provisions of the electrical part of this code for wet locations.

##### **R322.2.1 Elevation requirements.**

1. Buildings and structures in flood hazard areas, including flood hazard areas designated as Coastal A Zones, shall have the lowest floors elevated to or above the base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.
2. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated to a height above the highest adjacent grade of not less than the

depth number specified in feet (mm) on the FIRM plus 1 foot (305 mm), or not less than 3 feet (915 mm) if a depth number is not specified.

3. Basement floors that are below grade on all sides shall be elevated to or above base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.

**Exception:** Enclosed areas below the ~~design flood elevation required in this section~~, including *basements* with floors that are not below *grade* on all sides, shall meet the requirements of Section R322.2.2.

**R322.2.2 Enclosed area below ~~design flood~~ required elevation.** Enclosed areas, including crawl spaces, that are below the ~~design flood elevation required in Section R322.2.1~~ shall:

1. Be used solely for parking of vehicles, building access or storage.
2. Be provided with flood openings that meet the following criteria and are installed in accordance with Section R322.2.2.1:
  - 2.1. The total net area of nonengineered openings shall be not less than 1 square inch (645 mm<sup>2</sup>) for each square foot (0.093 m<sup>2</sup>) of enclosed area where the enclosed area is measured on the exterior of the enclosure walls, or the openings shall be designed as engineered openings and the construction documents shall include a statement by a registered design professional that the design of the openings will provide for equalization of hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters as specified in Section 2.7.2.2 of ASCE 24.
  - 2.2. Openings shall be not less than 3 inches (76 mm) in any direction in the plane of the wall.
  - 2.3. The presence of louvers, blades, screens and faceplates or other covers and devices shall allow the automatic flow of floodwater into and out of the enclosed areas and shall be accounted for in the determination of the net open area.

**R322.2.2.1 Installation of openings.** The walls of enclosed areas shall have openings installed such that:

1. There shall be not less than two openings on different sides of each enclosed area; if a building has more than one enclosed area ~~below the design flood elevation~~, each area shall have openings.
2. The bottom of each opening shall be not more than 1 foot (305 mm) above the higher of the final interior grade or floor and the finished exterior grade immediately under each opening.
3. Openings shall be permitted to be installed in doors and windows; doors and windows without installed openings do not meet the requirements of this section.

#### **R322.3.2 Elevation requirements.**

1. Buildings and structures erected within coastal high-hazard areas and Coastal A Zones, shall be elevated so that the bottom of the lowest horizontal structural members supporting the lowest floor, with the exception of piling, pile caps, columns, grade beams and bracing, is elevated to or above the base flood elevation plus 1 foot (305 mm) or the design flood elevation, whichever is higher.
2. Basement floors that are below grade on all sides are prohibited.
3. The use of fill for structural support is prohibited.
4. Minor grading, and the placement of minor quantities of fill, shall be permitted for landscaping and for drainage purposes under and around buildings and for support of parking slabs, pool decks, patios and walkways.
5. Walls and partitions enclosing areas below the ~~design flood elevation required in this section~~ shall meet the requirements of Sections R322.3.5 and R322.3.6.

**R322.3.5 Walls below ~~design flood~~ required elevation.** Walls and partitions are permitted below the ~~elevated floor elevation required in Section R322.3.2~~, provided that such walls and partitions are not part of the structural support of the building or structure and:

1. Electrical, mechanical and plumbing system components are not to be mounted on or penetrate through walls that are designed to break away under flood loads; and
2. Are constructed with insect screening or open lattice; or
3. Are designed to break away or collapse without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system. Such walls, framing and connections shall have a resistance of not less than 10 (479 Pa) and not more than 20 pounds per square foot (958 Pa) as determined using allowable stress design; or
4. Where wind loading values of this code exceed 20 pounds per square foot (958 Pa), as determined using allowable stress design, the construction documents shall include documentation prepared and sealed by a registered design professional that:
  - 4.1. The walls and partitions below the ~~design flood~~ required elevation have been designed to collapse from a water load less than that which would occur during the base flood.
  - 4.2. The elevated portion of the building and supporting foundation system have been designed to withstand the effects of wind and flood loads acting simultaneously on structural and nonstructural building components. Water-loading values used shall be those associated with the design flood. Wind-loading values shall be those required by this code.
5. Walls intended to break away under flood loads as specified in Item 3 or 4 have flood openings that meet the criteria in Section R322.2.2, Item 2.

**R322.3.6 Enclosed areas below ~~design flood~~ required elevation.** Enclosed areas below the ~~design flood~~ required elevation required in Section R322.3.2 shall be used solely for parking of vehicles, building access or storage.

**R322.3.7 Stairways and ramps.** Stairways and ramps that are located below the lowest floor elevations specified in Section R322.3.2 shall comply with one or more of the following:

1. Be designed and constructed with open or partially open risers and guards.
2. Stairways and ramps not part of the required means of egress shall be designed and constructed to break away during design flood conditions without causing damage to the building or structure, including foundation.
3. Be retractable, or able to be raised to or above the lowest floor elevation, provided that the ability to be retracted or raised prior to the onset of flooding is not contrary to the means of egress requirements of the code.
4. Be designed and constructed to resist flood loads and minimize transfer of flood loads to the building or structure, including foundation.

Areas below stairways and ramps shall not be enclosed with walls below the ~~design flood~~ required elevation required in Section R322.3.2 unless such walls are constructed in accordance with Section R322.3.5.

**Reason:** The primary aspect of elevated homes in flood hazard areas that contributes to reducing damage is the elevation of the lowest floor (R322.2.1) or lowest horizontal structural member of the lowest floor in Zone V and Coastal A Zones (R322.3.2) relative to the base flood elevation. The higher the floor, the lower the risk (and the lower are NFIP flood insurance premiums). To ensure the same level of protection is applied to all aspects of dwellings, Section R322.1.6 requires mechanical, plumbing and electrical equipment to be located at or above the required elevations, and R322.1.8 requires use of flood damage-resistant materials below the required elevations. This same level of protection should apply to enclosures and walls below the required elevations. Currently, the level of protection for enclosures and walls is at the design flood elevation, which may be lower than the lowest floor elevations required in R322.2.1 and R322.3.2.

This proposal is consistent with ASCE 24, in which each table specifying elevations refers not to the elevation of the flood, but the required elevation of the lowest floor (or lowest horizontal structural member of the lowest floor). This proposal is consistent with the NFIP regulations which, in Section 60.3(c)(5) specifies.... "fully enclosed areas below the lowest floor..." and Section 60.3(e)(5) which specifies.... "space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls ...".

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. Most enclosures below elevated buildings in flood hazard areas are constructed with all elements required for enclosures applied below the elevated lowest floor, thus no change in cost of construction. There may be a slight increase in cost in those rare situations where someone determines the DFE/BFE and "precisely" applies the regulations up to that elevation rather than up to the actual elevation of the lowest floor.

### Report of Committee Action Hearings

Committee Action:

Approved as Submitted

Modify as follows:

**Committee Reason:** This takes out "design flood" and puts in "required elevation," but does not change technical requirements. The proposal is consistent with ASCE 24. (Vote: 7-4)

Assembly Action:

None

### Public Comments

*Public Comment 2:*

**Gary Ehrlich, representing National Association of Home Builders (gehrlich@nahb.org) requests  
As Modified by Public Comment**

Modify as follows:

#### 2018 International Residential Code

**R309.3 Flood hazard areas.** ~~Garages and carports~~ For buildings located in flood hazard areas as established by Table R301.2(1), ~~shall be constructed in accordance with Section R322, garage floors shall be one of the following:~~

- ~~1. Elevated to or above the required lowest floor elevation as determined in accordance with Section R322.~~
- ~~2. Located below the required lowest floor elevation provided that the floors are at or above grade on not less than one side, are used solely for parking, building access or storage, meet the requirements of Section R322 and are otherwise constructed in accordance with this code.~~

#### R322.2.1 Elevation requirements.

1. Buildings and structures in flood hazard areas, including flood hazard areas designated as Coastal A Zones, shall have the lowest floors elevated to or above the base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.
2. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated to a height above the highest adjacent grade of not less than the depth number specified in feet (mm) on the FIRM plus 1 foot (305 mm), or not less than 3 feet (915 mm) if a depth number is not specified.
3. Basement floors that are below grade on all sides shall be elevated to or above base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.
4. Garage and carport floors shall comply with one of the following:
  - 4.1. They shall be elevated to or above the elevations required in Item 1 or Item 2, as applicable.
  - 4.2. They shall be at or above grade on not less than one side. Where a garage or carport is enclosed by walls, the garage or carport shall be used solely for parking, building access or storage.

**Exception:** Enclosed areas below the elevation required in this section, including *basements* with floors that are not below grade on all sides, shall meet the requirements of Section R322.2.2.

#### R322.3.2 Elevation requirements.

1. Buildings and structures erected within coastal high-hazard areas and Coastal A Zones, shall be elevated so that the bottom of the lowest horizontal structural members supporting the lowest floor, with the exception of piling, pile caps, columns, grade beams and bracing, is elevated to or above the base flood elevation plus 1 foot (305 mm) or the design flood elevation, whichever is higher.
2. Basement floors that are below grade on all sides are prohibited.
3. Garages used solely for parking, building access or storage, and carports, shall comply with Item 1, or shall be at or above grade on not less than one side and, if enclosed with walls, such walls shall comply with Item 6.
- ~~4. The use of fill for structural support is prohibited.~~
- ~~5. Minor grading, and the placement of minor quantities of fill, shall be permitted for landscaping and for drainage purposes under and around buildings and for support of parking slabs, pool decks, patios and walkways.~~
- ~~6. Walls and partitions enclosing areas below the elevation required in this section shall meet the requirements of Sections R322.3.5 and R322.3.6.~~

**Commenter's Reason:** The purpose of this public comment is to address potential confusion introduced by relating the location of a garage or carport floor to the lowest floor elevation determined in accordance with Section R322.

Garages and carports can be either attached in part or in whole to an adjacent dwelling or detached and completely independent of the dwelling. In all cases, they can be constructed such that the garage or carport floor or slab is at or above the elevation required by R322. The garage or carport floor may be elevated to the same level as the lowest floor of an attached or adjacent dwelling, or to another level that is still above the BFE+1 or DFE.

However, most garages and carports are only used for parking, building access or storage, and thus the floor of the garage or carport - generally a concrete slab on grade - is permitted by the NFIP to be below the BFE or DFE as long as the garage or carport floor is above grade on not less than one side. In this case, the key elevation in question is that of the finished grade around the carport or garage. There is no sense in relating the placement of the carport or garage slab to the lowest floor elevation of the adjacent house, which may be several feet higher and accessed up a set of steps or ramp.

Further, there appears to be no particular reason why flood elevation requirements for garages and carports are "parked" in Section R309, away from the rest of the flood resistant construction requirements. Hence, this comment relocates the elevation requirements to the appropriate sections of R322 (R322.2.1 for Zone A and R322.2.2 for Zone V/Coastal A Zone), leaving a pointer behind in R309. In doing so, this allows for rewriting the elevation requirements to be more clear, using the opportunity to parallel the standard elevation requirement (e.g. R322.2.1 Item 1) and the requirement based on surrounding grade (e.g. R322.2.1 Item 2). This also creates a similar construct to the way ASCE 24 Section 9.2 presents requirements for attached and detached garages and carports.

**Cost Impact:** The net effect of the public comment and code change proposal will increase the cost of construction. As noted in the proponent's original cost impact statement, the changes in RB141 would increase the cost of construction if a builder is using the DFE or BFE itself in applying enclosure requirements, rather than the actual lowest floor elevation which may be a few feet higher. The public comment could reduce the cost impact slightly by clarifying the requirements of the NFIP and IRC as they relate to where a garage or carport is allowed to be below the DFE or BFE+1.

**Final Action**

**RB141-19**

**AMPC1**

<b>Date Submitted</b> 2/9/2021	<b>Section 322</b>	<b>Proponent</b> Mo Madani
<b>Chapter</b> 3	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Approved as Submitted – Consent	<b>Staff Classification</b> Flood Requirements	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** Yes**Related Modifications**

Correlates Directly

**Summary of Modification**

. This proposal adds the word "not" in the first item, removing confusion by explicitly stating buildings in flood hazard areas designated as Coastal A Zones are not addressed by R322.2.1

**Rationale**

Two successful changes were approved in the 2015 code development cycle. One change modified the elevation requirement by adding 1 foot (freeboard) uniformly into R322, and one change made buildings in designated Coastal A Zones subject to the requirements of R322.3. The clear intent of the second change is to require buildings in Coastal A Zones to comply with R322.3. This is also clear in both R322.2 and R322.3. However, the combination of the two changes approved for R322.2.1 resulted in misleading phrasing.

**Comment Period History**

<b>Proponent</b> Rebecca Quinn obo F	<b>Submitted</b> 6/18/2021	<b>Attachments</b> No
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**Comment:**

Yes, retain this change. It is an important clarification.

SP8700-G1

**ORIGINAL****AS - APPROVED AS SUBMITTED****Revise as follows:****R322.2.1 Elevation requirements.**

1. Buildings and structures in flood hazard areas, not including flood hazard areas designated as Coastal A Zones, shall have the lowest floors elevated to or above the base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.
2. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated to a height above the highest adjacent grade of not less than the depth number specified in feet (mm) on the FIRM plus 1 foot (305 mm), or not less than 3 feet (915 mm) if a depth number is not specified.
3. Basement floors that are below grade on all sides shall be elevated to or above base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.

**Exception:** Enclosed areas below the design flood elevation, including *basements* with floors that are not below *grade* on all sides, shall meet the requirements of Section R322.2.2.

## Code Change No: RB142-19

### Original Proposal

#### Section(s): R322.2.1

**Proponents:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

#### 2018 International Residential Code

#### Revise as follows:

#### R322.2.1 Elevation requirements.

1. Buildings and structures in flood hazard areas, not including flood hazard areas designated as Coastal A Zones, shall have the lowest floors elevated to or above the base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.
2. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated to a height above the highest adjacent grade of not less than the depth number specified in feet (mm) on the FIRM plus 1 foot (305 mm), or not less than 3 feet (915 mm) if a depth number is not specified.
3. Basement floors that are below grade on all sides shall be elevated to or above base flood elevation plus 1 foot (305 mm), or the design flood elevation, whichever is higher.

**Exception:** Enclosed areas below the design flood elevation, including *basements* with floors that are not below *grade* on all sides, shall meet the requirements of Section R322.2.2.

**Reason:** Two successful changes were approved in the 2015 code development cycle. One change modified the elevation requirement by adding 1 foot (freeboard) uniformly into R322, and one change made buildings in designated Coastal A Zones subject to the requirements of R322.3. The clear intent of the second change is to require buildings in Coastal A Zones to comply with R322.3. This is also clear in both R322.2 and R322.3. However, the combination of the two changes approved for R322.2.1 resulted in misleading phrasing.

As written, buildings in flood hazard areas designated as Coastal A Zones are subject to the elevation requirements of both R322.2.1 (item #1) and R322.3.2. This proposal adds the word "not" in the first item, removing confusion by explicitly stating buildings in flood hazard areas designated as Coastal A Zones are not addressed by R322.2.1.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. No additional cost. This proposal does not change any requirements for buildings in flood hazard areas designated as Coastal A Zones, which must comply with R322.3.

### Report of Committee Action Hearings

#### Committee Action:

**Approved as Submitted**

**Committee Reason:** This proposal was approved based on the proponent's published reason statement (Vote: 11-0)

#### Assembly Action:

**None**

### Final Action

RB142-19

AS

<b>Date Submitted</b> 2/9/2021	<b>Section 322</b>	<b>Proponent</b> Mo Madani
<b>Chapter</b> 3	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Approved as Submitted – Consent	<b>Staff Classification</b> Flood Requirements	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** Yes**Related Modifications**

Correlates Directly

**Summary of Modification**

Section R322.3.3 allows the use of pilings or columns, but the way the requirements are phrased makes it appear they apply only to pilings, without equivalent specificity for columns.

**Rationale**

Section R322.3.3 allows the use of pilings or columns, but the way the requirements are phrased makes it appear they apply only to pilings, without equivalent specificity for columns. Columns must also be designed to account for wave and wind loads and the effects of scour. The primary object of this proposal is to provide that specificity. Second, the current text is long, so the proposal breaks it into distinct numbered items which makes it easier to read.

**Comment Period History**

**Proponent** Rebecca Quinn obo F **Submitted** 6/18/2021 **Attachments** No

**Comment:**

Yes, retain this change. Breaking long text into numbered items and clearly specifying requirements for columns helps readability and enforcement

**ORIGINAL****AS - APPROVED AS SUBMITTED****Revise as follows:**

**R322.3.3 Foundations.** Buildings and structures erected in coastal high-hazard areas and Coastal A Zones shall be supported on pilings or columns and shall be adequately anchored to such pilings or columns and shall comply with the following:

1. ~~columns.~~ The space below the elevated building shall be either free of obstruction or, if enclosed with walls, the walls shall meet the requirements of Section R322.3.5.
2. Pilings shall have adequate soil penetrations to resist the combined wave and wind loads (lateral and uplift) ~~. Water loading values used shall be those associated with the design flood. Wind loading values shall be those required by this code.~~ Pile and pile embedment shall include consideration of decreased resistance capacity caused by scour of soil strata surrounding the piling.
3. ~~Columns and their supporting foundations shall be designed to resist combined wave and wind loads, lateral and uplift, and shall include consideration of decreased resistance capacity caused by scour of soil strata surrounding the columns. Pile systems design and installation shall be certified in accordance with Section R322.3.9.~~ Spread footing, mat, raft or other foundations that support columns shall not be permitted where soil investigations that are required in accordance with Section R401.4 indicate that soil material under the spread footing, mat, raft or other foundation is subject to scour or erosion from wave-velocity flow conditions. If permitted, spread footing, mat, raft or other foundations that support columns shall be designed in accordance with ASCE 24.
4. Flood and wave loads shall be those associated with the design flood. Wind loads shall be those required by this code.
5. Foundation designs and construction documents shall be prepared and sealed in accordance with Section R322.3.9.

**Exception:** In Coastal A Zones, stem wall foundations supporting a floor system above and backfilled with soil or gravel to the underside of the floor system shall be permitted provided that the foundations are designed to account for wave action, debris impact, erosion and local scour. Where soils are susceptible to erosion and local scour, stem wall foundations shall have deep footings to account for the loss of soil.

## Code Change No: RB145-19

### Original Proposal

#### Section(s): R322.3.3

**Proponents:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

#### 2018 International Residential Code

#### Revise as follows:

**R322.3.3 Foundations.** Buildings and structures erected in coastal high-hazard areas and Coastal A Zones shall be supported on pilings or columns and shall be adequately anchored to such pilings or columns and shall comply with the following:

1. ~~columns.~~ The space below the elevated building shall be either free of obstruction or, if enclosed with walls, the walls shall meet the requirements of Section R322.3.5.
2. Pilings shall have adequate soil penetrations to resist the combined wave and wind loads (lateral and uplift) . ~~Water-loading values used shall be those associated with the design flood. Wind-loading values shall be those required by this code. Pile and pile~~ embedment shall include consideration of decreased resistance capacity caused by scour of soil strata surrounding the piling.
3. ~~Columns and their supporting foundations shall be designed to resist combined wave and wind loads, lateral and uplift, and shall include consideration of decreased resistance capacity caused by scour of soil strata surrounding the columns. Pile systems design and installation shall be certified in accordance with Section R322.3.9.~~ Spread footing, mat, raft or other foundations that support columns shall not be permitted where soil investigations that are required in accordance with Section R401.4 indicate that soil material under the spread footing, mat, raft or other foundation is subject to scour or erosion from wave-velocity flow conditions. If permitted, spread footing, mat, raft or other foundations that support columns shall be designed in accordance with ASCE 24.
4. Flood and wave loads shall be those associated with the design flood. Wind loads shall be those required by this code.
5. Foundation designs and construction documents shall be prepared and sealed in accordance with Section R322.3.9.

**Exception:** In Coastal A Zones, stem wall foundations supporting a floor system above and backfilled with soil or gravel to the underside of the floor system shall be permitted provided that the foundations are designed to account for wave action, debris impact, erosion and local scour. Where soils are susceptible to erosion and local scour, stem wall foundations shall have deep footings to account for the loss of soil.

**Reason:** Section R322.3.3 allows the use of pilings or columns, but the way the requirements are phrased makes it appear they apply only to pilings, without equivalent specificity for columns. Columns must also be designed to account for wave and wind loads and the effects of scour. The primary object of this proposal is to provide that specificity. Second, the current text is long, so the proposal breaks it into distinct numbered items which makes it easier to read.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. No cost impact associated with the added text for columns because the text is clarifying only and column foundations already are required to be designed by registered design professionals who should always evaluate whether sites have erodible soils subject to scour as part of the design process.

Report of Committee Action  
Hearings

Committee Action:

Approved as Submitted

Committee Reason: This reorganization makes it easier for code officials to interpret the requirements. (Vote: 7-4)

Assembly Action:

None

Final Action

RB145-19

AS

# TAC: Special Occupancy

Total Mods for **Special Occupancy** in **Denied – Consent**: 10

Total Mods for report: 17

## Sub Code: Building

SP9481/G18-19

8

Date Submitted 3/2/2021  
Chapter 1

Section 105.1  
Affects HVHZ Yes

Proponent Mo Madani  
Attachments Yes

TAC Recommendation Denied – Consent  
Commission Action Pending Review

Staff Classification Flood Requirements

### Comments

General Comments Yes

### Related Modifications

G105.1, G105.5, G105.6, G105.7

This appendix is reserved under the 2020 FBC-B.

Overlap

### Summary of Modification

This proposal allows jurisdictions to establish or designate a board to hear and decide requests for variances, concerning G105.1 General.

### Rationale

This proposal allows jurisdictions to establish or designate a board to hear and decide requests for variances. The NFIP gives the community the authority to approve or disapprove variances from the strict application of the minimum floodplain management requirements. The IBC authorizes the building official, not the board of appeals, to grant variances for buildings in flood hazard areas. When a local jurisdiction uses IBC Appendix G to regulate development other than buildings it should be able to designate the appropriate board or body, which may be the board of appeals or another body, such as the planning commission, the elected governing body, or a committee of department leadership.

## Comment Period History

Proponent Rebecca Quinn obo F Submitted 6/18/2021 Attachments No

### Comment:

Do not retain this change. The Commission has not make IBC Appendix G available in recent years and should continue that. Nearly all Florida communities that participate in the NFIP have adopted floodplain management ordinances that rely on the flood provisions of the FBC to satisfy the NFIP.

SP9481-G1

Approved as Modified

Original Proposal:

## 2018 International Building Code

Revise as follows:

**G105.1 General.** The ~~board of appeals~~ established pursuant to Section 113 shall jurisdiction shall establish or designate a board to hear and decide requests for variances. The board of appeals shall base its determination on technical justifications, and has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of this appendix and Section 1612.

**G105.5 Restrictions.** The board of appeals shall not issue a variance for any proposed development in a floodway if any increase in flood levels would result during the base flood discharge.

**G105.6 Considerations.** In reviewing applications for variances, the board of appeals shall consider all technical evaluations, all relevant factors, all other portions of this appendix and the following:

1. The danger that materials and debris may be swept onto other lands resulting in further injury or damage.
2. The danger to life and property due to flooding or erosion damage.
3. The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners.
4. The importance of the services provided by the proposed development to the community.
5. The availability of alternate locations for the proposed development that are not subject to flooding or erosion.
6. The compatibility of the proposed development with existing and anticipated development.
7. The relationship of the proposed development to the comprehensive plan and flood plain management program for that area.
8. The safety of access to the property in times of flood for ordinary and emergency vehicles.
9. The expected heights, velocity, duration, rate of rise and debris and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site.
10. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

**G105.7 Conditions for issuance.** Variances shall only be issued by the board of appeals where all of the following criteria are met:

1. A technical showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site renders the elevation standards inappropriate.
2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
4. A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
5. Notification to the applicant in writing over the signature of the building official that the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and that such construction below the base flood level increases risks to life and property.

Modified Proposal:

**G105.1 General.** ~~The jurisdiction shall establish or designate a board to~~ board of appeals established pursuant to Section 113, or other established or designated board, shall hear and decide requests for variances. The board shall base its determination on technical justifications, and has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of this appendix and Section 1612.

## Code Change No: **G18-19**

### Original Proposal

**Section(s): G105.1, G105.5, G105.6, G105.7**

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

**THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE**

**2018 International Building Code**

**Revise as follows:**

**G105.1 General.** The ~~board of appeals established pursuant to Section 113 shall~~ jurisdiction shall establish or designate a board to hear and decide requests for variances. The board ~~of appeals~~ shall base its determination on technical justifications, and has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of this appendix and Section 1612.

**G105.5 Restrictions.** The board ~~of appeals~~ shall not issue a variance for any proposed development in a floodway if any increase in flood levels would result during the base flood discharge.

**G105.6 Considerations.** In reviewing applications for variances, the board ~~of appeals~~ shall consider all technical evaluations, all relevant factors, all other portions of this appendix and the following:

1. The danger that materials and debris may be swept onto other lands resulting in further injury or damage.
2. The danger to life and property due to flooding or erosion damage.
3. The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners.
4. The importance of the services provided by the proposed development to the community.
5. The availability of alternate locations for the proposed development that are not subject to flooding or erosion.
6. The compatibility of the proposed development with existing and anticipated development.
7. The relationship of the proposed development to the comprehensive plan and flood plain management program for that area.
8. The safety of access to the property in times of flood for ordinary and emergency vehicles.
9. The expected heights, velocity, duration, rate of rise and debris and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site.
10. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

**G105.7 Conditions for issuance.** Variances shall only be issued by the board ~~of appeals~~ where all of the following criteria are met:

1. A technical showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site renders the elevation standards inappropriate.

2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
4. A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
5. Notification to the applicant in writing over the signature of the building official that the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and that such construction below the base flood level increases risks to life and property.

**Reason:** This proposal allows jurisdictions to establish or designate a board to hear and decide requests for variances. The NFIP gives the community the authority to approve or disapprove variances from the strict application of the minimum floodplain management requirements. The IBC authorizes the building official, not the board of appeals, to grant variances for buildings in flood hazard areas. When a local jurisdiction uses IBC Appendix G to regulate development other than buildings it should be able to designate the appropriate board or body, which may be the board of appeals or another body, such as the planning commission, the elected governing body, or a committee of department leadership.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. There is no cost impact because this proposal is related to designation of a deliberative body by individual jurisdictions.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**G105.1 General.** ~~The jurisdiction shall establish or designate a board to~~ board of appeals established pursuant to Section 113, or other established or designated board, shall hear and decide requests for variances. The board shall base its determination on technical justifications, and has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of this appendix and Section 1612.

**Committee Reason:** Allows establishment of a board to hear floodplain concerns. (Vote: 11-3)

The modification allows alternate boards.

**Assembly Action:**

**None**

**Final Action**

**G18-19**

**AM**

<b>Date Submitted</b> 3/2/2021	<b>Section 3112</b>	<b>Proponent</b> Mo Madani
<b>Chapter</b> 31	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Denied – Consent	<b>Staff Classification</b> Flood Requirements	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** No**Related Modifications**

3112, 3112.1, 3112.2

Proposed code change is in conflict with the flood management regulation of the NFIP. This code change was disapproved by the Commission during the 2020 FBC code development process.

**Summary of Modification**

Adds new Section 3112 "Public Use Restroom Buildings in Flood Hazard Areas", and adds provisions for such.

**Rationale**

Thousands of communities and state agencies have public open space and parks along rivers and shorelines. Many communities experience economic value from tourism and public access to areas that feature water resources. Under the current requirements of the IBC, restrooms for public use that are located in flood hazard areas must meet the same requirements as residential and commercial buildings. In flood hazard areas other than coastal high hazard areas and Coastal A Zones (i.e., in flood zones identified on Federal Emergency Management Agency Flood Insurance Rate Maps with the letter "A"), restroom buildings must either be elevated or dry floodproofed to or above the elevations required by the IBC/ASCE 24. In coastal high hazard areas (flood Zone V) and Coastal A Zones, restroom buildings must be elevated to or above the elevations required by the IBC/ASCE 24. In Florida and other coastal states, this has resulted in construction of public use restrooms as high as 6 to 18 feet above grade. This poses many challenges, not the least of which is access. Figures 1, 2, 3 and 4 (below) illustrate elevated restrooms with long ramps. While ramps can be built to meet ADA requirements, to reach some heights required in some flood hazard areas the ramps may be as long as 300 feet. In coastal high hazard areas, such ramps likely conflict with the NFIP requirements that elevated buildings be "free of obstruction," and the presence of such ramps would likely interfere with the ability of walls around enclosures to break away under flood conditions. Those same provisions are required by IBC Section 1612, Flood Loads, which references ASCE 24, Flood Resistant Design and Construction.

(Please see uploaded mod G149-18 for the complete text)

Approved as Modified by Public Comment 1

Original Proposal:

2018 International Building Code

Add new text as follows:

**SECTION 3112**  
**PUBLIC USE RESTROOM BUILDINGS IN FLOOD HAZARD AREAS**

**3112.1 General.** Public use restroom buildings that contain toilet rooms, bathrooms, showers and changing rooms, and those portions of buildings that contain toilet rooms, bathrooms, showers and changing rooms, and where such buildings and portions of buildings are intended for public use and located on publicly owned lands in flood hazard areas, shall comply with the requirements of this section. Public use restrooms that are not elevated or dry floodproofed in accordance with Section 1612 shall comply with Section 3112.2. Portions of buildings that include uses other than public use toilet rooms, bathrooms, showers and changing rooms shall comply with Section 1612.

**3112.2 Flood resistance.** Public use restrooms that are located in flood hazard areas shall comply with the requirements of ASCE 24, except for elevation requirements, and shall comply with all of the following criteria:

1. The building footprint is not more than 1,500 square feet.
2. Located, designed and constructed to resist the effects of flood hazards and flood loads to minimize flood damage from a combination of wind and water loads associated with the base flood.
3. Anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy during conditions of the base flood.
4. Constructed of flood damage-resistant materials.
5. Where enclosed by walls, the walls have flood openings.
6. Mechanical and electrical systems are located above the base flood elevation.
7. Plumbing fixtures and plumbing connections are located above the base flood elevation.
8. An emergency plan, approved by the jurisdiction, is submitted to the building official where the building design specifies implementation of protection measures prior to the onset of flooding conditions.

**Exceptions:**

1. Minimum electric service required to address life safety and electric code requirements is permitted below the base flood elevation.
2. Plumbing fixtures and connections are permitted below the base flood elevation provided the fixtures and connections are designed and installed to minimize or eliminate infiltration of floodwaters into the sanitary sewage system and discharges from sanitary sewage systems into floodwaters.

Modified Proposal PC1:

2018 International Building Code

3101.1 Scope. The provisions of this chapter shall govern special building construction including membrane structures, temporary structures, pedestrian walkways and tunnels, automatic vehicular gates, awnings and canopies, marquees, signs, towers, antennas, relocatable buildings, swimming pool enclosures and safety devices, and solar energy systems, and public use restroom buildings on publicly owned lands in flood hazard areas.

**SECTION 3142-3114  
PUBLIC USE RESTROOM BUILDINGS IN FLOOD HAZARD AREAS**

**3112-3114.1 General.** ~~Public use restroom buildings that contain toilet rooms, bathrooms, showers and changing rooms, and those portions of buildings that contain~~ For the purpose of this section, public restroom buildings are located on publicly owned lands in flood hazard areas and intended for public use. Public restroom buildings and portions of other buildings that contain public restrooms, are limited to toilet rooms, bathrooms, showers and changing rooms, and where such, Public restroom buildings and portions of buildings are intended for public use and located on publicly owned lands in flood hazard areas, that contain public restrooms shall comply with the requirements of this section. Public use restrooms that are not elevated or dry floodproofed in accordance with Section 1612 shall comply with Section 3142-3114.2. Portions of buildings that include uses other than public use toilet rooms, bathrooms, showers and changing rooms shall comply with Section 1612.

**3142.2-3114.2 Flood resistance.** Public use restrooms that are located on publicly owned lands in flood hazard areas shall comply with the requirements of ASCE 24, except for elevation requirements, and shall comply with all of the following criteria:

1. The building footprint is not more than 1,500 square feet.
2. Located, designed and constructed to resist the effects of flood hazards and flood loads to minimize flood damage from a combination of wind and water loads associated with the base flood.
3. Anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy during conditions of the base flood.
4. Constructed of flood damage-resistant materials.
5. Where enclosed by walls, the walls have flood openings.
6. Mechanical and electrical systems are located above the base flood elevation.
7. Plumbing fixtures and plumbing connections are located above the base flood elevation.
8. An emergency plan, approved by the jurisdiction, is submitted to the building official where the building design specifies documents specify implementation of protection measures prior to the onset of flooding conditions.

**Exceptions:**

1. Minimum necessary electric service equipment required to address health, life safety and electric code requirements is permitted below the base flood elevation in accordance with ASCE 24 provisions for electric elements installed below the minimum elevations.
2. Plumbing fixtures and connections are permitted below the base flood elevation provided the fixtures and connections are designed and installed to minimize or eliminate infiltration of floodwaters into the sanitary sewage system and discharges from sanitary sewage systems into floodwaters.

## Code Change No: **G149-18**

### Original Proposal

**Section(s):** 3112, 3112.1, 3112.2

**Proponent:** Steve Martin, Florida Division of Emergency Management, representing Florida Division of Emergency Management (steve.martin@em.myflorida.com); Douglas Wise, Building Officials Association of Florida, representing Building Officials Association of Florida (douglasbwise@att.net)

**2018 International Building Code**

**Add new text as follows:**

### **SECTION 3112** **PUBLIC USE RESTROOM BUILDINGS IN FLOOD HAZARD AREAS**

**3112.1 General.** Public use restroom buildings that contain toilet rooms, bathrooms, showers and changing rooms, and those portions of buildings that contain toilet rooms, bathrooms, showers and changing rooms, and where such buildings and portions of buildings are intended for public use and located on publicly owned lands in flood hazard areas, shall comply with the requirements of this section. Public use restrooms that are not elevated or dry floodproofed in accordance with Section 1612 shall comply with Section 3112.2. Portions of buildings that include uses other than public use toilet rooms, bathrooms, showers and changing rooms shall comply with Section 1612.

**3112.2 Flood resistance.** Public use restrooms that are located in flood hazard areas shall comply with the requirements of ASCE 24, except for elevation requirements, and shall comply with all of the following criteria:

1. The building footprint is not more than 1,500 square feet.
2. Located, designed and constructed to resist the effects of flood hazards and flood loads to minimize flood damage from a combination of wind and water loads associated with the base flood.
3. Anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy during conditions of the base flood.
4. Constructed of flood damage-resistant materials.
5. Where enclosed by walls, the walls have flood openings.
6. Mechanical and electrical systems are located above the base flood elevation.
7. Plumbing fixtures and plumbing connections are located above the base flood elevation.
8. An emergency plan, approved by the jurisdiction, is submitted to the building official where the building design specifies implementation of protection measures prior to the onset of flooding conditions.

**Exceptions:**

1. Minimum electric service required to address life safety and electric code requirements is permitted below the base flood elevation.
2. Plumbing fixtures and connections are permitted below the base flood elevation provided the fixtures and connections are designed and installed to minimize or eliminate infiltration of floodwaters into the sanitary sewage system and discharges from sanitary sewage systems into floodwaters.

**Reason:** Thousands of communities and state agencies have public open space and parks along rivers and shorelines. Many communities experience economic value from tourism and public access to areas that feature water resources. Under the current requirements of the IBC, restrooms for public use that are located in flood hazard areas must meet the same requirements as residential and commercial buildings. In flood hazard areas other than coastal high hazard areas and Coastal A Zones (i.e., in flood zones identified on Federal Emergency Management Agency Flood Insurance Rate Maps with the letter "A"), restroom buildings must either be elevated or dry floodproofed to or above the elevations required by the IBC/ASCE 24. In coastal high hazard areas (flood Zone V) and Coastal A Zones, restroom buildings must be elevated to or above the elevations required by the IBC/ASCE 24.

In Florida and other coastal states, this has resulted in construction of public use restrooms as high as 6 to 18 feet above grade. This poses many challenges, not the least of which is access. Figures 1, 2, 3 and 4 (below) illustrate elevated restrooms with long ramps. While ramps can be built to meet ADA requirements, to reach some heights required in some flood hazard areas the ramps may be as long as 300 feet. In coastal high hazard areas, such ramps likely conflict with the NFIP requirements that elevated buildings be "free of obstruction," and the presence of such ramps would likely interfere with the ability of walls around enclosures to break away under flood conditions. Those same provisions are required by IBC Section 1612, Flood Loads, which references ASCE 24, Flood Resistant Design and Construction.

Long ramps defeat accessibility when the distance of travel still renders restroom facilities inaccessible to many persons with disabilities or limited mobility. Although the IBC (and FEMA) permits elevators to extend below the base flood elevation, installing elevators to provide access to elevated public use restrooms is expensive and creates many maintenance issues, and a high rate of failure to function, especially in beach areas where blowing sand and windborne salt aerosols create corrosive conditions.

This proposal creates a new section in IBC Chapter 31, Special Construction to limit the scope to public use restrooms that include public use toilet rooms, bathrooms, showers and changing rooms and spaces. Portions of such buildings that include other uses would have to fully comply with the elevation and other flood resistant requirements of IBC Section 1612, Flood Loads, which references ASCE 24, Flood Resistant Design and Construction.

In recognition that most public use restrooms are built on public land using public funds, the proposal is to limit the potential financial losses associated with flooded public facilities in two ways: by limiting the footprint to not more than 1,500 square feet and by specifying design requirements that minimize or eliminate physical damage when flooding occurs. Enabling public use restrooms to be designed to withstand the hydrodynamic and hydrostatic loads below the base flood elevation is an appropriate alternative to the extremely high cost for design, construction and maintenance of highly elevated public restrooms and their required access ramps or elevators.

Although the proposed design requirements are intended to preclude significant damage during flood conditions up to and including conditions of the design flood (e.g., the base or 100-year flood), more severe floods can and do occur. Figure 5 (below) illustrates one modest design option that demonstrates the feasibility of the proposal. It shows a small masonry restroom on a beach after Hurricane Irma pushed onshore. The drawings for the building show below-grade piling support and it appears the masonry units were filled. Despite approximately 6-8 feet of flooding (including waves), there is no evidence of structural damage and the non-structural damage appears readily repairable.

The proposal includes requirements for flood resistance similar to those found in IBC Appendix G, Section G1001 for Utility and Miscellaneous Group U and similar to the requirements of ASCE 24-14 for Flood Design Class 1 (which is essentially equivalent to Structure/Risk Category I). Those requirements effectively are the same as the NFIP requirements in 44 Code of Federal Regulations Section 60.3(a)(3)(ii), (iii), and (iv). FEMA deems the flood provisions of the I-Codes, with reference to ASCE 24, to meet or exceed the requirements of the National Flood Insurance Program (NFIP).

The intent is to allow public use restrooms to be at-grade or above-grade but below the base flood (partially elevated), provided they meet the design requirements listed in 3112.2. The proponent acknowledges that, at present, FEMA guidance states that restroom buildings and comfort stations in coastal high hazard areas must be elevated and meet the same design and construction requirements as other buildings. This proposal is intended to meet the intent of all NFIP requirements, except elevation requirements, to minimize flood damage, while acknowledging the special needs and access required or appropriate for public use restrooms. The Florida Floodplain Management Association prepared a white paper on this subject: Policy and Design Options for Public Restrooms in Special Flood Hazard Areas (2014), [www.FLfoods.org/ffmawhitepaper](http://www.FLfoods.org/ffmawhitepaper).



Figure 1. Florida, flood Zone V. Ramp wraps around entire building. Has composting toilets, battery and solar electric system, emergency plan requires pumping out tank and filling with clean water.



Figure 2. Coastal Mississippi, flood Zone V. This facility cost \$1.1 million.



Figure 3. Florida, Gulf Coast, flood Zone V. Ramp built after original elevator determined to be unsustainable due to significant maintenance problems.



Figure 4. Southwest Florida, flood Zone V. Extensive ramp wraps around three sides.



Figure 5. Florida, after Hurricane Irma, flood Zone V. No evidence of structural damage after estimated 5 ft stillwater plus waves. From upper left: facing beach, side, interior, rear.

**Bibliography:** Policy and Design Options for Public Restrooms in Special Flood Hazard Areas, Florida Floodplain Management Associations, 2014. 55 pages. [www.FLfloods.org/ffmawhitepaper](http://www.FLfloods.org/ffmawhitepaper)

**Cost Impact:** The code change proposal will decrease the cost of construction

The proposal will lower the initial cost of construction and lower routine and long-term facility maintenance. The cost to construct as specified in this proposal to resist the effects of flood hazards and flood loads may be somewhat higher than a typical non-elevated restroom building that is not designed to resist flood loads and flood damage (not currently allowed). However, the cost for construction under the proposal will be less than the cost to elevate and provide and maintain elevators and extensive ramp systems (current method of compliance).

#### Report of Committee Action Hearings

**Committee Action:**

**Disapproved**

**Committee Reason:** This proposal has some merit, but the language is too loose. "Public" could mean any building that is considered public in the Americans with Disabilities Act. "Governmental entities" may be a better term. (Vote: 9-5)

**Assembly Action:**

**None**

## Public Comments

*Public Comment 1:*

**Steven Martin, Florida Division of Emergency Management, representing Florida Division of Emergency Management (steve.martin@em.myflorida.com); Douglas Wise (douglaswise@att.net) requests As Modified by Public Comment**

Modify as follows:

**2018 International Building Code**

**3101.1 Scope.** The provisions of this chapter shall govern special building construction including membrane structures, temporary structures, pedestrian walkways and tunnels, automatic vehicular gates, awnings and canopies, marquees, signs, towers, antennas, relocatable buildings, swimming pool enclosures and safety devices, ~~and solar energy systems, and public use restroom buildings on publicly owned lands in flood hazard areas.~~

**SECTION 3442-3114  
PUBLIC USE RESTROOM BUILDINGS IN FLOOD HAZARD AREAS**

**3442-3114.1 General.** ~~Public use restroom buildings that contain toilet rooms, bathrooms, showers and changing rooms, and those portions of buildings that contain~~ For the purpose of this section, public restroom buildings are located on publicly owned lands in flood hazard areas and intended for public use. Public restroom buildings and portions of other buildings that contain public restrooms, are limited to toilet rooms, bathrooms, showers and changing rooms, and where such, Public restroom buildings and portions of buildings are intended for public use and located on publicly owned lands in flood hazard areas, that contain public restrooms shall comply with the requirements of this section. Public use restrooms that are not elevated or dry floodproofed in accordance with Section 1612 shall comply with Section 3442-3114.2. Portions of buildings that include uses other than public use toilet rooms, bathrooms, showers and changing rooms shall comply with Section 1612.

**3442-2-3114.2 Flood resistance.** ~~Public use restrooms that are located on publicly owned lands in flood hazard areas shall comply with the requirements of ASCE 24, except for elevation requirements, and shall comply with all of the following criteria:~~

1. The building footprint is not more than 1,500 square feet.
2. Located, designed and constructed to resist the effects of flood hazards and flood loads to minimize flood damage from a combination of wind and water loads associated with the base flood.
3. Anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy during conditions of the base flood.
4. Constructed of flood damage-resistant materials.
5. Where enclosed by walls, the walls have flood openings.
6. Mechanical and electrical systems are located above the base flood elevation.
7. Plumbing fixtures and plumbing connections are located above the base flood elevation.
8. An emergency plan, approved by the jurisdiction, is submitted to the building official where the building design ~~specifies documents specify~~ implementation of protection measures prior to the onset of flooding conditions.

**Exceptions:**

1. Minimum necessary ~~electric service equipment~~ required to address health, life safety and electric code requirements is permitted below the base flood elevation in accordance with ASCE 24 provisions for electric elements installed below the minimum elevations.
2. Plumbing fixtures and connections are permitted below the base flood elevation provided the fixtures and connections are designed and installed to minimize or eliminate infiltration of floodwaters into the sanitary sewage system and discharges from sanitary sewage systems into floodwaters.

**Commenter's Reason:** This public comment addresses issues raised by committee members at the March 13, 2018 Committee Action Hearing by clarifying that this new section applies to public restroom buildings and portions of other buildings that contain public restrooms in flood hazard areas located only on publicly-owned land.

The intent is to provide an alternative to elevating public restrooms in publicly-owned open spaces and parks along rivers and shorelines which otherwise may be challenging to access for persons with limited mobility because of excessively long ramps. Restrooms designed and constructed in accordance with this section, which references ASCE 24, Flood Resistant Design and Construction, will be minimal in nature and designed to resist flooding with minimal, if any damage.

FEMA deployed a Mitigation Assessment Team after Hurricane Irma to investigate damage, including how public restrooms were affected. The results of that field work were not released as of the deadline for submission of this public comment. Florida Division of Emergency Management staff participated in the field work and, along with the other team members, observed some below-BFE small public restrooms designed to resist flood loads that sustained superficial damage (finishes and fixtures) and were readily repairable. At a June 2018 meeting between the Florida Division of Emergency Management and senior management officials with the FEMA Flood Insurance and Mitigation Administration, FEMA concurred with the public comment and indicated the

agency would work to achieve consistency across agency programs to develop guidance or procedures based on the proposed amendment. No opposition to the proposal was expressed during that meeting.

Another clarification to the proposal is to specify the minimum necessary "electric equipment" (rather than "electric service") that may be below the base flood elevation. ASCE 24 specifies requirements for electric elements installed below minimum required elevations, including conduits and cables; lighting circuits, switches, receptacles, and fixtures; wiring and splices suitable for submergence; and energizing from distribution panels located above and accessible from above flood elevation supplied by branch circuits originating from ground-fault circuit-interrupter breakers. ASCE 24 also requires installations to be in accordance with NFPA 70, National Electric Code. The proponents will submit to ICC proposed text for the commentary volume that describes allowances for light switches and fixtures, GFCI receptacles, exhaust fans, and electrical equipment and attendant utilities that are the minimum necessary to meet health and life safety requirements.

**Cost Impact:** The net effect of the public comment and code change proposal will decrease the cost of construction. This public comment clarifies the intent and does not change the cost impact submitted as part of the original proposal.

Final Action

G149-18AMPC1

<b>Date Submitted</b> 3/2/2021	<b>Section</b> 101.5	<b>Proponent</b> Mo Madani
<b>Chapter</b> 2707	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Denied – Consent	<b>Staff Classification</b> Flood Requirements	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** Yes**Related Modifications**

G101.5 (New), G103.1, G103.2, G103.3, G103.4, G103.5, G103.6, G103.6.1, G103.7, G103.8, G103.9, G104.1, G104.2, G104.3, G104.4, G104.5, G105.2, G105.7

Overlap - This appendix is reserved under the 2020 FBC -B.

Overlap

**Summary of Modification**

This proposal addresses a concern raised in the last cycle by stating the designation of the floodplain administrator does not alter any duties and responsibilities of the building official.

**Rationale**

When local jurisdictions join the National Flood Insurance Program they are required to designate the local official responsible for enforcing floodplain management regulations. Some jurisdictions identify an official other than the building official, in part because many responsibilities are not directly related to enforcement of requirements for buildings. In those jurisdictions, the building official and the official designated as the floodplain administrator work together to fulfill the communities commitments to the NFIP.

This proposal addresses a concern raised in the last cycle by stating the designation of the floodplain administrator does not alter any duties and responsibilities of the building official.

Appendix G is scoped to apply to "development," which is defined in Appendix G, and it governs activities other than buildings and structures. The authority under which Appendix G is enforced is the jurisdiction's agreement with the NFIP and is specified in Appendix G, not the building code. When a local jurisdiction uses IBC Appendix G to regulate development other than buildings it should be able to designate the appropriate official, which may or may not be the building official. The role of the floodplain administrator is limited to the provisions of the appendix. Jurisdictions may choose to designate the building official as the floodplain administrator.

**Comment Period History**

**Proponent** Rebecca Quinn obo F **Submitted** 6/18/2021 **Attachments** No

**Comment:**

Do not retain this change. The Commission has not make IBC Appendix G available in recent years and should continue that. Nearly all Florida communities that participate in the NFIP have adopted floodplain management ordinances that rely on the flood provisions of the FBC to satisfy the NFIP.

Approved as Submitted

## 2018 International Building Code

### Add new text as follows:

**G101.5 Designation of floodplain administrator.** The [INSERT JURISDICTION'S SELECTED POSITION TITLE] is designated as the floodplain administrator and is authorized and directed to enforce the provisions of this appendix. The floodplain administrator is authorized to delegate performance of certain duties to other employees of the jurisdiction. Such designation shall not alter any duties and powers of the building official.

### Revise as follows:

**G103.1 Permit applications.** ~~All applications for permits must~~ shall comply with the following:

1. The ~~building official~~ floodplain administrator shall review all permit applications to determine whether proposed development is located in flood hazard areas established in Section G102.2.
2. Where a proposed development site is in a flood hazard area, all development to which this appendix is applicable as specified in Section G102.1 shall be designed and constructed with methods, practices and materials that minimize flood damage and that are in accordance with this code and ASCE 24.

**G103.2 Other permits.** ~~It shall be the responsibility of the building official~~ floodplain administrator to ensure that approval of a proposed development shall not be given until proof that necessary permits have been granted by federal or state agencies having jurisdiction over such development.

**G103.3 Determination of design flood elevations.** ~~If design flood elevations are not specified, the building official~~ floodplain administrator is authorized to require the applicant to meet one of the following:

1. Obtain, review and reasonably utilize data available from a federal, state or other source.
2. Determine the design flood elevation in accordance with accepted hydrologic and hydraulic engineering techniques. Such analyses shall be performed and sealed by a registered design professional. Studies, analyses and computations shall be submitted in sufficient detail to allow review and approval by the ~~building official~~ floodplain administrator. The accuracy of data submitted for such determination shall be the responsibility of the applicant.

**G103.4 Activities in riverine flood hazard areas.** ~~In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the building official~~ floodplain administrator shall not permit any new construction, substantial improvement or other development, including fill, unless the applicant submits an engineering analysis prepared by a registered design professional, demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachment, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the community.

**G103.5 Floodway encroachment.** Prior to issuing a permit for any floodway encroachment, including fill, new construction, substantial improvements and other development or land-disturbing activity, the ~~building official~~ floodplain administrator shall require submission of a certification, prepared by a registered design professional, along with supporting technical data, demonstrating that such development will not cause any increase of the base flood level.

**G103.6 Watercourse alteration.** Prior to issuing a permit for any alteration or relocation of any watercourse, the ~~building official~~ floodplain administrator shall require the applicant to provide notification of the proposal to the appropriate authorities of all adjacent government jurisdictions, as well as appropriate state agencies. A copy of the notification shall be maintained in the permit records and submitted to FEMA.

**G103.6.1 Engineering analysis.** The ~~building official~~ floodplain administrator shall require submission of an engineering analysis, prepared by a registered design professional, demonstrating that the flood-carrying capacity of the altered or relocated portion of the watercourse will not be decreased. Such watercourses shall be maintained in a manner that preserves the channel's flood-carrying capacity.

**G103.7 Alterations in coastal areas.** Prior to issuing a permit for any alteration of sand dunes and mangrove stands in coastal high-hazard areas and coastal A zones, the ~~building official~~ floodplain administrator shall require submission of an engineering analysis, prepared by a registered design professional, demonstrating that the proposed alteration will not increase the potential for flood damage.

**G103.8 Records.** The ~~building official~~ floodplain administrator shall maintain a permanent record of all permits issued in flood hazard areas, including supporting certifications and documentation required by this appendix and copies of inspection reports, design certifications and documentation of elevations required in Section 1612 of this code and Section R322 of the International Residential Code.

**G103.9 Inspections.** Development for which a permit under this appendix is required shall be subject to inspection. The ~~building official~~ floodplain administrator or the ~~building official's~~ floodplain administrator's designee shall make, or cause to be made, inspections of all development in flood hazard areas authorized by issuance of a permit under this appendix.

**G104.1 Required.** Any person, owner or owner's authorized agent who intends to conduct any development in a flood hazard area shall first make application to the ~~building official~~ floodplain administrator and shall obtain the required permit.

**G104.2 Application for permit.** The applicant shall file an application in writing on a form furnished by the ~~building official~~ floodplain administrator. Such application shall:

1. Identify and describe the development to be covered by the permit.
2. Describe the land on which the proposed development is to be conducted by legal description, street address or similar description that will readily identify and definitely locate the site.
3. Include a site plan showing the delineation of flood hazard areas, floodway boundaries, flood zones, design flood elevations, ground elevations, proposed fill and excavation and drainage patterns and facilities.
4. Include in subdivision proposals and other proposed developments with more than 50 lots or larger than 5 acres (20 234 m<sup>2</sup>), base flood elevation data in accordance with Section 1612.3.1 if such data are not identified for the flood hazard areas established in Section G102.2.
5. Indicate the use and occupancy for which the proposed development is intended.
6. Be accompanied by construction documents, grading and filling plans and other information deemed appropriate by the ~~building official~~ floodplain administrator.
7. State the valuation of the proposed work.
8. Be signed by the applicant or the applicant's authorized agent.

**G104.3 Validity of permit.** The issuance of a permit under this appendix shall not be construed to be a permit for, or approval of, any violation of this appendix or any other ordinance of the jurisdiction. The issuance of a permit based on submitted documents and information shall not prevent the ~~building official~~ floodplain administrator from requiring the correction of errors. The ~~building official~~ floodplain administrator is authorized to prevent occupancy or use of a structure or site that is in violation of this appendix or other ordinances of this jurisdiction.

**G104.4 Expiration.** A permit shall become invalid if the proposed development is not commenced within 180 days after its issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the work commences. Extensions shall be requested in writing and justifiable cause demonstrated. The ~~building official~~ floodplain administrator

floodplain administrator is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each.

G104.5 Suspension or revocation. The ~~building official~~ floodplain administrator is authorized to suspend or revoke a permit issued under this appendix wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or code of this jurisdiction.

G105.2 Records. The ~~building official~~ floodplain administrator shall maintain a permanent record of all variance actions, including justification for their issuance.

G105.7 Conditions for issuance. Variances shall only be issued by the board of appeals where all of the following criteria are met:

1. A technical showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site renders the elevation standards inappropriate.
2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
4. A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
5. Notification to the applicant in writing over the signature of the ~~building official~~ floodplain administrator that the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and that such construction below the base flood level increases risks to life and property.

## Code Change No: **G16-19**

### Original Proposal

**Section(s):** G101.5 (New), G103.1, G103.2, G103.3, G103.4, G103.5, G103.6, G103.6.1, G103.7, G103.8, G103.9, G104.1, G104.2, G104.3, G104.4, G104.5, G105.2, G105.7

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

**THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE**

**2018 International Building Code**

**Add new text as follows:**

**G101.5 Designation of floodplain administrator.** The [INSERT JURISDICTION'S SELECTED POSITION TITLE] is designated as the floodplain administrator and is authorized and directed to enforce the provisions of this appendix. The floodplain administrator is authorized to delegate performance of certain duties to other employees of the jurisdiction. Such designation shall not alter any duties and powers of the building official.

**Revise as follows:**

**G103.1 Permit applications.** All applications for permits ~~must~~ shall comply with the following:

1. The ~~building official~~ floodplain administrator shall review all permit applications to determine whether proposed development is located in flood hazard areas established in Section G102.2.
2. Where a proposed development site is in a flood hazard area, all development to which this appendix is applicable as specified in Section G102.1 shall be designed and constructed with methods, practices and materials that minimize flood damage and that are in accordance with this code and ASCE 24.

**G103.2 Other permits.** It shall be the responsibility of the ~~building official~~ floodplain administrator to ensure that approval of a proposed development shall not be given until proof that necessary permits have been granted by federal or state agencies having jurisdiction over such development.

**G103.3 Determination of design flood elevations.** If design flood elevations are not specified, the ~~building official~~ floodplain administrator is authorized to require the applicant to meet one of the following:

1. Obtain, review and reasonably utilize data available from a federal, state or other source.
2. Determine the design flood elevation in accordance with accepted hydrologic and hydraulic engineering techniques. Such analyses shall be performed and sealed by a registered design professional. Studies, analyses and computations shall be submitted in sufficient detail to allow review and approval by the ~~building official~~ floodplain administrator. The accuracy of data submitted for such determination shall be the responsibility of the applicant.

**G103.4 Activities in riverine flood hazard areas.** In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the ~~building official~~ floodplain administrator shall not permit any new construction, substantial improvement or other development, including fill, unless the applicant submits an engineering analysis prepared by a registered design professional, demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachment, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the community.

**G103.5 Floodway encroachment.** Prior to issuing a permit for any floodway encroachment, including fill, new construction, substantial improvements and other development or land-disturbing activity, the ~~building official~~ floodplain administrator shall require submission of a certification, prepared by a registered design professional, along with supporting technical data, demonstrating that such development will not cause any increase of the base flood level.

**G103.6 Watercourse alteration.** Prior to issuing a permit for any alteration or relocation of any watercourse, the ~~building official~~ floodplain administrator shall require the applicant to provide notification of the proposal to the appropriate authorities of all adjacent government jurisdictions, as well as appropriate state agencies. A copy of the notification shall be maintained in the permit records and submitted to FEMA.

**G103.6.1 Engineering analysis.** The ~~building official~~ floodplain administrator shall require submission of an engineering analysis, prepared by a registered design professional, demonstrating that the flood-carrying capacity of the altered or relocated portion of the watercourse will not be decreased. Such watercourses shall be maintained in a manner that preserves the channel's flood-carrying capacity.

**G103.7 Alterations in coastal areas.** Prior to issuing a permit for any alteration of sand dunes and mangrove stands in coastal high-hazard areas and coastal A zones, the ~~building official~~ floodplain administrator shall require submission of an engineering analysis, prepared by a registered design professional, demonstrating that the proposed alteration will not increase the potential for flood damage.

**G103.8 Records.** The ~~building official~~ floodplain administrator shall maintain a permanent record of all permits issued in flood hazard areas, including supporting certifications and documentation required by this appendix and copies of inspection reports, design certifications and documentation of elevations required in Section 1612 of this code and Section R322 of the International Residential Code.

**G103.9 Inspections.** Development for which a permit under this appendix is required shall be subject to inspection. The ~~building official~~ floodplain administrator or the ~~building official's~~ floodplain administrator's designee shall make, or cause to be made, inspections of all development in flood hazard areas authorized by issuance of a permit under this appendix.

**G104.1 Required.** Any person, owner or owner's authorized agent who intends to conduct any development in a flood hazard area shall first make application to the ~~building official~~ floodplain administrator and shall obtain the required *permit*.

**G104.2 Application for permit.** The applicant shall file an application in writing on a form furnished by the ~~building official~~ floodplain administrator. Such application shall:

1. Identify and describe the development to be covered by the permit.
2. Describe the land on which the proposed development is to be conducted by legal description, street address or similar description that will readily identify and definitely locate the site.
3. Include a site plan showing the delineation of flood hazard areas, floodway boundaries, flood zones, design flood elevations, ground elevations, proposed fill and excavation and drainage patterns and facilities.

4. Include in subdivision proposals and other proposed developments with more than 50 lots or larger than 5 acres (20 234 m2), base flood elevation data in accordance with Section 1612.3.1 if such data are not identified for the flood hazard areas established in Section G102.2.
5. Indicate the use and occupancy for which the proposed development is intended.
6. Be accompanied by construction documents, grading and filling plans and other information deemed appropriate by the building official/floodplain administrator.
7. State the valuation of the proposed work.
8. Be signed by the applicant or the applicant's authorized agent.

**G104.3 Validity of permit.** The issuance of a permit under this appendix shall not be construed to be a permit for, or approval of, any violation of this appendix or any other ordinance of the jurisdiction. The issuance of a permit based on submitted documents and information shall not prevent the building official/floodplain administrator from requiring the correction of errors. The building official/floodplain administrator is authorized to prevent occupancy or use of a structure or site that is in violation of this appendix or other ordinances of this jurisdiction.

**G104.4 Expiration.** A permit shall become invalid if the proposed development is not commenced within 180 days after its issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the work commences. Extensions shall be requested in writing and justifiable cause demonstrated. The building official/floodplain administrator is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each.

**G104.5 Suspension or revocation.** The building official/floodplain administrator is authorized to suspend or revoke a permit issued under this appendix wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or code of this jurisdiction.

**G105.2 Records.** The building official/floodplain administrator shall maintain a permanent record of all variance actions, including justification for their issuance.

**G105.7 Conditions for issuance.** Variances shall only be issued by the board of appeals where all of the following criteria are met:

1. A technical showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site renders the elevation standards inappropriate.
2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.
3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or ordinances.
4. A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
5. Notification to the applicant in writing over the signature of the building official/floodplain administrator that the issuance of a variance to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and that such construction below the base flood level increases risks to life and property.

**Reason:** When local jurisdictions join the National Flood Insurance Program they are required to designate the local official responsible for enforcing floodplain management regulations. Some jurisdictions identify an official other than the building official, in part because many responsibilities are not directly related to enforcement of requirements for buildings. In those jurisdictions, the building official and the official designated as the floodplain administrator work together to fulfill the communities commitments to the NFIP.

This proposal addresses a concern raised in the last cycle by stating the designation of the floodplain administrator does not alter any duties and responsibilities of the building official.

Appendix G is scoped to apply to "development," which is defined in Appendix G, and it governs activities other than buildings and structures. The authority under which Appendix G is enforced is the jurisdiction's agreement with the NFIP and is specified in Appendix G, not the building code. When a local jurisdiction uses IBC Appendix G to regulate development other than buildings it should be able to designate the appropriate official, which may or may not be the building official. The role of the floodplain

administrator is limited to the provisions of the appendix. Jurisdictions may choose to designate the building official as the floodplain administrator.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. There is no cost impact because this proposal is related to designation of personnel by individual jurisdictions.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** This clarifies that it is the wall panel/material that is tested per C1629/C1629M and not a full wall assembly. Full wall assembly testing is outside of the scope of C1629/C1629M. Section 1.1.1.1 of C1629/C1629M states, "panel product performance is not intended to classify the system for abuse resistance." (Vote: 13-1)

**Assembly Action:**

**None**

**Final Action**

**G16-19**

**AS**

<b>Date Submitted</b> 3/2/2021	<b>Section</b> 103.10	<b>Proponent</b> Mo Madani
<b>Chapter</b> 2707	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Denied – Consent	<b>Staff Classification</b> Flood Requirements	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** Yes**Related Modifications**

G103.10

This appendix is reserved under the 2020 FBC-B.

Overlap

**Summary of Modification**

Adds section G103.10. The building official and the applicant shall not use changed flood hazard area boundaries or base flood elevations for proposed buildings or developments unless the building official or applicant has applied for a conditional Flood Insurance Rate Map and have approval of FEMA.

**Rationale**

Virtually every community with identified areas subject to flooding adopts the Federal Emergency Management Agency's Flood Insurance Study and Flood Insurance Rate Maps (FIRMs) as the official maps. If a community develops its own flood study or if an applicant provides data or studies that show a change to a FIRM is appropriate, the data must be submitted to FEMA so the official maps are maintained with the best available information.

FEMA has a formal process to amend flood data. Local officials do not have the authority to change FEMA's maps and data, which means the effective FIRMs and data must be used until and unless changed by FEMA. If a flood zone or Base Flood Elevation is changed by a study and that change is not shown on the FIRM, decisions regarding future permit requirements and NFIP flood insurance policies would not be based on the best available information. Also, the current effective FIRMs are used by mortgage lenders to determine which borrowers must have flood insurance. If new studies are not provided to FEMA, some property owners might be forced to buy flood insurance even though a new study shows their locations are "out" of the SFHA. Or if new studies show a lower BFE, policies would not be rated based on those BFEs because the FIRMs weren't revised.

**Comment Period History**

**Proponent** Rebecca Quinn obo F **Submitted** 6/18/2021 **Attachments** No

**Comment:**

Do not retain this change. The Commission has not make IBC Appendix G available in recent years and should continue that. Nearly all Florida communities that participate in the NFIP have adopted floodplain management ordinances that rely on the flood provisions of the FBC to satisfy the NFIP.

Approved as Modified

Original Proposal:

## 2018 International Building Code

Add new text as follows:

**G103.10 Use of changed technical data. The building official and the applicant shall not use changed flood hazard area boundaries or base flood elevations for proposed buildings or developments unless the building official or applicant has applied for a conditional Flood Insurance Rate Map (FIRM) revision and has received the approval of the Federal Emergency Management Agency (FEMA).**

Modified Proposal:

**G103.10 Use of changed technical data. The building-official floodplain administrator and the applicant shall not use changed flood hazard area boundaries or base flood elevations for proposed buildings or developments unless the building-official floodplain administrator or applicant has applied for a conditional Flood Insurance Rate Map (FIRM) revision and has received the approval of the Federal Emergency Management Agency (FEMA).**

## Code Change No: G17-19

### Original Proposal

#### Section(s): G103.10 (New)

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

**THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE**

#### 2018 International Building Code

#### Add new text as follows:

**G103.10 Use of changed technical data.** The building official and the applicant shall not use changed flood hazard area boundaries or base flood elevations for proposed buildings or developments unless the building official or applicant has applied for a conditional Flood Insurance Rate Map (FIRM) revision and has received the approval of the Federal Emergency Management Agency (FEMA).

**Reason:** Virtually every community with identified areas subject to flooding adopts the Federal Emergency Management Agency's Flood Insurance Study and Flood Insurance Rate Maps (FIRMs) as the official maps. If a community develops its own flood study or if an applicant provides data or studies that show a change to a FIRM is appropriate, the data must be submitted to FEMA so the official maps are maintained with the best available information.

FEMA has a formal process to amend flood data. Local officials do not have the authority to change FEMA's maps and data, which means the effective FIRMs and data must be used until and unless changed by FEMA. If a flood zone or Base Flood Elevation is changed by a study and that change is not shown on the FIRM, decisions regarding future permit requirements and NFIP flood insurance policies would not be based on the best available information. Also, the current effective FIRMs are used by mortgage lenders to determine which borrowers must have flood insurance. If new studies are not provided to FEMA, some property owners might be forced to buy flood insurance even though a new study shows their locations are "out" of the SFHA. Or if new studies show a lower BFE, policies would not be rated based on those BFEs because the FIRMs weren't revised.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. There is no cost impact because communities that participate in the NFIP are already required to submit, or require applicants to submit, new data and studies to FEMA.

### Report of Committee Action Hearings

#### Committee Action:

**Approved as Modified**

#### Modify proposal as follows:

**G103.10 Use of changed technical data.** The building official, floodplain administrator and the applicant shall not use changed flood hazard area boundaries or base flood elevations for proposed buildings or developments unless the building official, floodplain administrator or applicant has applied for a conditional Flood Insurance Rate Map (FIRM) revision and has received the approval of the Federal Emergency Management Agency (FEMA).

**Committee Reason:** Virtually every community with identified areas subject to flooding adopts the Federal Emergency Management Agency's Flood Insurance Study and Flood Insurance Rate Maps (FIRMs) as the official maps. If a community develops its own flood study or if an applicant provides data or studies that show a change to a FIRM is appropriate, the data must be submitted to FEMA so the official maps are maintained with the best available information. FEMA has a formal process to amend flood data. Local officials do not have the authority to change FEMA's maps and data, which means the effective FIRMs and data must be used until and unless changed by FEMA. If a flood zone or Base Flood Elevation is changed by a study and that change is not shown on the FIRM, decisions regarding future permit requirements and NFIP flood insurance policies would not be based on the best available information. Also, the current effective FIRMs are used by mortgage lenders to determine which borrowers must

have flood insurance. If new studies are not provided to FEMA, some property owners might be forced to buy flood insurance even though a new study shows their locations are "out" of the SFHA. Or if new studies show a lower BFE, policies would not be rated based on those BFEs because the FIRMs weren't revised. The modification from the committee changed 'building official' to 'floodplain administrator' in two places to clarify the position. (Vote: 13-1)

Assembly Action: None

Final Action

G17-19AM

<b>Date Submitted</b> 3/2/2021	<b>Section</b> 105.4	<b>Proponent</b> Mo Madani
<b>Chapter</b> 2707	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Denied – Consent	<b>Staff Classification</b> Flood Requirements	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** Yes**Related Modifications**

G105.4, G201.2

This appendix is reserved under the 2020 FBC-B.

Overlap

**Summary of Modification**

This proposal makes the definitions of G201.2 consistent with the definition in the Code of Federal Regulations (44 CFR Section 59.1) used by the National Flood Insurance Program and the NFIP provisions that allow granting of variances for functionally dependent uses (44 CFR Section 60.6(a)(7)).

**Rationale**

This proposal makes the definition consistent with the definition in the Code of Federal Regulations (44 CFR Section 59.1) used by the National Flood Insurance Program and the NFIP provisions that allow granting of variances for functionally dependent uses (44 CFR Section 60.6(a)(7)).

The CFR definition includes a definitive list of functionally dependent uses, while the current IBC Appendix G definition only offers a list of examples by using the phrase “such as,” which could allow other types of facilities to be issued a variance. Granting a functionally dependent use variance to any facility other than those listed in the CFR definition does not meet the minimum NFIP requirement. This proposal removes that inconsistency so that minimum NFIP requirements are met.

**Comment Period History**

**Proponent** Rebecca Quinn obo F **Submitted** 6/18/2021 **Attachments** No

**Comment:**

Do not retain this change. The Commission has not make IBC Appendix G available in recent years and should continue that. Nearly all Florida communities that participate in the NFIP have adopted floodplain management ordinances that rely on the flood provisions of the FBC to satisfy the NFIP.

Approved as Modified

Original Proposal:

## 2018 International Building Code

Revise as follows:

**G105.4 Functionally dependent facilities uses.** A variance is authorized to be issued for the construction or substantial improvement of a structure and for other development necessary for the conduct of a functionally dependent facility use provided that the criteria in Section 1612.1 are met and the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to methods and materials that minimize flood damages during the design flood and do not create additional threats to public safety.

### G201.2 Definitions.

**DEVELOPMENT.** Any man-made change to improved or unimproved real estate, including but not limited to, buildings or other structures, temporary structures, temporary or permanent storage of materials, mining, dredging, filling, grading, paving, excavations, operations and other land-disturbing activities.

**FUNCTIONALLY DEPENDENT FACILITY USE.** A facility use that cannot be used for perform its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility water. The term includes only docking facilities, port facilities necessary for the loading or unloading of cargo or passengers, and shipbuilding or and ship repair facilities. The term does not include long-term storage, manufacture, sales or service facilities.

Modified Proposal:

**G105.4 Functionally dependent facilities uses.** A variance is authorized to be issued for the construction or substantial improvement of a structure and for other development necessary for the conduct of a functionally dependent facility use provided that the criteria in Section 1612.1 are met and the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to methods and materials that minimize flood damages during the design flood and do not create additional threats to public safety.

### G201.2 Definitions.

**DEVELOPMENT.** Any man-made change to improved or unimproved real estate, including but not limited to, buildings or other structures, temporary structures, temporary or permanent storage of materials, mining, dredging, filling, grading, paving, excavations, operations and other land-disturbing activities.

**FUNCTIONALLY DEPENDENT FACILITY USE.** A facility use that cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities necessary for the loading or unloading of cargo or passengers, and shipbuilding and ship repair facilities. The term does not include long-term storage, manufacture, sales or service facilities.

## Code Change No: G19-19

### Original Proposal

**Section(s):** G105.4, G201.2

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

**THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE**

**2018 International Building Code**

**Revise as follows:**

**G105.4 Functionally dependent facilities uses.** A variance is authorized to be issued for the construction or substantial improvement of a structure and for other development necessary for the conduct of a functionally dependent facility use provided that the criteria in Section 1612.1 are met and the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to methods and materials that minimize flood damages during the design flood and do not create additional threats to public safety.

**G201.2 Definitions.**

**DEVELOPMENT.** Any man-made change to improved or unimproved real estate, including but not limited to, buildings or other structures, temporary structures, temporary or permanent storage of materials, mining, dredging, filling, grading, paving, excavations, operations and other land-disturbing activities.

**FUNCTIONALLY DEPENDENT FACILITY USE.** A facility use that cannot be used for perform its intended purpose unless it is located or carried out in close proximity to water, ~~such as a docking or port facility water.~~ The term includes only docking facilities, port facilities necessary for the loading or unloading of cargo or passengers, and shipbuilding or and ship repair facilities. The term does not include long-term storage, manufacture, sales or service facilities.

**Reason:** This proposal makes the definition consistent with the definition in the Code of Federal Regulations (44 CFR Section 59.1) used by the National Flood Insurance Program and the NFIP provisions that allow granting of variances for functionally dependent uses (44 CFR Section 60.6(a)(7)).

The CFR definition includes a definitive list of functionally dependent uses, while the current IBC Appendix G definition only offers a list of examples by using the phrase "such as," which could allow other types of facilities to be issued a variance. Granting a functionally dependent use variance to any facility other than those listed in the CFR definition does not meet the minimum NFIP requirement. This proposal removes that inconsistency so that minimum NFIP requirements are met.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. The proposal is substantially editorial. No additional cost. This proposal does not increase construction requirements or costs.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**G105.4 Functionally dependent facilities uses.** A variance is authorized to be issued for the construction or substantial improvement of a ~~structure and for other development necessary for the conduct of a~~ functionally dependent facility use provided that the criteria in Section 1612.1 are met and the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to methods and materials that minimize flood damages during the design flood and do not create additional threats to public safety.

**G201.2 Definitions.**

**DEVELOPMENT.** Any man-made change to improved or unimproved real estate, including but not limited to, buildings or other structures, temporary structures, temporary or permanent storage of materials, mining, dredging, filling, grading, paving, excavations, operations and other land-disturbing activities.

**FUNCTIONALLY DEPENDENT FACILITY USE.** A facility use that cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities necessary for the loading or unloading of cargo or passengers, and shipbuilding and ship repair facilities. The term does not include long-term storage, manufacture, sales or service facilities.

**Committee Reason:** This proposal makes the definition consistent with the definition in the Code of Federal Regulations (44 CFR Section 59.1) used by the National Flood Insurance Program and the NFIP provisions that allow granting of variances for functionally dependent uses (44 CFR Section 60.6(a)(7)). The CFR definition includes a definitive list of functionally dependent uses, while the current IBC Appendix G definition only offers a list of examples by using the phrase "such as," which could allow other types of facilities to be issued a variance. Granting a functionally dependent use variance to any facility other than those listed in the CFR definition does not meet the minimum NFIP requirement. This proposal removes that inconsistency so that minimum NFIP requirements are met. The modification improves the definition. (Vote: 10-4)

**Assembly Action:** None

Final Action

G19-19 AM

<b>Date Submitted</b> 3/2/2021	<b>Section</b> 201.2	<b>Proponent</b> Mo Madani
<b>Chapter</b> 2707	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Denied – Consent	<b>Staff Classification</b> Flood Requirements	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** Yes**Related Modifications**

G201.2, SECTION G1101

This appendix is reserved under the 2020 FBC-B.

Overlap

**Summary of Modification**

The U.S. Department of Housing and Urban Development (HUD) modified 24 CFR Part 3280 Manufactured Home Construction and Safety Standards. Updated reference standards and definition Manufactured Home.

**Rationale**

The U.S. Department of Housing and Urban Development (HUD) modified 24 CFR Part 3280 Manufactured Home Construction and Safety Standards a number of times since 2008, most recently in 2018. G201 includes a definition for “Manufactured Home” that refers to units constructed to Federal Manufactured Home Construction and Safety Standards promulgated by HUD.

**Comment Period History**

<b>Proponent</b>	Rebecca Quinn obo F	<b>Submitted</b>	6/18/2021	<b>Attachments</b>	No
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**Comment:**

Do not retain this change. The Commission has not make IBC Appendix G available in recent years and should continue that. Nearly all Florida communities that participate in the NFIP have adopted floodplain management ordinances that rely on the flood provisions of the FBC to satisfy the NFIP.

Approved as Submitted

## 2018 International Building Code

### Revise as follows:

#### G201.2 Definitions.

**MANUFACTURED HOME.** A structure that is transportable in one or more sections, built on a permanent chassis, designed for use with or without a permanent foundation when attached to the required utilities, and constructed to the Federal ~~Mobile~~ Manufactured Home Construction and Safety Standards and rules and regulations promulgated by the U.S. Department of Housing and Urban Development. The term also includes mobile homes, park trailers, travel trailers and similar transportable structures that are placed on a site for 180 consecutive days or longer.

#### SECTION G1101 REFERENCED STANDARDS

HUD 24 CFR Part 3280 (2008 <u>2018</u> )	Manufactured Home Construction and Safety Standards	G201
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## Code Change No: **G20-19**

### Original Proposal

**Section(s): G201.2, SECTION G1101**

**Proponent:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

**THIS CODE CHANGE WILL BE HEARD BY THE IBC-STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE**

**2018 International Building Code**

**Revise as follows:**

**G201.2 Definitions.**

**MANUFACTURED HOME.** A structure that is transportable in one or more sections, built on a permanent chassis, designed for use with or without a permanent foundation when attached to the required utilities, and constructed to the Federal ~~Mobile~~ Manufactured Home Construction and Safety Standards and rules and regulations promulgated by the U.S. Department of Housing and Urban Development. The term also includes mobile homes, park trailers, travel trailers and similar transportable structures that are placed on a site for 180 consecutive days or longer.

#### SECTION G1101 REFERENCED STANDARDS

HUD 24 CFR Part 3280 ( <del>2008</del> 2018)	Manufactured Home Construction and Safety Standards	G201
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**Reason:** The U.S. Department of Housing and Urban Development (HUD) modified 24 CFR Part 3280 Manufactured Home Construction and Safety Standards a number of times since 2008, most recently in 2018. G201 includes a definition for "Manufactured Home" that refers to units constructed to Federal Manufactured Home Construction and Safety Standards promulgated by HUD.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. There is no cost impact because this proposal updates a reference to HUD standards.

#### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** The proposal modifies the definition to match the CFR. The U.S. Department of Housing and Urban Development (HUD) modified 24 CFR Part 3280 Manufactured Home Construction and Safety Standards a number of times since 2008, most recently in 2018. G201 includes a definition for "Manufactured Home" that refers to units constructed to Federal Manufactured Home Construction and Safety Standards promulgated by HUD. (Vote: 14-0)

**Assembly Action:**

**None**

#### Final Action

G20-19	AS
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## Sub Code: Existing Building

SP8709/EB11-19

14

Date Submitted 2/9/2021  
Chapter 3

Section 302.3.1  
Affects HVHZ Yes

Proponent Mo Madani  
Attachments Yes

TAC Recommendation Denied – Consent  
Commission Action Pending Review

Staff Classification Correlates Directly

### Comments

General Comments Yes

### Related Modifications

302.3.1 (New)

Note: State licensed facilities are not subject to the FBC - Existing Building (see Section 101.2 of the FBC - EB.

### Summary of Modification

This change aligns with existing federal requirements for the healthcare industry.

### Rationale

NFPA 99 is currently in the IFC for maintenance and repair. NFPA 99 specifies additional requirements for building systems in health care facilities than just NFPA 70. In order to meet federal conditions of participation health care facilities must comply with system and equipment according to the requirements listed in NFPA 99, Health Care Facilities Code (K901, K902, K904, K905, K911, K906, K912, K914, K915 and K916). This change will align the electrical systems installation requirements for Outpatient Clinics, Group B Ambulatory Care and Group I-2 facilities.

## Comment Period History

Proponent Bryan Holland

Submitted 6/28/2021

Attachments No

### Comment:

NEMA fully supports the changes made by EB11 in Chapter 3 of the IEBC and related to NFPA 99 compliance for certain health care facilities.

SP8709-G1

Approved as Modified (AM)

**302.3 Additional codes.**~~Alterations, repairs, additions and changes of occupancy~~ to, or relocation of, ~~existing buildings and structures~~ shall comply with the provisions for ~~alterations, repairs, additions and changes of occupancy~~ or relocation, respectively, in this code and the International Energy Conservation Code , International Fire Code , International Fuel Gas Code , International Mechanical Code , International Plumbing Code , International Private Sewage Disposal Code , International Property Maintenance Code , International Residential Code and NFPA 70. Where provisions of the other codes conflict with provisions of this code, the provisions of this code shall take precedence.

Add new text as follows:

**302.3.1 Additional Codes in Healthcare.**~~In existing Group I-2 occupancies, ambulatory healthcare facilities, outpatient clinics and hyperbaric facilities, alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy in NFPA 99.~~

Committee Action:

Approved as Modified

Modify proposal as follows:

**302.3.1 Additional codes in healthcare.** In existing Group I-2 occupancies, ambulatory healthcare facilities, outpatient clinics and hyperbaric facilities, alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall also comply with ~~the provisions for alterations, repairs, additions and changes of occupancy in NFPA 99.~~

## Code Change No: **EB11-19**

### Original Proposal

#### Section(s): 302.3.1 (New)

**Proponent:** John Williams, representing Healthcare Committee (AHC@iccsafe.org)

#### 2018 International Existing Building Code

#### Revise as follows:

**302.3 Additional codes.** *Alterations, repairs, additions and changes of occupancy* to, or relocation of, *existing buildings* and structures shall comply with the provisions for *alterations, repairs, additions and changes of occupancy* or relocation, respectively, in this code and the International Energy Conservation Code, International Fire Code, International Fuel Gas Code, International Mechanical Code, International Plumbing Code, International Private Sewage Disposal Code, International Property Maintenance Code, International Residential Code and NFPA 70. Where provisions of the other codes conflict with provisions of this code, the provisions of this code shall take precedence.

#### Add new text as follows:

**302.3.1 Additional Codes in Healthcare.** In existing Group I-2 occupancies, ambulatory healthcare facilities, outpatient clinics and hyperbaric facilities, alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy in NFPA 99.

**Reason:** NFPA 99 is currently in the IFC for maintenance and repair. NFPA 99 specifies additional requirements for building systems in health care facilities than just NFPA 70. In order to meet federal conditions of participation health care facilities must comply with system and equipment according to the requirements listed in NFPA 99, Health Care Facilities Code (K901, K902, K904, K905, K911, K906, K912, K914, K915 and K916). This change will align the electrical systems installation requirements for Outpatient Clinics, Group B Ambulatory Care and Group I-2 facilities.

NFPA 99 uses a risk based approach to system design, installation and maintenance in healthcare facilities (Group I-2 facilities, ambulatory care facilities and outpatient clinics). Four levels of systems categories are defined in NFPA 99, based on the risks to patients and caregivers in the facilities. The categories are as follows:

- (1) Category 1: Systems that are expected to be functional at all times. Failure of these systems is likely to cause major injury or death.
- (2) Category 2: Systems are expected to have a high level of reliability. Failures of these systems are likely to cause minor injury to patients or caregivers, however, limited short durations of equipment downtime can be tolerated. Category 2 systems are not critical for life support.
- (3) Category 3: Normal building system reliabilities are expected. Such systems support patient needs, but failure of such equipment or systems would not immediately affect patient care and are not critical for life support.
- (4) Category 4: Such systems have no impact on patient care and would not be noticeable to patients in the event of failure.

The category definitions apply to equipment and systems operations.

A risk assessment should be conducted to evaluate the risk to the patients, staff, and visitors in all healthcare facilities. These categories are not always aligned to occupancy classification. Potential examples of areas/systems and their categories of risk;

- (1) Ambulatory surgical center, where patients undergo general anesthesia, Category 1
- (2) Reconstructive surgeon's office with general anesthesia, Category 1
- (3) Procedural sedation site for outpatient services, Category 2
- (4) Cooling systems in Houston, TX, Category 2
- (5) Cooling systems in Seattle, WA, Category 3
- (6) Heating systems in Chicago, IL, Category 2
- (7) Dental office, no general anesthesia, Category 3
- (8) Typical doctor's office/exam room, Category 4
- (9) Group I-2 Condition 2 facilities most systems would be Category 1

This approach more closely aligns system design, performance and maintenance to the safety risk to the public. It does not create significant additional costs.

This proposal is submitted by the ICC Committee on Healthcare (CHC). The CHC was established by the ICC Board to evaluate and assess contemporary code issues relating to healthcare facilities. This is a joint effort between ICC and the American Society for Healthcare Engineering (ASHE), a subsidiary of the American Hospital Association, to eliminate duplication and conflicts in healthcare regulation. In 2017 and 2018 the CHC held 4 open meetings and numerous conference calls, *which included members of the committees as well as any interested parties, to discuss and debate the proposed changes.* Information on the CHC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CHC effort can be downloaded from the CHC website at: <https://www.iccsafe.org/codes-tech-support/cs/icc-committee-on-healthcare/>.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. This change aligns with existing federal requirements for the healthcare industry.

**Report of Committee Action  
Hearings**

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**302.3.1 Additional codes in healthcare.** In existing Group I-2 occupancies, ambulatory healthcare facilities, outpatient clinics and hyperbaric facilities, alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall also comply with the provisions for alterations, repairs, additions and changes of occupancy in NFPA 99.

**Committee Reason:** This the reference to NFPA 99 was seen as slightly redundant but a necessary reference to address compliance with Center for Medicare Services. The modification simply removes the scoping language which is already within NFPA 99. It also clarifies that compliance must be both with the IEBC, IBC and NFPA 99. (Vote: 12-1)

**Assembly Action:**

**None**

**Final Action**

**EB11-19**

**AM**

<b>Date Submitted</b> 3/12/2021	<b>Section</b> 1201.3	<b>Proponent</b> Mo Madani
<b>Chapter</b> 12	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Denied – Consent	<b>Staff Classification</b> Overlap	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** No**Related Modifications**

1201.3

Original text of this code change is not consistent with that of the 2020 FBC-EB.

**Summary of Modification**

Proposal to addresses non mandatory language.

**Rationale**

This addresses non mandatory language.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at:

<https://www.iccsafe.org/codes-tech-support/codes/codedevelopment-process/building-code-actioncommittee-bcac>.

Approved as Submitted

## 2018 International Existing Building Code

### Revise as follows:

1201.3 Special occupancy exceptions—museums. Where a building in Group R-3 is used for Group A, B or M purposes such as museum tours, exhibits, and other public assembly activities, or for museums less than 3,000 square feet (279 m<sup>2</sup>), the *code official* may is authorized to determine that the occupancy is Group B where life safety conditions can be demonstrated in accordance with Section 1201.2. Adequate means of egress in such buildings, which may include includes, but are not limited to a means of maintaining doors in an open position to permit egress, a limit on building occupancy to an occupant load permitted by the means of egress capacity, a limit on occupancy of certain areas or floors, or supervision by a person knowledgeable in the emergency exiting procedures, shall be provided.

## Code Change No: **EB110-19**

### Original Proposal

**Section(s):** 1201.3

**Proponents:** Ed Kulik, representing ICC Building Code Action Committee (bcac@iccsafe.org)

**2018 International Existing Building Code**

**Revise as follows:**

**1201.3 Special occupancy exceptions—museums.** Where a building in Group R-3 is used for Group A, B or M purposes such as museum tours, exhibits, and other public assembly activities, or for museums less than 3,000 square feet (279 m<sup>2</sup>), the ~~code official may be authorized to~~ determine that the occupancy is Group B where life safety conditions can be demonstrated in accordance with Section 1201.2. Adequate means of egress in such buildings, ~~which may include~~ includes, but are not limited to a means of maintaining doors in an open position to permit egress, a limit on building occupancy to an occupant load permitted by the means of egress capacity, a limit on occupancy of certain areas or floors, or supervision by a person knowledgeable in the emergency exiting procedures, shall be provided.

**Reason:** This addresses non mandatory language.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors in July 2011 to pursue opportunities to improve and enhance assigned International Codes or portions thereof. Since 2017 the BCAC has held 6 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: <https://www.iccsafe.org/codes-tech-support/codes/code-development-process/building-code-actioncommittee-bcac>.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction Editorial.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** This proposal was approved as it removes non-mandatory language from the section. (Vote: 13-0)

**Assembly Action:**

**None**

### Final Action

**EB110-19**

**AS**

<b>Date Submitted</b> 3/12/2021	<b>Section</b> 1204.9	<b>Proponent</b> Mo Madani
<b>Chapter</b> 12	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Denied – Consent	<b>Staff Classification</b> Overlap	
<b>Commission Action</b> Pending Review		

**Comments****General Comments** No**Related Modifications**

1204.9

Original text of this code change is not consistent with that of the 2020 FBC-EB.

**Summary of Modification**

Modifies text of Section 1204.9 "Finishes". Changes title to "Interior Finish". Deletes "have a flame spread index of Class C or better, when tested in accordance with ASTM E84 or UL 723". Adds pointer to Section 803.1 of the IBC.

**Rationale**

This code proposal makes two changes:

1. Neither the IBC nor the IFC allow all interior finish materials to be tested to ASTM E84 or UL 723. In fact, although all materials are allowed to be classified by NFPA 286 (a room corner test), some materials are not allowed to be classified by using ASTM E84 or UL 723. Any material that meets the requirements of the IBC code (or IFC code) based on testing to NFPA 286 is considered to comply with a Class A, Class B or Class C requirement, in accordance with ASTM E84 or UL 723. The requirements are contained in Section 803.1 of the IBC (with 803.1.1 dealing with NFPA 286, 803.1.2 dealing with ASTM E84 or UL 723 and 803.1.3 dealing with materials with special requirements). Therefore it is possible that interior finish materials have been shown to meet NFPA 286 requirements and they are (in accordance with the IBC) acceptable as materials with a "Class C or better" in accordance with ASTM E84 or UL 723 and don't need retesting (or may not even be allowed by the IBC to be tested to ASTM E84 or UL 723). The use of a reference exclusively to a Class C, without a reference to the IBC or IFC, prevents the use of materials tested to (or needing testing to) NFPA 286.
2. The typical nomenclature used in the IBC and IFC is fire-retardant coating.

Approved as Modified

Original Proposal:

## 2018 International Existing Building Code

Revise as follows:

**1204.9 Finishes. Interior finish.** Where interior finish materials are required to have a flame spread index of Class C or better, when tested in accordance with ASTM E84 or UL 723, comply with the fire test requirements of Section 803.1 of the *International Building Code*, existing nonconforming materials shall be permitted to be surfaced with an approved fire-retardant paint or finish, coating to achieve the required fire performance.

**Exception:** Existing nonconforming materials need not be surfaced with an *approved* fire-retardant paint or finish coating where the building is equipped throughout with an automatic sprinkler system installed in accordance with the *International Building Code* and the nonconforming materials can be substantiated as being historic in character.

Modified Proposal:

**1204.9 Interior finish.** Where interior finish materials are required to comply with the fire test requirements of Section 803.1 of the *International Building Code*, existing nonconforming materials shall be permitted to be surfaced with an *approved* fire-retardant coating to achieve the required fire performance classification. Compliance with this section shall be demonstrated by testing the fire-retardant coating on the same material and achieving the required fire classification. If the same material is not available, it shall be permitted to test on a similar material.

## Code Change No: EB112-19

### Original Proposal

**Section(s):** 1204.9

**Proponent:** Marcelo Hirschler, representing GBH International (mmh@gbhint.com)

**2018 International Existing Building Code**

**Revise as follows:**

**1204.9 Finishes. Interior finish.** Where interior finish materials are required to ~~have a flame spread index of Class C or better, when tested in accordance with ASTM E84 or UL 723, comply with the fire test requirements of Section 803.1 of the International Building Code,~~ existing nonconforming materials shall be permitted to be surfaced with an approved fire-retardant paint or finish coating to achieve the required fire performance.

**Exception:** Existing nonconforming materials need not be surfaced with an *approved* fire-retardant ~~paint or finish coating~~ where the building is equipped throughout with an automatic sprinkler system installed in accordance with the *International Building Code* and the nonconforming materials can be substantiated as being historic in character.

**Reason:** This code proposal makes two changes:

1. Neither the IBC nor the IFC allow all interior finish materials to be tested to ASTM E84 or UL 723. In fact, although all materials are allowed to be classified by NFPA 286 (a room corner test), some materials are not allowed to be classified by using ASTM E84 or UL 723. Any material that meets the requirements of the IBC code (or IFC code) based on testing to NFPA 286 is considered to comply with a Class A, Class B or Class C requirement, in accordance with ASTM E84 or UL 723. The requirements are contained in Section 803.1 of the IBC (with 803.1.1 dealing with NFPA 286, 803.1.2 dealing with ASTM E84 or UL 723 and 803.1.3 dealing with materials with special requirements). Therefore it is possible that interior finish materials have been shown to meet NFPA 286 requirements and they are (in accordance with the IBC) acceptable as materials with a "Class C or better" in accordance with ASTM E84 or UL 723 and don't need retesting (or may not even be allowed by the IBC to be tested to ASTM E84 or UL 723). The use of a reference exclusively to a Class C, without a reference to the IBC or IFC, prevents the use of materials tested to (or needing testing to) NFPA 286.
2. The typical nomenclature used in the IBC and IFC is fire-retardant coating.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. The revision simply permits materials already tested to NFPA 286 to be covered.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Modified**

**Modify proposal as follows:**

**1204.9 Interior finish.** Where interior finish materials are required to comply with the fire test requirements of Section 803.1 of the *International Building Code*, existing nonconforming materials shall be permitted to be surfaced with an *approved* fire-retardant coating to achieve the required ~~fire performance classification. Compliance with this section shall be demonstrated by testing the fire-retardant coating on the same material and achieving the required fire classification. If the same material is not available, it shall be permitted to test on a similar material.~~

**Exception:** Existing nonconforming materials need not be surfaced with an *approved* fire-retardant coating where the building is equipped throughout with an automatic sprinkler system installed in accordance with the *International Building Code* and the nonconforming materials can be substantiated as being historic in character.

**Committee Reason:** The committee approved the proposal based upon the action taken on EB78-19 and the fact that this correctly

refers back to the IBC for the testing requirements. The modifications are consistent with the modifications on EB78-19 which revise the language to "classification" from "fire performance." (Vote: 13-0)

**Assembly Action:** **None**

**Final Action**

**EB112-19** **AM**

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## Sub Code: Residential

SP8510/RB34-19

17

Date Submitted 2/5/2021  
Chapter 3

Section 301  
Affects HVHZ Yes

Proponent Mo Madani  
Attachments Yes

TAC Recommendation Denied – Consent  
Commission Action Pending Review

Staff Classification Flood Requirements

### Comments

General Comments Yes

### Related Modifications

Overlap

Original text of this code change is not consistent with that of the 2020 FBC-R.

### Summary of Modification

This proposal brings the establishment of the flood hazard area in line with Section 1612.3 of the IBC, which requires only identification of the title and date of issuance of the FIS.

### Rationale

It is sufficient only to identify the title and date of the community's Flood Insurance Study. Flood Insurance Studies are official reports provided by the Federal Emergency Management Agency that include or contain the Flood Insurance Rate Maps (FIRM), the Flood Boundary and Floodway Map (FBFM), the water surface elevation of the base flood and supporting technical data. The requirement to list the panel numbers and associated dates of all currently effective FIRMs and FBFMs is burdensome, especially in large jurisdictions with multiple panels. Additionally, some states permit communities to automatically adopt updated FISs and accompanying FIRMs. Requiring individual panel numbers and dates of newly updated FIRMs would require those communities to modify the list with issuance of each new FIRM and defeats the purpose of the auto-adopt mechanism. This proposal brings the establishment of the flood hazard area in line with Section 1612.3 of the IBC, which requires only identification of the title and date of issuance of the FIS.

## Comment Period History

Proponent Rebecca Quinn obo F Submitted 6/18/2021 Attachments No

### Comment:

Do not retain the modification to the 2021 IRC Table R301.2(1) as shown. The Commission modified the footnote to refer to adoption by local floodplain management ordinance (a defined term). DEM may submit a proposal to remove reference to panel numbers and dates because local ordinances do not include those details.

SP8510-G1

Approved as Submitted

See attached monograph

## Code Change No: **RB34-19**

### Original Proposal

#### Section(s): **TABLE R301.2(1)**

**Proponents:** Gregory Wilson, representing Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, RCQuinn Consulting, on behalf of Federal Emergency Management Agency, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

#### 2018 International Residential Code

Revise as follows:

**TABLE R301.2(1)**  
**CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

GROUND SNOW	WIND DESIGN				SEISMIC DESIGN CATEGORY <sup>1</sup>	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP <sup>6</sup>	ICE BARRIER UNDERLAYMENT REQUIRED <sup>7</sup>	FLOOD HAZARDS <sup>8</sup>	AIR FREEZING INDEX <sup>9</sup>	MEAN ANNUAL TEMP <sup>10</sup>
	LOAD <sup>5</sup>	Speed <sup>4</sup> (mph)	Topographic effects <sup>3</sup>	Special wind region <sup>1</sup>		Weathering <sup>2</sup>	Frost line depth <sup>3</sup>	Termite <sup>2</sup>					
—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>MANUAL J DESIGN CRITERIA<sup>11</sup></b>													
Elevation	Latitude		Winter heating	Summer cooling	Altitude correction factor		Indoor design temperature	Design temperature cooling		Heating temperature difference			
—	—		—	—	—		—	—		—			
Cooling temperature difference	Wind velocity heating		Wind velocity cooling	Coincident wet bulb	Daily range		Winter humidity	Summer humidity		—			
—	—		—	—	—		—	—		—			

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

- a. Where weathering requires a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code, the frost line depth strength required for weathering shall govern. The weathering column shall be filled in with the weathering index, "negligible," "moderate" or "severe" for concrete as determined from Figure R301.2(4). The grade of masonry shall be determined from Figure R301.2(4).
- b. Where the frost line depth requires deeper footings than indicated in Figure R403.1(1), the frost line depth strength required for weathering shall govern. The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
- c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
- d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(5)A]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.

- e. The outdoor design dry-bulb temperature shall be selected from the columns of 97 $\frac{1}{2}$ -percent values for winter from Appendix D of the International Plumbing Code. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official. [Also see Figure R301.2(1)]
- f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas) and (b) the title and date(s) of the currently effective Flood Insurance Study and (c) the panel numbers and dates of the currently effective FIRMs and FBFMs or other flood hazard map study and maps adopted by the authority having jurisdiction, as amended. In accordance with Sections R905.1.2, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."
- h. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)."
- i. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)."
- j. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
- k. In accordance with Figure R301.2(5)A, where there is local historical data documenting unusual wind conditions, the jurisdiction shall fill in this part of the table with "YES" and identify any specific requirements. Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
- l. In accordance with Section R301.2.1.2 the jurisdiction shall indicate the wind-borne debris wind zone(s). Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
- m. The jurisdiction shall fill in these sections of the table to establish the design criteria using Table 1a or 1b from ACCA Manual J or established criteria determined by the jurisdiction.
- n. The jurisdiction shall fill in this section of the table using the Ground Snow Loads in Figure R301.2(6).

**Reason:** It is sufficient only to identify the title and date of the community's Flood Insurance Study. Flood Insurance Studies are official reports provided by the Federal Emergency Management Agency that include or contain the Flood Insurance Rate Maps (FIRM), the Flood Boundary and Floodway Map (FBFM), the water surface elevation of the *base flood* and supporting technical data.

The requirement to list the panel numbers and associated dates of all currently effective FIRMs and FBFMs is burdensome, especially in large jurisdictions with multiple panels. Additionally, some states permit communities to automatically adopt updated FISs and accompanying FIRMs. Requiring individual panel numbers and dates of newly updated FIRMs would require those communities to modify the list with issuance of each new FIRM and defeats the purpose of the auto-adopt mechanism.

This proposal brings the establishment of the flood hazard area in line with Section 1612.3 of the IBC, which requires only identification of the title and date of issuance of the FIS.

**Cost Impact:** The code change proposal will not increase or decrease the cost of construction. No additional cost. The proposal eliminates an administrative burden on communities.

### Report of Committee Action Hearings

**Committee Action:**

**Approved as Submitted**

**Committee Reason:** This proposal modifies the flood maps to what is currently accepted. (Vote: 11-0)

**Assembly Action:**

**None**

### Final Action

**RB34-19**

**AS**