## Enclosures Under Elevated Buildings: Prohibit Partitions; Prohibit Enclosures – local technical code amendments (FBC, R and FBC, B)

## Alternative A: prohibit partitions in enclosures under elevated buildings (with option to also limit access doors)

## Alternative B: prohibit enclosures under elevated buildings

**Description:** The NFIP regulations and the *Florida Building Code* (FBC) allow areas under elevated buildings to be enclosed with walls. Any enclosed area must be limited to use for parking of vehicles, storage, and building access. The NFIP regulations do not reference partitions. Walls of enclosed areas must meet specific requirements depending on the flood zone:

* In Zone A, walls are required to have flood openings; and
* In Zone V[[1]](#footnote-1), walls are required to break away under certain flood loads.

NFIP flood insurance coverage (structure and contents) is more expensive if buildings have enclosed areas and coverage of enclosures is limited. In Zone V, buildings with enclosures larger than 300 square feet in area are charged more than buildings with smaller enclosures.

**Alternative A - Prohibiting partitions:** Enclosed areas without partitions are less likely to be modified to a non-permitted use. In addition, in Zone V, walls of enclosures (and partitions) are required to break away under flood loads and the presence of partitions may diminish or interfere with that performance.

**Alternative B - Prohibiting enclosures:** The benefits of not permitting any enclosures include less property damage, lower flood insurance costs, less debris in floodwaters, fewer obstructions to the free flow of floodwaters, and no enclosed area that could be modified to a non-permitted use.

**Related Higher Standards:** See instructions for these other higher standards related to enclosures:

* Limiting the size of enclosed areas below elevated buildings
* Requiring Declaration of Land Restriction (Nonconversion Agreement) for enclosures below elevated buildings

**How the FBC, Residential addresses enclosures:** The FBC, Residential includes the basic, NFIP-consistent requirements for enclosed areas and walls below elevated dwellings. Requirements for all flood zones are in R322.1, requirements for Zone A are in R322.2, and requirements for Zone V are in R322.3. The 6th Edition FBC, R will treat CAZ like Zone V, with an exception that permits backfilled stemwalls.

**How the FBC, Building addresses enclosures by reference to ASCE 24:** The FBC, Building, by reference to ASCE 24, includes the basic, NFIP-consistent requirements for enclosed areas and walls below elevated buildings. Requirements for enclosures under buildings in Zone A are in ASCE 24 Section 2.6 and requirements for Zone V and CAZ are in ASCE 24 Section 4.6.

**INSTRUCTIONS.**

***If your intent is to apply a limitation ONLY to dwellings, then where you see {select one: buildings / dwelling}, pick “dwellings” and then show only the code amendment(s) for the FBC, Residential.***

***Submit your draft ordinance (in <track changes>) to Technical Support*** ***flood.ordinance@em.myflorida.com*** ***for review well in advance of your first reading.***

**ALTERNATIVE A. Use this set of changes to prohibit partitioning of enclosures under elevated buildings/dwellings (with option to also limit access doors).**

* *To apply in only Zone V, the Whereas clause should be modified to replace “flood hazard areas” with “coastal high hazard areas” and then use only the text modifications for R322.3.4 and R322.3.5.*

***Step A-1.*** *See the General Instructions to select the appropriate Whereas clause(s). Insert the following brief description of the higher standard:*

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| limit partitioning of enclosed areas below elevated **{select one: buildings / dwellings}** *Option to also limit access:* limit partitioning of enclosed areas below elevated **{select one: buildings / dwellings}**and to limit access to enclosed areas  |

***Step A-2.*** *Add a new SECTION 3 to the ordinance package to adopt local technical amendments to the FBC, Residential. Maintain strikethrough and underlining to denote changes to the FBC.*

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| **SECTION 3. The *Florida Building Code, Residential* is hereby amended by the following technical amendments*.*** **R322.2.2 Enclosed areas below design flood elevation.** Enclosed areas, including crawl spaces, that are below the design flood elevation shall:1. Be used solely for parking of vehicles, building access or storage. The interior portion of such enclosed areas shall not be partitioned or finished into separate rooms except for stairwells, ramps, and elevators, unless a partition is required by the fire code. The limitation on partitions does not apply to load bearing walls interior to perimeter wall (crawlspace) foundations.*Remainder unchanged* ***Option*** *to also limit access:* **R322.2.2 Enclosed areas below design flood elevation.** Enclosed areas, including crawl spaces, that are below the design flood elevation shall:1. Be used solely for parking of vehicles, building access or storage. The interior portion of such enclosed areas shall not be partitioned or finished into separate rooms except for stairwells, ramps, and elevators, unless a partition is required by the fire code. The limitation on partitions does not apply to load bearing walls interior to perimeter wall (crawlspace) foundations. Access to enclosed areas shall be the minimum necessary to allow for the parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the building (stairway or elevator).

*Remainder unchanged* |
| **R322.3.4 Walls below design flood elevation.** Walls ~~and partitions~~ are permitted below the elevated floor, 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 design safe loading resistance of not less than 10 (470 Pa) and no more than 20 pounds per square foot (958 Pa); or
4. Where wind loading values of this code exceed 20 pounds per square foot (958 Pa), 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 have been designed to collapse from a water load less than that which would occur during the design 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 all building components (structural and nonstructural). Water loading values used shall be those associated with the design flood. Wind loading values used shall be those required by this code.  |
| **R322.3.5 Enclosed areas below the design flood elevation.** Enclosed areas below the design flood elevation shall be used solely for parking of vehicles, building access or storage. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms except for stairwells, ramps, and elevators, unless a partition is required by the fire code.***Option*** *to also limit access:***R322.3.5 Enclosed areas below the design flood elevation.** Enclosed areas below the design flood elevation shall be used solely for parking of vehicles, building access or storage. The interior portion of such enclosed area shall not be partitioned or finished into separate rooms except for stairwells, ramps, and elevators, unless a partition is required by the fire code. Access to enclosed areas shall be the minimum necessary to allow for the parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the building (stairway or elevator). |

***Step A-3.*** *Add a new SECTION 4 to the ordinance package to adopt local technical amendments to the FBC, Building as follows. Maintain strikethrough and underlining to denote changes to the FBC.*

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| **SECTION 4. The *Florida Building Code, Building* is hereby amended by the following technical amendments*.*** **1612.4.2 Additional requirements for enclosed areas.**  In addition to the requirements of ASCE 24, enclosed areas below the design flood elevation shall not be partitioned or finished into separate rooms except for stairwells, ramps, and elevators. |

**ALTERNATIVE B. Use this amendment to prohibit enclosures, including crawlspaces, below elevated buildings/dwellings.**

* *To apply in only Zone V, the Whereas clause should be modified to replace “flood hazard areas” with “coastal high hazard areas” and then use only the text modifications for R322.3.4 and R322.3.5 shown below.*
* *Contact* *flood.ordinance@em.myflorida.com* *if your intent is to prohibit enclosures in all Zone A but to allow perimeter wall foundations (crawlspaces).*
* *Note this language prohibits enclosures in Zone V by not allowing breakaway walls that form enclosures. An option is shown to allow insect screening or open lattice.*

***Step B-1.***  *See the General Instructions to select the appropriate Whereas clause(s). Insert the following brief description of the higher standard:*

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| Prohibit enclosures below elevated **{select one: buildings / dwellings}**   |

***Step B-2.*** *Add a new SECTION 3 to the ordinance package to adopt local technical amendments to the FBC, Residential as follows. Maintain strikethrough and underlining to denote changes to the FBC.*

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| **SECTION 3. The *Florida Building Code, Residential* is hereby amended by the following technical amendments*.*** **R322.2.2 Enclosed area below design flood elevation.** Enclosed areas, including crawl spaces, that are below the design flood elevation are not permitted. ~~shall:~~~~1. Be used solely for parking of vehicles, building access or storage.~~~~2. Be provided with flood openings that meet the following criteria:~~~~2.1. There shall be a minimum of 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 on exterior walls.~~~~2.2. The total net area of all openings shall be at least 1 square inch (645 mm²) for each square foot (0.093 m²) of enclosed area, or the openings shall be designed 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 2.6.2.2 of ASCE 24.~~~~2.3. The bottom of each opening shall be 1 foot (305 mm) or less above the adjacent ground level.~~~~2.4. Openings shall be not less than 3 inches (76 mm) in any direction in the plane of the wall.~~ ~~2.5. Any louvers, screens or other opening covers shall allow the automatic flow of floodwaters into and out of the enclosed area.~~~~2.6. Openings installed in doors and windows, that meet requirements 2.1 through 2.5, are acceptable; however, doors and windows without installed openings do not meet the requirements of this section.~~ |
| **R322.3.4 Walls below design flood elevation.** Walls and partitions are not permitted below the elevated floor.~~, 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 design safe loading resistance of not less than 10 (470 Pa) and no more than 20 pounds per square foot (958 Pa); or~~
4. ~~Where wind loading values of this code exceed 20 pounds per square foot (958 Pa), 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 have been designed to collapse from a water load less than that which would occur during the design 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 all building components (structural and nonstructural). Water loading values used shall be those associated with the design flood. Wind loading values used shall be those required by this code~~.  |
| **R322.3.5 Enclosed areas below design flood elevation.** Enclosed areas below the design flood elevation are not permitted ~~shall be used solely for parking of vehicles, building access or storage~~.*Alternative: If you want to allow areas with insect screening or lattice:***R322.3.5 Enclosed areas below design flood elevation.** Enclosed areas below the design flood elevation are not permitted ~~shall be used solely for parking of vehicles, building access or storage~~.**Exception**: Areas enclosed by insect screening or open lattice. |

***Step B-3.***  *Add a new SECTION 4 to the ordinance package to adopt local technical amendments to the FBC, Building as follows. Maintain strikethrough and underlining to denote changes to the FBC.*

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| **SECTION 4. The *Florida Building Code, Building* is hereby amended by the following technical amendments*.*** **1612.4.2 Enclosure limitations.**  Enclosures below the design flood elevation are not permitted.  |

1. The 6th Edition FBC will treat Coastal A Zone like Zone V if the FIRM has a LiMWA or the community designates the CAZ; flood openings will be required in all walls, including breakaway walls. [↑](#footnote-ref-1)