5th Edition Florida Building Code[1], Building (2014)
[a compilation of flood resistant provisions, prepared by Florida DEM]

CHAPTER 1
ADMINISTRATIVE

Note: *In these Chapter 1 excerpts the flood provisions are identified by the vertical black bar in the right margin.*

Note: *Sections 101.2 and 102.2 are shown so that floodplain administrators who are not familiar with the code see which buildings are subject to the FBC, Building, FBC, Residential, and FBC, Existing Building, and which buildings and facilities are exempt. The NFIP requires all development to be regulated; buildings not subject to the FBC are still subject to floodplain requirements under local regulations.*

101.2 Scope. The provisions of this code shall apply to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (town houses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures shall comply with the Florida Building Code, Residential.
2. Existing buildings undergoing repair, alterations or additions or change of occupancy shall comply with Chapter 34 of this code.

102.2 [Applicability] Building. The provisions of the Florida Building Code shall apply to the construction, erection, alteration, modification, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every public and private building, structure or facility or floating residential structure, or any appurtenances connected or attached to such buildings, structures or facilities. Additions, alterations, repairs and changes of use or occupancy group in all buildings and structures shall comply with the provisions provided in Chapter 34 of this code. The following buildings, structures and facilities are exempt from the Florida Building Code as provided by law, and any further exemptions shall be as determined by the legislature and provided by law:

a. Building and structures specifically regulated and preempted by the federal government.
b. Railroads and ancillary facilities associated with the railroad.
c. Nonresidential farm buildings on farms.
d. Temporary buildings or sheds used exclusively for construction purposes.
e. Mobile or modular structures used as temporary offices, except that the provisions of Part II (Sections 553.501–553.513, Florida Statutes) relating to

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accessibility by persons with disabilities shall apply to such mobile or modular structures.

f. Those structures or facilities of electric utilities, as defined in Section 366.02, Florida Statutes, which are directly involved in the generation, transmission, or distribution of electricity.
g. Temporary sets, assemblies, or structures used in commercial motion picture or television production, or any sound-recording equipment used in such production, on or off the premises.
h. Chickees constructed by the Miccosukee Tribe of Indians of Florida or the Seminole Tribe of Florida. As used in this paragraph, the term "chickee" means an open-sided wooden hut that has a thatched roof of palm or palmetto or other traditional materials, and that does not incorporate any electrical, plumbing, or other nonwood features.
i. Family mausoleums not exceeding 250 square feet (23 m^2) in area which are prefabricated and assembled on site or preassembled and delivered on site and have walls, roofs, and a floor constructed of granite, marble, or reinforced concrete.
j. Temporary housing provided by the Department of Corrections to any prisoner in the state correctional system.
k. A building or structure having less than 1,000 square feet (93 m^2) which is constructed and owned by a natural person for hunting and which is repaired or reconstructed to the same dimension and condition as existed on January 1, 2011, if the building or structure:
    1. Is not rented or leased or used as a principal residence;
    2. Is not located within the 100-year floodplain according to the Federal Emergency Management Agency's current Flood Insurance Rate Map; and
    3. Is not connected to an off-site electric power or water supply.

102.2.5 Each enforcement district shall be governed by a board, the composition of which shall be determined by the affected localities.

1. At its own option, each enforcement district or local enforcement agency may adopt rules granting to the owner of a single-family residence one or more exemptions from the Florida Building Code relating to:
    a. Addition, alteration, or repairs performed by the property owner upon his or her own property, provided any addition or alteration shall not exceed 1,000 square feet (93 m^2) or the square footage of the primary structure, whichever is less.
    b. Addition, alteration, or repairs by a nonowner within a specific cost limitation set by rule, provided the total cost shall not exceed $5,000 within any 12-month period.
    c. Building and inspection fees.
2. However, the exemptions under subparagraph 1 do not apply to single-family residences that are located in mapped flood hazard areas, as defined in the code, unless the enforcement district or local enforcement agency has determined that the work, which is otherwise exempt, does not constitute a substantial improvement, including the repair of substantial damage, of such single-family residences.
3. Each code exemption, as defined in sub-subparagraphs 1a, 1b, and 1c shall be certified to the local board 10 days prior to implementation and shall only be effective in the territorial jurisdiction of the enforcement district or local enforcement agency implementing it.

102.7 Relocation of manufactured buildings.

1. Relocation of an existing manufactured building does not constitute an alteration.
2. A relocated building shall comply with wind speed requirements of the new location, using the appropriate wind speed map. If the existing building was manufactured in compliance with the Standard Building Code (prior to March 1, 2002), the wind speed map of the Standard Building Code shall be applicable. If the existing building was manufactured in compliance with the Florida Building Code (after March 1, 2002), the wind speed map of the Florida Building Code shall be applicable.
3. A relocated building shall comply with the flood hazard area requirements of the new location, if applicable.

104.10 Modifications. Reserved.

104.10.1 Flood hazard areas. Reserved.

105.1 [Permits] Required. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any impact-resistant coverings, electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit.

105.14 Permit issued on basis of an affidavit. Whenever a permit is issued in reliance upon an affidavit or whenever the work to be covered by a permit involves installation under conditions which, in the opinion of the building official, are hazardous or complex, the building official shall require that the architect or engineer who signed the affidavit or prepared the drawings or computations shall supervise such work. In addition, they shall be responsible for conformity to the permit, provide copies of inspection reports as inspections are performed, and upon completion make and file with the building official written affidavit that the work has been done in conformity to the reviewed plans and with the structural provisions of the technical codes. In the event such architect or engineer is not available, the owner shall employ in his stead a competent person or agency whose qualifications are reviewed by the building official. The building official shall ensure that any person conducting plans review is qualified as a plans examiner under Part XII of Chapter 468, Florida Statutes, and that any person conducting inspections is qualified as a building inspector under Part III of Chapter 468, Florida Statutes.

Exception: Permit issued on basis of an affidavit shall not extend to the flood load and flood-resistance requirements of the Florida Building Code.

107.2.5 [Submittal Documents] Site plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades and the proposed finished grades and, as applicable, flood hazard areas, floodways, and design flood elevations; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The building official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted.

107.2.5.1 Design flood elevations. Where design flood elevations are not specified, they shall be established in accordance with Section 1612.3.1.

107.2.5.2 For the purpose of inspection and record retention, site plans for a building may be maintained in the form of an electronic copy at the worksite. These plans must be open to inspection by the building official or a duly authorized representative, as required by the Florida Building Code.

107.3.5 Minimum plan review criteria for buildings. *(partial – only flood shown)*
Commercial Buildings: Building
1. Site requirements:
Flood hazard areas, flood zones, and design flood elevations

8. Structural requirements shall include:
Flood requirements in accordance with Section 1612, including lowest floor elevations, enclosures, flood damage-resistant materials

Electrical
8. Design flood elevation

Plumbing
14. Design flood elevation

Mechanical
16. Design flood elevation

Gas
10. Design flood elevation

Residential (one- and two-family)
6. Structural requirements shall include:
Flood hazard areas, flood zones, design flood elevations, lowest floor elevations, enclosures, equipment, and flood damage-resistant materials

107.6 Affidavits. The building official may accept a sworn affidavit from a registered architect or engineer stating that the plans submitted conform to the technical codes. For buildings and structures, the affidavit shall state that the plans conform to the laws as to egress, type of construction and general arrangement and, if accompanied by drawings, show the structural design and that the plans and design conform to the requirements of the technical codes as to strength, stresses, strains, loads and stability. The building official may without any examination or inspection accept such affidavit, provided the architect or engineer who made such affidavit agrees to submit to the building official copies of inspection reports as inspections are performed and upon completion of the structure, electrical, gas, mechanical or plumbing systems a certification that the structure, electrical, gas, mechanical or plumbing system has been erected in accordance with the requirements of the technical codes. Where the building official relies upon such affidavit, the architect or engineer shall assume full responsibility for compliance with all provisions of the technical codes and other pertinent laws or ordinances. The building official shall ensure that any person conducting plans review is qualified as a plans examiner under Part XII of Chapter 468, Florida Statutes, and that any person conducting inspections is qualified as a building inspector under Part XII of Chapter 468, Florida Statutes.

107.6.1 Building permits issued on the basis of an affidavit. Pursuant to the requirements of federal regulation for participation in the National Flood Insurance Program (44 C.F.R. Parts 59 and 60), the authority granted to the building official to issue permits, to

rely on inspections, and to accept plans and construction documents on the basis of affidavits and plans submitted pursuant to Sections 105.14 and 107.6, shall not extend to the flood load and flood-resistance construction requirements of the Florida Building Code.

110.3 [Inspections] Required inspections. The building official upon notification from the permit holder or his or her agent shall make the following inspections, and shall either release that portion of the construction or shall notify the permit holder or his or her agent of any violations which must be corrected in order to comply with the technical codes. The building official shall determine the timing and sequencing of when inspections occur and what elements are inspected at each inspection.

Building *(partial)*

1.1 In flood hazard areas, upon placement of the lowest floor, including basement, and prior to further vertical construction, the elevation certification shall be submitted to the authority having jurisdiction.

5.1. In flood hazard areas, as part of the final inspection, a final certification of the lowest floor elevation shall be submitted to the authority having jurisdiction.

111.2 [Certificate of Occupancy] Certificate issued. After the building official inspects the building or structure and finds no violations of the provisions of this code or other laws that are enforced by the department of building safety, the building official shall issue a certificate of occupancy that contains the following: *(partial)*

6. For buildings and structures in flood hazard areas, a statement that documentation of the as-built lowest floor elevation has been provided and is retained in the records of the authority having jurisdiction

117.1 [Variances in Flood Hazard Areas] Flood hazard areas. Pursuant to Section 553.73(5), Florida Statutes, the variance procedures adopted in the local floodplain management ordinance shall apply to requests submitted to the building official for variances to the provisions of Section 1612.4 of the Florida Building Code, Building or, as applicable, the provisions of Section R322 of the Florida Building Code, Residential. This section shall not apply to Section 3109 of the Florida Building Code, Building.

CHAPTER 2
SECTION 202 DEFINITIONS

ADDITION. An extension or increase in floor area, number of stories or height of a building or structure.

BASE FLOOD. The flood having a 1-percent chance of being equaled or exceeded in any given year.

BASE FLOOD ELEVATION. The elevation of the base flood, including wave height, relative to the National Geodetic Vertical Datum (NGVD), North American Vertical Datum (NAVD) or other datum specified on the Flood Insurance Rate Map (FIRM).

BASEMENT (for flood loads). The portion of a building having its floor subgrade (below ground level) on all sides. This definition of “Basement” is limited in application to the provisions

of Section 1612.

BASEMENT. A story that is not a story above grade plane (see "Story above grade plane"). This definition of "Basement" does not apply to the provisions of Section 1612 for flood loads.

COASTAL HIGH HAZARD AREA. Area within the special flood hazard area extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area that is subject to high-velocity wave action from storms or seismic sources, and shown on a Flood Insurance Rate Map (FIRM) or other flood hazard map as velocity Zone V, VO, VE or V1-30.

DESIGN FLOOD. The flood associated with the greater of the following two areas:

1. Area with a flood plain subject to a 1-percent or greater chance of flooding in any year; or

2. Area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

DESIGN FLOOD ELEVATION. The elevation of the "design flood," including wave height, relative to the datum specified on the community's legally designated flood hazard map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the building's perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet (610 mm).

DRY FLOODPROOFING. A combination of design modifications that results in a building or structure, including the attendant utilities and equipment and sanitary facilities, being water tight with walls substantially impermeable to the passage of water and with structural components having the capacity to resist loads as identified in ASCE 7.

EXISTING CONSTRUCTION. Any buildings and structures for which the start of construction commenced before the effective date of the community's first flood plain management code, ordinance or standard. "Existing construction" is also referred to as "existing structures."

EXISTING STRUCTURE (For Section 1612.2). See "Existing construction".

FLOATING RESIDENTIAL UNIT. Means a structure primarily designed or constructed as a living unit, built on a floating base, which is not designed primarily as a vessel, is not self-propelled although it may be towed about from place to place, and is primarily intended to be anchored or otherwise moored in a fixed location.

FLOOD or FLOODING. A general and temporary condition of partial or complete inundation of normally dry land from:

1. The overflow of inland or tidal waters.

2. The unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD DAMAGE-RESISTANT MATERIALS. Any construction material capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair.

FLOOD HAZARD AREA. The greater of the following two areas:

1. The area within a flood plain subject to a 1-percent or greater chance of flooding in any year.

2. The area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

FLOOD INSURANCE RATE MAP (FIRM). An official map of a community on which the Federal Emergency Management Agency (FEMA) has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY. The official report provided by the Federal Emergency Management Agency containing the Flood Insurance Rate Map (FIRM), the Flood Boundary and Floodway Map (FBFM), the water surface elevation of the base flood and supporting technical data.

FLOODWAY. The channel of the river, creek or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

HABITABLE SPACE. A space in a structure for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, screen enclosures, sunroom Categories I, II and III as defined in the AAMA/NPEA/NSA 2100, storage or utility spaces and similar areas are not considered habitable spaces.

HIGH-VELOCITY HURRICANE ZONE. This zone consists of Broward and Dade counties.

HISTORIC BUILDINGS. Buildings that are listed in or eligible for listing in the National Register of Historic Places, or designated as historic under an appropriate state or local law (see Chapter 12 of the *Florida Existing Building Code*).

LOCAL FLOODPLAIN MANAGEMENT ORDINANCE. An ordinance or regulation adopted pursuant to the requirements in Title 44 Code of Federal Regulations, Parts 59 and 60 for participation in the National Flood Insurance Program.

LOWEST FLOOR. The lowest floor of the lowest enclosed area, including basement, but excluding any unfinished or flood-resistant enclosure, usable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the structure in violation of this section.

RISK CATEGORY. A categorization of buildings and other structures for determination of flood, wind, snow, ice and earthquake loads based on the risk associated with unacceptable performance.

SPECIAL FLOOD HAZARD AREA. The land area subject to flood hazards and shown on a Flood Insurance Rate Map or other flood hazard map as Zone A, AE, A1-30, A99, AR, AO, AH, V, VO, VE or V1-30.

START OF CONSTRUCTION. The date of issuance for new construction and substantial improvements to existing structures, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement is within 180 days after the date of issuance. The actual start of construction means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of a slab or footings, installation of pilings or construction of columns.

Permanent construction does not include land preparation (such as clearing, excavation, grading or filling), the installation of streets or walkways, excavation for a basement, footings, piers or foundations, the erection of temporary forms or the installation of accessory buildings such as garages or sheds not occupied as dwelling units or not part of the main building. For a substantial improvement, the actual “start of construction” means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

SUBSTANTIAL DAMAGE. Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT. Any repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either:

1. Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that is the minimum necessary to assure safe living conditions.
2. Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

CHAPTER 4
SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

SECTION 449 HOSPITALS

449.4.2.2 Site standards.

449.4.2.2.1 Except as permitted by Section 1612 of this code, the lowest floor of all new facilities shall be elevated to the base flood elevation as defined in Section 1612, plus 2 feet (609.6 mm), or to the height of hurricane Category 3 (Saffir-Simpson scale) surge inundation elevation, as described by the Sea, Lake, and Overland Surge (SLOSH) from Hurricanes model developed by the Federal Emergency Management Agency (FEMA), United States Army Corps of Engineers (USACE), and the National Weather Service (NWS), whichever is higher.

449.4.2.2.2 For all existing facilities, the lowest floor elevations of all additions, and all patient support areas including food service, and all patient support utilities, including mechanical, and electrical (except fuel storage as noted in Section 449.4.2.9.3 of this code) for the additions shall be at or above the elevation of the existing building, if the existing building was designed and constructed to comply with either the site standards of Section 449.4 or local flood-resistant requirements, in effect at the time of construction, whichever requires the higher elevation, unless otherwise permitted by Section 1612 of this code. If the existing building was constructed prior to the adoption of either the site standards of Section 449.4 or local flood-resistant requirements, then the addition and all patient support areas and utilities for the addition as described in this section shall either be designed and constructed to meet the requirements of Section 449.4.2.2.1 or be designed and constructed to meet the dry flood proofing requirements of Section 1612.

449.4.2.2.3 Substantial improvement, as defined by Section 1612, to all existing facilities located within flood areas as defined in Section 1612 of this code or within a Category 3 surge inundation zone as described in Section 449.4.2.2.1 of this code, shall be designed and constructed in compliance with Section 1612.

449.4.2.2.4 Where an off-site public access route is available to the new facility at or above the base flood elevation, a minimum of one on-site emergency access route shall be provided that is located at the same elevation as the public access route.

SECTION 450 NURSING HOMES

450.4 Physical plant requirements for disaster preparedness of new nursing home construction.

450.4.2.2 Site standards.

450.4.2.2.1 Except as permitted by Section 1612 of this code, the lowest floor of all new facilities shall be elevated to the base flood elevation as defined in Section 1612, plus 2 feet (607 mm), or to the height of hurricane Category 3 (Saffir-Simpson scale) surge inundation elevation, as described by the Sea, Lake, and Overland Surge (SLOSH) from Hurricanes model developed by the Federal Emergency Management Agency (FEMA), United States Army Corps of Engineers (USACE), and the National Weather Service (NWS), whichever is higher.

450.4.2.2.2 For all existing facilities, the lowest floor elevations of all additions, and all resident support areas including food service, and all resident support utilities, including mechanical, and electrical (except fuel storage as noted in Section 450.4.2.9.3 of this code) for the additions shall be at or above the elevation of the existing building, if the existing building was designed and constructed to comply with either the site standards of Section 450.4 or local flood resistant requirements, in effect at the time of construction, whichever requires the higher elevation, unless otherwise permitted by Section 1612 of this code. If the existing building was constructed prior to the adoption of either the site standards of Section 450.4 or local flood-resistant requirements, then the addition and all resident support areas and utilities for the addition as described in this section shall either be designed and constructed to meet the requirements of Section 450.4.2.2.1 or be designed and constructed to meet the dry flood-proofing requirements of Section 1612.

450.4.2.2.3 Substantial improvement, as defined by Section 1612, to all existing facilities located within flood areas as defined in Section 1612 or within a Category 3 surge inundation zone as described in Section 450.4.2.2.1, shall be designed and constructed in compliance with Section 1612.

450.4.2.2.4 Where an off-site public access route is available to the new facility at or above the base flood elevation, a minimum of one on-site emergency access route shall be provided that is located at the same elevation as the public access route.

453 EDUCATIONAL FACILITIES

453.4.2 Flood-resistant construction. Educational facilities in flood hazard areas shall comply with ASCE 24.

453.10.10 School site master plan. New schools shall include, as applicable: facility design capacity; floodplain locations; covered accessible walks; infrastructure locations for, and extensions of, technology, telephone, electricity, fire alarm; and, where applicable, water and sewer utilities, and relocatables.

453.25.2.1 Emergency access. EHPAs shall have at least one route for emergency vehicle access. The emergency route shall be above the 100-year floodplain. This requirement may be waived by the board, with concurrence of the local emergency management agency or the

DEM.

453.27.5.1 Floodplain. Compliance with floodplain standards is required for the initial and subsequent installation of public educational relocatable units. The finished floor shall be 12 inches (305 mm) above base flood elevation, the structure shall be designed to meet the Florida Building Code and anchored to resist buoyant forces.

454 SWIMMING POOLS AND BATHING PLACES (PUBLIC AND PRIVATE)

454.1 Public swimming pools and bathing places. Public swimming pools and bathing places shall comply with the design and construction standards of this section.

454.1.1 Flood hazard areas. Public swimming pools installed in flood hazard areas established in Section 1612.3 shall comply with Section 1612.

454.2.4.2 Items not covered. For any items not specifically covered in these requirements, the administrative authority is hereby authorized to require that all equipment, materials, methods of construction and design features shall be proven to function adequately, effectively and without excessive maintenance and operational difficulties.

454.2.4.2.1 Flood hazard areas. Private swimming pools installed in flood hazard areas established in Section 1612.3 shall comply with Section 1612.

CHAPTER 8
INTERIOR FINISHES

801.5 Applicability. For buildings in flood hazard areas as established in Section 1612.3, interior finishes, trim and decorative materials below the elevation required by Section 1612 shall be flood-damage-resistant materials.

CHAPTER 12
INTERIOR ENVIRONMENT

1203.3 Under-floor ventilation.
1203.3.2. Exceptions. *(partial)*

5. For buildings in flood hazard areas as established in Section 1612.3, the openings for under-floor ventilation shall be deemed as meeting the flood opening requirements of ASCE 24 provided that the ventilation openings are designed and installed in accordance with ASCE 24.

CHAPTER 14
EXTERIOR WALLS

1403.6 Flood resistance. For buildings in flood hazard areas as established in Section 1612.3, exterior walls extending below the elevation required by Section 1612 shall be constructed with flood-damage-resistant materials. Wood shall be pressure-preservative treated in accordance with AWPA U1 for the species, product and end use using a preservative listed in Section 4 of AWPA U1 or decay-resistant heartwood of redwood, black locust or cedar.

1403.7 Flood resistance for coastal high hazard areas. For buildings in coastal high hazard areas as established in Section 1612.3, electrical, mechanical and plumbing system components shall not be mounted on or penetrate through exterior walls that are designed to break away under flood loads.

CHAPTER 16
STRUCTURAL DESIGN

1601.1 Scope. The provisions of this chapter shall govern the structural design of buildings, structures and portions thereof regulated by this code.

Exception: Buildings and structures located within the high-velocity hurricane zone shall comply with the provisions of Section 1605, 1607, 1611, Sections 1616 through 1626, and, as applicable in flood hazard areas, Section 1612

1602 DEFINITIONS AND NOTATIONS
NOTATIONS. *[partial]*

F_a = Flood load in accordance with Chapter 5 of ASCE 7.

1603.1 General. Construction documents shall show the size,section and relative locations of structural members with floor levels, column centers and offsets dimensioned. The design loads and other information pertinent to the structural design required by Sections 1603.1.1 through 1603.1.9 shall be indicated on the construction documents.

Exception: Construction documents for buildings constructed in accordance with the conventional light-frame construction provisions of Section 2308 shall indicate the following structural design information:

1. Floor and roof live loads.
2. Ground snow load, P_g.
3. Ultimate design wind speed, Vult, (3-second gust), miles per hour (mph) (km/hr) and nominal design wind speed, Vasd, as determined in accordance with Section 1609.3.1 and wind exposure.
4. Seismic design category and site class.
5. Flood design data, if located in flood hazard areas established in Section 1612.3.
6. Design load-bearing values of soils.

1603.1.7 Flood design data. For buildings located in whole or in part in flood hazard areas as established in Section 1612.3, the documentation pertaining to design, if required in Section 1612.5, shall be included and the following information, referenced to the datum on the community's Flood Insurance Rate Map (FIRM), shall be shown, regardless of whether flood loads govern the design of the building:

1. In flood hazard areas other than coastal high hazard areas, the elevation of the proposed lowest floor, including the basement.
2. In coastal high hazard areas, the elevation to which any nonresidential building will be dry flood proofed.
3. In coastal high hazard areas, the proposed elevation of the bottom of the lowest horizontal structural member of the lowest floor, including the basement.

1605.2.1 [Load combinations using strength design or load and resistance factor design] Other loads. Where flood loads, F_a, are to be considered in the design, the load combinations of Section 2.3.3 of ASCE 7 shall be used. Where self-straining loads, T, are considered in

design, their structural effects in combination with other loads shall be determined in accordance with Section 2.3.5 of ASCE 7. Where an ice sensitive structure is subjected to loads due to atmospheric icing, the load combinations of Section 2.3.4 of ASCE 7 shall be considered.

1605.3.1.2 [Load combinations using allowable stress design] Flood loads. Where flood loads, F_a, are to be considered in design, the load combinations of Section 2.4.2 of ASCE 7 shall be used.

1605.3.1.2 [Load combinations using allowable stress design] Other loads. Where flood loads, F_a, are to be considered in design, the load combinations of Section 2.4.2 of ASCE 7 shall be used. Where self-straining loads, T, are considered in design, their structural effects in combination with other loads shall be determined in accordance with Section 2.4.4 of ASCE 7. Where an ice-sensitive structure is subjected to loads due to atmospheric icing, the load combinations of Section 2.4.3 of ASCE 7 shall be considered.

SECTION 1612
FLOOD LOADS

1612.1 General. Within flood hazard areas as established in Section 1612.3, all new construction of buildings, structures and portions of buildings and structures, including substantial improvement and restoration of substantial damage to buildings and structures, shall be designed and constructed to resist the effects of flood hazards and flood loads. For buildings that are located in more than one flood hazard area, the provisions associated with the most restrictive flood hazard area shall apply.

1612.1.1 Cross references. See Table 1612.1.

1612.2 Definitions. The following terms are defined in Chapter 2:
BASE FLOOD.
BASE FLOOD ELEVATION.
BASEMENT.
DESIGN FLOOD.
DESIGN FLOOD ELEVATION.
DRY FLOODPROOFING.
EXISTING CONSTRUCTION.
EXISTING STRUCTURE.
FLOOD or FLOODING.
FLOOD DAMAGE-RESISTANT MATERIALS.
FLOOD HAZARD AREA.
FLOOD HAZARD AREA SUBJECT TO HIGHVELOCITY WAVE ACTION.
FLOOD INSURANCE RATE MAP (FIRM).
FLOOD INSURANCE STUDY.
FLOODWAY.
LOCAL FLOODPLAIN MANAGEMENT ORDINANCE
LOWEST FLOOR.
SPECIAL FLOOD HAZARD AREA.
START OF CONSTRUCTION.
SUBSTANTIAL DAMAGE.

SUBSTANTIAL IMPROVEMENT.

1612.3 Establishment of flood hazard areas. To establish flood hazard areas, the applicable governing authority shall, by local floodplain management ordinance, adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for [INSERT NAME OF JURISDICTION]," dated [INSERT DATE OF ISSUANCE], as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.

1612.3.1 Design flood elevations. Where design flood elevations are not included in the flood hazard areas established in Section 1612.3, or where floodways are not designated, the building official is authorized to require the applicant to:

1. Obtain and reasonably utilize any design flood elevation and floodway data available from a federal, state or other source; or
2. Determine the design flood elevation and/or floodway in accordance with accepted hydrologic and hydraulic engineering practices used to define special flood hazard areas. Determinations shall be undertaken by a registered design professional who shall document that the technical methods used reflect currently accepted engineering practice.

1612.3.2 Determination of impacts. In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed work will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction of the applicable governing authority.

1612.4 Design and construction. The design and construction of buildings and structures located in flood hazard areas, including coastal high hazard areas, shall be in accordance with Chapter 5 of ASCE 7 and with ASCE 24.

1612.4.1 Modification of ASCE 24. Table 6-1 and Section 6.2.1 in ASCE 24 shall be modified as follows:

1. The title of Table 6.1 shall be "Minimum Elevation of Floodproofing, Relative to Base Flood Elevation (BFE) or Design Flood Elevation (DFE), in Coastal A Zones and in Other Flood Hazard Areas that are not High Risk Flood Hazard Areas."
2. Section 6.2.1 shall be modified to permit dry floodproofing in Coastal A Zones, as follows: "Dry floodproofing of nonresidential structures and nonresidential areas of mixed-use structures shall not be allowed unless such structures are located outside of High Risk Flood Hazard areas and Coastal High Hazard Areas. Dry floodproofing shall be permitted in Coastal A Zones provided wave loads and the potential for erosion and local scour are accounted for in the design. Dry floodproofing of residential structures or residential areas of mixed-use structures shall not be permitted."

1612.5 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:
    1.1. The elevation of the lowest floor, including basement, as required by the

foundation inspection and the final inspection in Section 110.3.

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 2.6.2.1 of ASCE 24, construction documents shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.6.2.2 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:

2.1. The elevation of the bottom of the lowest horizontal structural member as required by the foundation inspection and the final inspection in Section 110.3.

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^2) determined using allowable stress design, construction documents shall include a statement that the breakaway wall is designed in accordance with ASCE 24.

Table 1612.1 CROSS REFERENCES DEFINING FLOOD RESISTANT PROVISIONS OF THE FLORIDA BUILDING CODE			
Florida Building Code – Building			
Section		**Section**	
Chapter 1	Administration	Chapter 14	Exterior Walls
102	Applicability	1403	Performance Requirements
107	Construction Documents		
110	Inspections	Chapter 16	Structural Design
111	Certificates of Occupancy and Completion	1601	General
		1603	Construction Documents
Chapter 2	Definitions	1605	Load Combinations
202	Definitions	1612	Flood Loads
Chapter 4	Special Detailed Requirements Based on Use and Occupancy	Chapter 18	Soils and Foundations
449	Hospitals	1804	Excavation, Grading and Fill
450	Nursing Homes	1805	Dampproofing and Waterproofing
454	Swimming Pools and Bathing Places (Public And Private)		
Chapter 8	Interior Finishes	Chapter 30	Elevators and Conveying Systems
801	General	3001	General
Chapter 12	Interior Environment	Chapter 31	Special Construction
1203	Ventilation	3102	Membrane Structures
Florida Building Code – Residential			
Section		**Section**	
Chapter 2	Definitions	Chapter 22	Special Piping and Storage Systems
202	Definitions	M2201	Oil Tanks
Chapter 3	Building Planning	Chapter 24	Fuel Gas
R301	Design Criteria	G2404 (301)	General
R309	Garages and Carports		
R322	Flood Resistant Construction	Chapter 26	General Plumbing Requirements
		P2601	General
Chapter 4	Foundations		
R401	General	Chapter 27	Plumbing Fixtures
R404	Foundation and Retaining Walls	P2705	Installation
R408	Under-Floor Space		
Chapter 13	General Mechanical System Requirements	Chapter 30	Sanitary Drainage
M1301	General	P3001	General
Chapter 14	Heating and Cooling Equipment	Chapter 31	Vents
M1401	General	P3101	Vent Systems
Chapter 16	Duct Systems	Chapter 42	Swimming Pools, Electrical
M1601	Duct Construction	R4201	

(continued)

Table 1612.1—continued CROSS REFERENCES DEFINING FLOOD RESISTANT PROVISIONS OF THE FLORIDA BUILDING CODE			
Florida Building Code – Residential			
Section		**Section**	
Chapter 17	Combustion Air	Chapter 44	High-Velocity Hurricane Zones
M1701	General	R4403	High-Velocity Hurricane Zones – General
Chapter 20	Boilers and Water Heaters	Chapter 45	Private Swimming Pools
M2001	Boilers	R4501	
Florida Building Code – Existing			
Section		**Section**	
Chapter 1	Administration	Chapter 11	Additions
101	General	1103	Structural
Chapter 2	Definitions		
202	Definitions	Chapter 12	Historic Buildings
Chapter 3	Compliance Methods	1201	General
301.1	General		
Chapter 4	Prescriptive Compliance Method		
402	Additions		
403	Alterations	Chapter 13	Relocated or Moved Buildings
404	Repairs	1302	Requirements
Chapter 6	Repairs		
601	General	Chapter 14	Performance Compliance Methods
606	Structural	1401	General
Chapter 7	Alterations – Level I		
701	General		
Florida Building Code – Mechanical			
Section		**Section**	
Chapter 3	General Regulations	Chapter 6	Duct Systems
M301	General	M602	Plenums
		M603	Duct Construction and Installation
Chapter 4	Ventilation		
M401	General	Chapter 12	Hydronic Piping
		M1206	Piping Installation
Chapter 5	Exhaust Systems		
M501	General	Chapter 13	Fuel Oil Piping and Storage
		M1305	Fuel Oil System Installation
Florida Building Code – Plumbing			
Section			
Chapter 3	General Regulations		
P309	Flood Hazard Resistance		
Florida Building Code – Fuel Gas			
Section			
Chapter 3	General Regulations		
FG301	General		

CHAPTER 18
SOILS AND FOUNDATIONS

1801.1 Scope. The provisions of this chapter shall apply to building and foundation systems.

1804.4 Grading and fill in flood hazard areas. In flood hazard areas established in Section 1612.3, grading and/or fill shall not be approved:

1. Unless such fill is placed, compacted and sloped to minimize shifting, slumping and erosion during the rise and fall of flood water and, as applicable, wave action.
2. In floodways, unless it has been demonstrated through hydrologic and hydraulic analyses performed by a registered design professional in accordance with standard engineering practice that the proposed grading or fill, or both, will not result in any increase in flood levels during the occurrence of the design flood.
3. In coastal high hazard areas, unless such fill is conducted and/or placed to avoid diversion of water and waves toward any building or structure.
4. Where design flood elevations are specified but floodways have not been designated, unless it has been demonstrated that the cumulative effect of the proposed flood hazard area encroachment, 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.

1805.1.2.1 [Under-floor space] Flood hazard areas. For buildings and structures in flood hazard areas as established in Section 1612.3, the finished ground level of an under-floor space such as a crawl space shall be equal to or higher than the outside finished ground level on at least one side.

Exception: Under-floor spaces of Group R-3 buildings that meet the requirements of FEMA/FIA-TB-11.

CHAPTER 30
ELEVATORS AND CONVEYING SYSTEMS

3001.2 Referenced standards. Except as otherwise provided for in this code, the design, construction, installation, alteration, repair and maintenance of elevators and conveying systems and their components shall conform to ASME A17.1/ CSA B44, ASME A17.3 and ASME A18.1, ASME A90.1, ASME B20.1, ALI ALCTV, and ASCE 24 for construction in flood hazard areas established in Section 1612.3. The Division of Hotels and Restaurants may grant exceptions, variances and waivers to the Elevator Safety Code as authorized by the Safety Code for Elevators and Escalators (ASME A17.1, Section 1.2) and Florida Statutes (Chapter 120.)

CHAPTER 31
SPECIAL CONSTRUCTION

3102.7 Engineering design. The structure shall be designed and constructed to sustain dead loads; loads due to tension or inflation; live loads including wind, snow or flood and seismic loads and in accordance with Chapter 16.

SECTION 3109 STRUCTURES SEAWARD OF A COASTAL CONSTRUCTION CONTROL LINE

Note: *The more restrictive of the CCCL and flood hazard area requirements (1612 and R322) must be satisfied.*

REBUILDING. See definition of “Substantial improvement.”

SUBSTANTIAL IMPROVEMENT. See Section 1612.

CHAPTER 34
EXISTING STRUCTURES

3401.1 Scope. Alteration, repair, addition, relocation and change of occupancy of existing structures and buildings shall comply with the provisions of the Florida Building Code, Existing Building.

CHAPTER 35
REFERENCED STANDARDS

FEMA Federal Emergency Management Agency
Federal Center Plaza
500 C Street S.W.
Washington, DC 20472

Standard Reference Number	Title	Referenced in code section number
FIA-TB-11—01	Crawlspace Construction for Buildings Located in Special Flood Hazard Areas	1805.1.2.1

5th Edition Florida Building Code, Residential (2014)
[a compilation of flood resistant provisions, prepared by Florida DEM]

CHAPTER 1: SCOPE AND ADMINISTRATION

R101.2 Scope. The provisions of the Florida Building Code, Residential shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress and their accessory structures.

Exceptions:

1. Live/work units complying with the requirements of Section 419 of the Florida Building Code, Building shall be permitted to be built as one- and two-family dwellings or townhouses. Fire suppression required by Section 419.5 of the Florida Building Code, Building when constructed under the Florida Building Code, Residential shall conform to Section P2904.
2. Owner-occupied lodging houses with five or fewer guestrooms shall be permitted to be constructed in accordance with the Florida Building Code, Residential when equipped with a fire sprinkler system in accordance with Section P2904.
3. Existing buildings undergoing repair, alteration, addition or change of occupancy shall comply with the Florida Building Code, Existing Building.

R101.2.1 The provisions of Chapter 1, Florida Building Code, Building, shall govern the administration and enforcement of the Florida Building Code, Residential.

CHAPTER 2: DEFINITIONS

HABITABLE SPACE. A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, screen enclosures, sunroom Categories I, II and III as defined in the AAMA/NPEA/NSA 2100, storage or utility spaces and similar areas are not considered habitable spaces. [*Note: this definition shown to clarify that some spaces that are not habitable spaces are not permitted below elevated buildings in SFHAs*.]

LOCAL FLOODPLAIN MANAGEMENT ORDINANCE. An ordinance or regulation adopted pursuant to the authority granted to local governments by Title 44, Code of Federal Regulations, Sections 59 and 60 for participation in the National Flood Insurance Program.

MANUFACTURED HOME. Manufactured home means a structure, transportable in one or more sections, which in the traveling mode is 8 body feet (2438 body mm) or more in width or 40 body feet (12,192 body mm) or more in length, or, when erected on site, is 320 square feet (30 m^2) or more, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning and electrical systems contained therein; except that such term shall include any structure that meets all the requirements of this paragraph except the size requirements and with respect to which the manufacturer voluntarily files a

certification required by the secretary (HUD) and complies with the standards established under this title. For mobile homes built prior to June 15, 1976, a label certifying compliance to the Standard for Mobile Homes, NFPA 501, in effect at the time of manufacture is required. For the purpose of these provisions, a mobile home shall be considered a manufactured home.

CHAPTER 3: BUILDING PLANNING

R301.1 [Design Criteria] Application. Buildings and structures, and all parts thereof, shall be constructed to safely support all loads, including dead loads, live loads, roof loads, flood loads, snow loads, wind loads and seismic loads as prescribed by this code. The construction of buildings and structures in accordance with the provisions of this code shall result in a system that provides a complete load path that meets all requirements for the transfer of all loads from their point of origin through the load-resisting elements to the foundation. Buildings and structures constructed as prescribed by this code are deemed to comply with the requirements of this section.

Exception: Buildings and structures located within the High-Velocity Hurricane Zone shall comply with Sections R302 to R324, inclusive, and the provisions of Chapter 44 and Section R406. In addition, buildings and structures located in flood hazard areas established in Table R301.2(1) shall comply with Sections R301.2.4 and R322.

R301.2 Climatic and geographic design criteria. Buildings shall be constructed in accordance with the provisions of this code as limited by the provisions of this section. Additional criteria shall be set forth in Table R301.2(1).

Table R301.2(1) Climatic and Geographic Design Criteria

GROUND SNOW LOAD	WIND DESIGN		SEISMIC DESIGN CATEGORY[f]	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP[e]	ICE BARRIER UNDERLAYMENT REQUIRED[h]	FLOOD HAZARDS[g]	AIR FREEZING INDEX[i]	MEAN ANNUAL TEMP[j]
	Speed[d] (mph)	Topographic effects[k]		Weathering[a]	Frost line depth[b]	Termite[c]					
NA	See Fig. R301.2(4)		NA	Negligible	NA	Very Heavy		NA		NA	NA

g. The applicable governing body shall, by local floodplain management ordinance, specify (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), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRM and FBFM, or other flood hazard map adopted by the authority having jurisdiction, as amended.

R301.2.4 Floodplain construction. Buildings and structures constructed in whole or in part in flood hazard areas (including A or V Zones) as established in Table R301.2(1) shall be designed and constructed in accordance with Section R322. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

R301.2.4.1 Alternative provisions. As an alternative to the requirements in Section R322, ASCE 24 is permitted subject to the limitations of this code and the limitations therein.

R301.2.5 Structures seaward of a coastal control construction line. Structures located seaward of the coastal construction control line shall be designed to resist the predicted forces of a 100-year storm event in accordance with Section 3109 of the Florida Building Code,

Building.

R309.3 [Garages and Carports] Flood hazard areas. For buildings located in flood hazard areas as established by Table R301.2(1), garage floors shall be:

1. Elevated to or above the design flood elevation as determined in Section R322; or
2. Located below the design flood elevation provided they are at or above grade on at least 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.

SECTION R322
FLOOD–RESISTANT CONSTRUCTION

R322.1 General. Buildings and structures constructed in whole or in part in flood hazard areas (including A or V Zones) as established in Table R301.2(1) shall be designed and constructed in accordance with the provisions contained in this section. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

R322.1.1 Alternative provisions. As an alternative to the requirements in Section R322, ASCE 24 is permitted subject to the limitations of this code and the limitations therein.

R322.1.2 Structural systems. All structural systems of all buildings and structures shall be designed, connected and anchored to resist flotation, collapse or permanent lateral movement due to structural loads and stresses from flooding equal to the design flood elevation.

R322.1.3 Flood-resistant construction. All buildings and structures erected in areas prone to flooding shall be constructed by methods and practices that minimize flood damage.

R322.1.4 Establishing the design flood elevation. The design flood elevation shall be used to define flood hazard areas. At a minimum, the design flood elevation is the higher of:

1. The base flood elevation at the depth of peak elevation of flooding (including wave height) which has a 1 percent (100-year flood) or greater chance of being equaled or exceeded in any given year; or
2. The elevation of the design flood associated with the area designated on a flood hazard map adopted by the community, or otherwise legally designated.

R322.1.4.1 Determination of design flood elevations. If design flood elevations are not specified, the building official is authorized to require the applicant to:

1. Obtain and reasonably use data available from a federal, state or other source; or
2. Determine the design flood elevation in accordance with accepted hydrologic and hydraulic engineering practices used to define special flood hazard areas. Determinations shall be undertaken by a registered design professional who shall document that the technical methods used reflect currently accepted engineering practice. Studies, analyses and computations shall be submitted in sufficient detail to allow thorough review and approval.

R322.1.4.2 Determination of impacts. In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the applicant shall demonstrate that the effect of the proposed buildings and structures on design flood elevations, including fill, when combined with all other existing and anticipated flood hazard area

encroachments, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction.

R322.1.5 Lowest floor. The lowest floor shall be the floor of the lowest enclosed area, including basement, but excluding any unfinished flood-resistant enclosure that is useable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the building or structure in violation of this section.

R322.1.6 Protection of mechanical 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 (flood hazard areas including A Zones) or R322.3 (coastal high-hazard areas including V Zones). 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 (flood hazard areas including A Zones) or R322.3 (coastal high-hazard areas including V Zones) 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 elevation in accordance with ASCE 24. Electrical wiring systems are permitted to be located below the required elevation provided they conform to the provisions of the electrical part of this code for wet locations.

R322.1.7 Protection of water supply and sanitary sewage systems. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems in accordance with the plumbing provisions of this code. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into systems and discharges from systems into floodwaters in accordance with the plumbing provisions of this code in accordance with Chapter 64E-6, Florida Administrative Code, Standards for Onsite Sewage Treatment and Disposal Systems.

R322.1.8 Flood-resistant materials. Building materials used below the elevation required in Section R322.2 (flood hazard areas including A Zones) or R322.3 (coastal high-hazard areas including V Zones) shall comply with the following:

1. All wood, including floor sheathing, shall be pressure- preservative-treated in accordance with AWPA U1 for the species, product, preservative and end use or be the decay-resistant heartwood of redwood, black locust or cedars. Preservatives shall be listed in Section 4 of AWPA U1.
2. Materials and installation methods used for flooring and interior and exterior walls and wall coverings shall conform to the provisions of FEMA/FIA-TB-2.

R322.1.9 Manufactured homes. In addition to the applicable requirements of the state agency with jurisdiction over installation of manufactured homes, installation of manufactured homes in flood hazard areas is subject to the applicable provisions of the local floodplain management ordinance.

R322.1.10 As-built elevation documentation. A registered design professional shall prepare and seal documentation of the elevations specified in Section R322.2 or R322.3.

R322.1.11 Structures seaward of a coastal [control] construction line. In addition to the requirements of this section, structures located in flood hazard areas and seaward of the coastal construction line shall be designed to resist the predicted forces of a 100-year storm event in accordance with Section 3109 of the Florida Building Code, Building, and the more restrictive provisions shall govern. [*Note:"coastal construction line" should refer to the "coastal construction control line."*]

R322.2 Flood hazard areas (including A Zones). All areas that have been determined to be prone to flooding but not subject to high-velocity wave action shall be designated as flood hazard areas. Flood hazard areas that have been delineated as subject to wave heights between 11/2 feet (457 mm) and 3 feet (914 mm) shall be designated as Coastal A Zones. All building and structures constructed in whole or in part in flood hazard areas shall be designed and constructed in accordance with Sections R322.2.1 through R322.2.3.

R322.2.1 Elevation requirements.

1. Buildings and structures in flood hazard areas not designated as Coastal A Zones shall have the lowest floors elevated to or above the design flood elevation.
2. Buildings and structures in 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 to the design flood elevation, whichever is higher.
3. In areas of shallow flooding (AO Zones), buildings and structures shall have the lowest floor (including basement) elevated at least as high above the highest adjacent grade as the depth number specified in feet on the FIRM, or at least 2 feet (610 mm) if a depth number is not specified.
4. Basement floors that are below grade on all sides shall be elevated to or above the design flood elevation.

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

R322.2.2 Enclosed area 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.
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 mm^2) for each square foot (0.093 m^2) 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.

R322.2.3 Foundation design and construction. Foundation walls for all buildings and structures erected in flood hazard areas shall meet the requirements of Chapter 4.
Exception: Unless designed in accordance with Section R404:

1. The unsupported height of 6-inch (152 mm) plain masonry walls shall be no more than 3 feet (914 mm).
2. The unsupported height of 8-inch (203 mm) plain masonry walls shall be no more than 4 feet (1219 mm).
3. The unsupported height of 8-inch (203 mm) reinforced masonry walls shall be no more than 8 feet (2438 mm).

For the purpose of this exception, unsupported height is the distance from the finished grade of the under-floor space to the top of the wall.

R322.2.4 Pools in flood hazard areas. Pools that are located in flood hazard areas established by Table R301.2(1), including above-ground pools, on-ground pools, and in-ground pools that involve placement of fill, shall comply with Sections R322.2.4.1 or R322.2.4.2.

Exception: Pools located in riverine flood hazard areas which are outside of designated floodways.

R322.2.4.1 Pools located in designated floodways. Where pools are located in designated floodways, documentation shall be submitted to the building official, which demonstrates that the construction of the pool will not increase the design flood elevation at any point within the jurisdiction.

R322.2.4.2 Pools located where floodways have not been designated. Where pools are located in riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed pool will not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction.

R322.3 Coastal high-hazard areas (including V Zones). Areas that have been determined to be subject to wave heights in excess of 3 feet (914 mm) or subject to high-velocity wave action or wave-induced erosion shall be designated as coastal high-hazard areas. Buildings and structures constructed in whole or in part in coastal high-hazard areas shall be designed and constructed in accordance with Sections R322.3.1 through R322.3.6.

R322.3.1 Location and site preparation. *[Note: Instead of referring to R105.3.1.1 (not retained by Florida), should refer to the FBC, Existing Building.]*

1. New buildings and buildings that are determined to be substantially improved pursuant to Section R105.3.1.1, shall be located landward of the reach of mean high tide.
2. For any alteration of sand dunes and mangrove stands the building official shall require submission of an engineering analysis which demonstrates that the proposed alteration will not increase the potential for flood damage.

R322.3.2 Elevation requirements.

1. All buildings and structures erected within coastal high-hazard areas shall be elevated so that the lowest portion of all structural members supporting the lowest floor, with the

exception of piling, pile caps, columns, grade beams and bracing, is elevated to or above the design flood elevation.
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.

Exception: Walls and partitions enclosing areas below the design flood elevation shall meet the requirements of Sections R322.3.4 and R322.3.5.

R322.3.3 Foundations. Buildings and structures erected in coastal high-hazard areas shall be supported on pilings or columns and shall be adequately anchored to such pilings or 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 R322.3.4. 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 embedment shall include consideration of decreased resistance capacity caused by scour of soil strata surrounding the piling. Pile systems design and installation shall be certified in accordance with Section R322.3.6. 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. Slabs, pools, pool decks and walkways shall be located and constructed to be structurally independent of buildings and structures and their foundations to prevent transfer of flood loads to the buildings and structures during conditions of flooding, scour or erosion from wave velocity flow conditions, unless the buildings and structures and their foundation are designed to resist the additional flood load.

R322.3.3.1 Pools. Pools in coastal high-hazard areas shall be designed and constructed in conformance with ASCE 24.

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 resistance of not less than 10 (479 Pa) and no more than 20 pounds per square foot (958 Pa), determined using allowable stress design; or
4. Where wind loading values of this code exceed 20 pounds per square foot (958 Pa), determined using the 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 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 shall be those required by this code.

R322.3.5 Enclosed areas below design flood elevation. Enclosed areas below the design flood elevation shall be used solely for parking of vehicles, building access or storage.

R322.3.6 Construction documents. The construction documents shall include documentation that is prepared and sealed by a registered design professional that the design and methods of construction to be used meet the applicable criteria of this section.

CHAPTER 4: FOUNDATIONS

R401.1 [General] Application. The provisions of this chapter shall control the design and construction of the foundation and foundation spaces for all buildings. In addition to the provisions of this chapter, the design and construction of foundations in flood hazard areas as established by Table R301.2(1) shall meet the provisions of Section R322. Wood foundations shall be designed and installed in accordance with AF&PA PWF.

Exception: The provisions of this chapter shall be permitted to be used for wood foundations only in the following situations: *[partial]*

3. Buildings and structures located within the High- Velocity Hurricane Zone shall comply with the provisions of Chapter 44 and, as applicable, Section R322 in flood hazard areas.

R401.2 Requirements. Foundations shall be capable of resisting all loads from roof uplift and building overturn. Foundation uplift for light-frame wood or steel buildings shall be calculated or determined from Table R401.1. Masonry buildings within the dimensional scope of Table R401.1 shall be assumed to be of adequate weight so as not to require uplift resistance greater than that provided by the structure and any normal foundation. Foundation construction shall also be capable of accommodating all gravity loads according to Section R301 and of transmitting the resulting loads to the supporting soil. Fill soils that support footings and foundations shall be designed, installed and tested in accordance with accepted engineering practice. Gravel fill used as footings for wood and precast concrete foundations shall comply with Section R403.

R401.3 [General] Drainage. Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection that does not create a hazard. Lots shall be graded to drain surface water away from foundation walls. The grade shall fall a minimum of 6 inches (152 mm) within the first 10 feet (3048 mm).

Exception: Where lot lines, walls, slopes or other physical barriers prohibit 6 inches (152 mm) of fall within 10 feet (3048 mm), drains or swales shall be constructed to ensure drainage away from the structure. Impervious surfaces within 10 feet (3048 mm) of the building foundation shall be sloped a minimum of 2 percent away from the building.

R404.1.9.5 Masonry piers in flood hazard areas. Masonry piers for dwellings in flood hazard areas shall be designed in accordance with Section R322.

R408.6 [Under-Floor Space] Finished grade. The finished grade of under-floor surface may be located at the bottom of the footings; however, where there is evidence that the groundwater table can rise to within 6 inches (152 mm) of the finished floor at the building perimeter or where

there is evidence that the surface water does not readily drain from the building site, the grade in the under-floor space shall be as high as the outside finished grade, unless an approved drainage system is provided.

R408.7 [Under-Floor Space] Flood resistance. For buildings located in flood hazard areas as established in Table R301.2(1):

1. Walls enclosing the under-floor space shall be provided with flood openings in accordance with Section R322.2.2.
2. The finished ground level of the under-floor space shall be equal to or higher than the outside finished ground level on at least one side.

Exception: Under-floor spaces that meet the requirements of FEMA/FIA TB 11-1.

CHAPTER 5: FLOORS

R506.2.1 [Concrete Floors (on Ground)] Fill. Fill material shall be free of vegetation and foreign material. The fill shall be compacted to assure uniform support of the slab, and except where approved, the fill depths shall not exceed 24 inches (610 mm) for clean sand or gravel and 8 inches (203 mm) for earth.

CHAPTER 13: GENERAL MECHANICAL SYSTEM REQUIREMENTS

M1301.1.1 [General Mechanical System Requirements; General] Flood-resistant installation. In flood hazard areas as established by Table R301.2(1), mechanical appliances, equipment and systems shall be located or installed in accordance with Section R322.1.6.

CHAPTER 14: HEATING AND COOLING EQUIPMENT AND APPLIANCES

M1401.5 [Heating and Cooling Equipment; General] Flood hazard. In flood hazard areas as established by Table R301.2(1), heating and cooling equipment and appliances shall be located or installed in accordance with Section R322.1.6.

CHAPTER 16: DUCT SYSTEMS

M1601.4.9 [Duct Construction; Duct installation] Flood hazard areas. In flood hazard areas as established by Table R301.2(1), duct systems shall be located or installed in accordance with Section R322.1.6.

CHAPTER 17: COMBUSTION AIR

M1701.2 [Combustion Air; General] Opening location. In flood hazard areas as established in Table R301.2(1), combustion air openings shall be located at or above the elevation required in Section R322.2.1 or R322.3.2.

CHAPTER 20: BOILERS AND WATER HEATERS

M2001.4 [Boilers and Water Heaters] Flood-resistant installation. In flood hazard areas established in Table R301.2(1), boilers, water heaters and their control systems shall be located or installed in accordance with Section R322.1.6.

CHAPTER 22: SPECIAL PIPING AND STORAGE SYSTEMS

M2201.6 [Special Piping and Storage Systems; Oil tanks] Flood-resistant installation. In flood hazard areas as established by Table R301.2(1), tanks shall be installed at or above the elevation required in Section R322.2.1 or R322.3.2 or shall be anchored to prevent flotation, collapse and lateral movement under conditions of the design flood.

CHAPTER 24: FUEL GAS

G2404.7 (301.11)) [Fuel Gas; General] Flood hazard. For structures located in flood hazard areas, the appliance, equipment and system installations regulated by this code shall be located at or above the elevation required by Section R322 for utilities and attendant equipment.

Exception: The appliance, equipment and system installations regulated by this code are permitted to be located below the elevation required by Section R322 for utilities and attendant equipment 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 such elevation.

CHAPTER 26: GENERAL PLUMBING REQUIREMENTS

P2601.3 [General Plumbing Requirements; General] Flood hazard areas. In flood hazard areas as established by Table R301.2(1), plumbing fixtures, drains, and appliances shall be located or installed in accordance with Section R322.1.6.

P2602.2 [Individual Water Supply and Sewage Disposal] Flood resistant installation. In areas prone to flooding as established by Table R301.2(1):

1. Water supply systems shall be designed and constructed to prevent infiltration of floodwaters.
2. Pipes for sewage disposal systems shall be designed and constructed to prevent infiltration of floodwaters into the systems and discharges from the systems into floodwaters.

CHAPTER 27: PLUMBING FIXTURES

P2705.1 [Plumbing Fixtures, Installation] General. The installation of fixtures shall conform to the following: *[partial]*

7. In flood hazard areas as established by Table R301.2(1), plumbing fixtures shall be located or installed in accordance with Section R322.1.7.

CHAPTER 30: SANITARY DRAINAGE

P3001.3 [Sanitary Drainage; General] Flood-resistant installation. In flood hazard areas as established by Table R301.2(1), drainage, waste and vent systems shall be located and installed to prevent infiltration of floodwaters into the systems and discharges from the systems into floodwaters.

CHAPTER 31: VENTS

P3101.5 [Vent Systems] Flood resistance. In flood hazard areas as established by Table R301.2(1), vents shall be located at or above the elevation required in Section R322.1 (flood hazard areas including A Zones) or R322.2 (coastal high-hazard areas including V Zones). [*Note: referenced sections should be R322.2.1 and R322.3.2, in which elevations are specified.*]

CHAPTER 45 PRIVATE SWIMMING POOLS

R4501.4.2.1. [Private Swimming Pools] Flood hazard areas. Pools installed in flood hazard areas established in Section R322 shall comply with Section R322.2.4 (A Zones) or R322.3.3.1 in coastal high-hazard areas (V Zones).

CHAPTER 44: HIGH-VELOCITY HURRICANE ZONE

Note: *Specific provisions are replaced with references to chapters in the Florida Building Code, Building.*

CHAPTER 46: REFERENCED STANDARDS

FEMA Federal Emergency Management Agency
500 C Street, SW
Washington, DC 20472

Standard reference Title	Referenced in code number section number
FEMA/TB-2—08 Flood-damage Resistant Materials Requirements R322.1.8	
FEMA-TB-11—01 Crawlspace Construction for Buildings . . . . . R408.7 Located in Special Flood Hazard Area.	

ASCE 24-05 Flood Resistant Design and Construction

5th Edition Florida Building Code, Existing Building (2014)
[a compilation of flood resistant provisions, prepared by Florida DEM]

CHAPTER 1 ADMINISTRATIVE

101.1 Title. These regulations shall be known as the Florida Building Code, Existing Building, hereinafter referred to as "this code". In addition to the provisions of this chapter, the provisions of Chapter 1, Florida Building Code, Building, shall govern the administration and enforcement of this code.

101.2 Scope. The provisions of the Florida Building Code, Existing Building shall apply to the repair, alteration, change of occupancy, addition and relocation of existing buildings.

Exception: For the purpose of public educational facilities and state licensed facilities, see Chapter 4, Special Occupancy, of the Florida Building Code, Building.

101.3 Intent. The intent of this code is to provide flexibility to permit the use of alternative approaches to achieve compliance with minimum requirements to safeguard the public health, safety and welfare insofar as they are affected by the repair, alteration, change of occupancy, addition and relocation of existing buildings.

101.4 Applicability. This code shall apply to the repair, alteration, change of occupancy, addition and relocation of all existing buildings, regardless of occupancy, subject to the criteria of Sections 101.4.1 and 101.4.2.

101.4.1 Buildings not previously occupied. A building or portion of a building that has not been previously occupied or used for its intended purpose in accordance with the laws in existence at the time of its completion shall comply with the provisions of the Florida Building Code, Building or Florida Building Code, Residential, as applicable, for new construction or with any current permit for such occupancy.

101.4.2 Buildings previously occupied. The legal occupancy of any building existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code, the Florida Fire Prevention Code, or as is deemed necessary by the code official for the general safety and welfare of the occupants and the public.

CHAPTER 2 DEFINITIONS

ADDITION. An extension or increase in floor area, number of stories, or height of a building or structure.

ALTERATION. Any construction or renovation to an existing structure other than a repair or addition. Alterations are classified as Level 1, Level 2 and Level 3.

CHANGE OF OCCUPANCY. A change in the purpose or level of activity within a building that involves a change in application of the requirements of this code.

EXISTING BUILDING. A building erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued.

EXISTING STRUCTURES (for flood hazard areas). See Section 1612.2 of the Florida Building Code, Building.

FLOOD HAZARD AREA. The greater of the following two areas:
1. The area within a flood plain subject to a 1-percent or greater chance of flooding in any year.
2. The area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

HISTORIC BUILDING. See Section 1202.

REHABILITATION. Any work, as described by the categories of work defined herein, undertaken in an existing building.

REPAIR. The restoration to good or sound condition of any part of an existing building for the purpose of its maintenance.

SUBSTANTIAL DAMAGE. For the purpose of determining compliance with the flood provisions of this code, damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

SUBSTANTIAL IMPROVEMENT. Any repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either:
1. Any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the building official and that is the minimum necessary to ensure safe living conditions; or
2. Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

CHAPTER 3 COMPLIANCE METHODS

301.1 General. The repair, alteration, change of occupancy, addition or relocation of all existing buildings shall comply with one of the methods listed in Sections 301.1.1 through 301.1.3 as selected by the applicant. Application of a method shall be the sole basis for assessing the compliance of work performed under a single permit unless otherwise approved by the code official. Sections 301.1.1 through 301.1.3 shall not be applied in combination with each other. Where this code requires consideration of the seismic force-resisting system of an existing building subject to repair, alteration, change of occupancy, addition or relocation of existing buildings, the seismic evaluation and design shall be based on Section 301.1.4 regardless of which compliance method is used.

Exception: Subject to the approval of the code official, alterations complying with the laws in existence at the time the building or the affected portion of the building was built shall be considered in compliance with the provisions of this code unless the building is undergoing

more than a limited structural alteration as defined in Section 907.4.3. New structural members added as part of the alteration shall comply with the Florida Building Code, Building. Alterations of existing buildings in flood hazard areas shall comply with Section 701.3.

CHAPTER 4 PRESCRIPTIVE COMPLIANCE METHOD

402.2 [Additions] Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable, any addition that constitutes substantial improvement of the existing structure, as defined in Section 202, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 of the Florida Building Code, Building, or Section R322 of the Florida Building Code, Residential, as applicable any additions that do not constitute substantial improvement of the existing structure, as defined in Section 202, are not required to comply with the flood design requirements for new construction.

403.2 [Alterations] Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable, any alteration that constitutes substantial improvement of the existing structure, as defined in Section 202, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 of the Florida Building Code, Building, or Section R322 of the Florida Building Code, Residential, as applicable, any alterations that do not constitute substantial improvement of the existing structure, as defined in Section 202, are not required to comply with the flood design requirements for new construction.

404.5 [Repairs] Flood hazard areas. For buildings and structures in flood hazard areas established in Section 1612.3 of the Florida Building Code, Building, or Section R322 of the Florida Building Code, Residential, as applicable any repair that constitutes substantial improvement of the existing structure, as defined in Section 202, shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 of the Florida Building Code, Building, or Section R322 of the Florida Building Code, Residential, as applicable, any repairs that do not constitute substantial improvement or repair of substantial damage of the existing structure, as defined in Section 202, are not required to comply with the flood design requirements for new construction.

SECTION 408 HISTORIC BUILDINGS: SEE CHAPTER 12

CHAPTER 6 REPAIRS

601.3 Flood hazard areas. In flood hazard areas, repairs that constitute substantial improvement shall require that the building comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable.

601.3.1 Structure seaward of a coastal construction line. Structures located seaward of the coastal construction line shall be designed to resist the predicted forces of a 100-year storm event in accordance with Section 3109 of the Florida Building Code, Building.

606.2.4 [Structural] Flood hazard areas. In flood hazard areas, buildings that have sustained substantial damage shall be brought into compliance with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable.

CHAPTER 7 ALTERATIONS – LEVEL 1

701.3 Flood hazard areas. In flood hazard areas, alterations that constitute substantial improvement shall require that the building comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable.

CHAPTER 8 ALTERATIONS – LEVEL 2

801.2 Alteration Level 1 compliance. In addition to the requirements of this chapter, all work shall comply with the requirements of Chapter 7.

CHAPTER 9 ALTERATIONS – LEVEL 3

901.2 Compliance. In addition to the provisions of this chapter, work shall comply with all of the requirements of Chapters 7 and 8. The requirements of Sections 803, 804 and 805 shall apply within all work areas whether or not they include exits and corridors shared by more than one tenant and regardless of the occupant load.

Exception: Buildings in which the reconfiguration of space affecting exits or shared egress access is exclusively the result of compliance with the accessibility requirements of Section 705.2 shall not be required to comply with this chapter.

CHAPTER 10 CHANGE OF OCCUPANCY

1001.1 Scope. The provisions of this chapter shall apply where a change of occupancy occurs, as defined in Section 202, including:

1. Where the occupancy classification is not changed; or
2. Where there is a change in occupancy classification or the occupancy group designation changes.

CHAPTER 11 ADDITIONS

1101.1 Scope. An addition to a building or structure shall comply with the Florida Codes as adopted for new construction without requiring the existing building or structure to comply with any requirements of those codes or of these provisions, except as required by this chapter. Where an addition impacts the existing building or structure, that portion shall comply with this code.

1103.1 [Structural] Compliance with the International Building Code. Additions to existing buildings or structures are new construction and shall comply with the Florida Building Code, Building.

1103.5 Flood hazard areas. Additions and foundations in flood hazard areas shall comply with the following requirements:

1. For horizontal additions that are structurally interconnected to the existing building:
   1.1. If the addition and all other proposed work, when combined, constitute substantial improvement, the existing building and the addition shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential as applicable.
   1.2. If the addition constitutes substantial improvement, the existing building and the addition shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential as applicable.
2. For horizontal additions that are not structurally interconnected to the existing building:
   2.1. The addition shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable.
   2.2. If the addition and all other proposed work, when combined, constitute substantial improvement, the existing building and the addition shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable.
3. For vertical additions and all other proposed work that, when combined, constitute substantial improvement, the existing building shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable.
4. For a raised or extended foundation, if the foundation work and all other proposed work, when combined, constitute substantial improvement, the existing building shall comply with Section 1612 of the Florida Building Code, Building.
5. For a new foundation or replacement foundation, the foundation shall comply with Section 1612 of the Florida Building Code, Building, or Section R322 of the Florida Building Code, Residential, as applicable.

CHAPTER 12 HISTORIC BUILDINGS

1201.3 Flood hazard areas. In flood hazard areas, if all proposed work, including repairs, work required because of a change of occupancy, and alterations, constitutes substantial improvement, then the building shall comply with Section 1612 of the Florida Building Code, Building, or Section R322 of the Florida Building Code, Residential, as applicable.

Exception: If the program that designated the building as historic determines that it will continue to be an historic building after the proposed work is completed, then the proposed

work is not considered to be substantial improvement. For the purposes of this exception, an historic building is:

1. Individually listed in the National Register of Historic Places; or
2. A contributing resource within a National Register of Historic Places listed district; or
3. Designated as historic property under an official municipal, county, special district or state designation, law, ordinance or resolution either individually or as a contributing property in a district, provided the local program making the designation is approved by the Department of the Interior (the Florida state historic preservation officer maintains a list of approved local programs); or
4. Determined eligible by the Florida State Historic Preservation Officer for listing in the National Register of Historic Places, either individually or as a contributing property in a district.

HISTORIC BUILDING. For the purposes of this code and the referenced documents, an historic building is defined as a building or structure that is:

1. Individually listed in the National Register of Historic Places; or
2. A contributing property in a National Register of Historic Places listed district; or
3. Designated as historic property under an official municipal, county, special district or state designation, law, ordinance or resolution either individually or as a contributing property in a district; or
4. Determined eligible by the Florida State Historic Preservation Officer for listing in the National Register of Historic Places, either individually or as a contributing property in a district.

CHAPTER 13 RELOCATED OR MOVED BUILDINGS

1302.6 Flood hazard areas. If relocated or moved into a flood hazard area, structures shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable.

CHAPTER 14 PERFORMANCE COMPLIANCE METHOD

1401.1 Scope. The provisions of this chapter shall apply to the alteration, repair, addition and change of occupancy of existing structures, including historic and moved structures, as referenced in Section 301.1.3. The provisions of this chapter are intended to maintain or increase the current degree of public safety, health and general welfare in existing buildings while permitting repair, alteration, addition and change of occupancy without requiring full compliance with Chapters 5 through 13, except where compliance with other provisions of this code is specifically required in this chapter.

1401.3 Acceptance. For repairs, alterations, additions, and changes of occupancy to existing buildings that are evaluated in accordance with this section, compliance with this section shall be accepted by the code official.

1401.3.3 Compliance with flood hazard provisions. In flood hazard areas, buildings that are evaluated in accordance with this section shall comply with Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable, if the work covered by this section constitutes substantial improvement.

5th Edition Florida Building Code, Mechanical, Plumbing, and Fuel Gas Codes (2014)

[a compilation of flood resistant provisions, prepared by Florida DEM]

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5th Edition Florida Building Code, Mechanical

DESIGN FLOOD ELEVATION. The elevation of the "design flood," including wave height, relative to the datum specified on the community's legally designated flood hazard area map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the building's perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet (610 mm).

M301.16 [General Regulations] Flood hazard. For structures located in flood hazard areas, mechanical systems, equipment and appliances shall be located at or above the elevation required by Section 1612.4 of the *Florida Building Code, Building* for utilities and attendant equipment.

Exception: Mechanical systems, equipment and appliances are permitted to be located below the elevation required by Section 1612.4 of the *Florida Building Code, Building* for utilities and attendant equipment 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 up to such elevation.

M301.16.1 Coastal high hazard areas. In coastal high hazard areas, mechanical systems and equipment shall not be mounted on or penetrate walls intended to break away under flood loads.

M401.4 [Ventilation, General] Intake opening location. Air intake openings shall comply with all of the following:

4. Intake openings on structures in flood hazard areas shall be at or above the elevation required by Section 1612.4 of the *Florida Building Code, Building* for utilities and attendant equipment.

M501.3.1 [Exhaust Systems, General] Location of exhaust outlets. The termination point of exhaust outlets and ducts discharging to the outdoors shall be located with the following minimum distances:

4. Exhaust outlets serving structures in flood hazard areas shall be installed at or above elevation required by Section 1612.4 of the *Florida Building Code* for utilities and attendant equipment.

M602.4 [Duct Systems, General] Flood hazard. For structures located in flood hazard areas, plenum spaces shall be located above the elevation required by Section 1612.4 of the *Florida Building Code, Building* for utilities and attendant equipment or shall be designed and constructed to prevent water from entering or accumulating within the plenum spaces during

floods up to such elevation. If the plenum spaces are located below the elevation required by Section 1612.4 of the *Florida Building Code, Building* for utilities and attendant equipment, they shall be capable of resisting hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding up to such elevation.

M603.13 [Duct Construction and Installation] Flood hazard areas. For structures in flood hazard areas, ducts shall be located above the elevation required by Section 1612.4 of the *Florida Building Code, Building* for utilities and attendant equipment or shall be designed and constructed to prevent water from entering or accumulating within the ducts during floods up to such elevation. If the ducts are located below the elevation required by Section 1612.4 of the *Florida Building Code, Building* for utilities and attendant equipment, the ducts shall be capable of resisting hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to such elevation.

M1206.9.1 [Hydronic Piping, Piping installation] Flood hazard. Piping located in a flood hazard area shall be capable of resisting hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the elevation required by Section 1612.4 of the *Florida Building Code, Building*.

M1305.2.1 [Fuel Oil System Installation] Flood hazard. All fuel oil pipe, equipment and appliances located in flood hazard areas shall be located above the elevation required by Section 1612.4 of the *Florida Building Code, Building* for utilities and attendant equipment or shall be capable of resisting hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding up to such elevation.

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5th Edition Florida Building Code, Plumbing

BASE FLOOD ELEVATION. A reference point, determined in accordance with the building code, based on the depth or peak elevation of flooding, including wave height, which has a 1 percent (100-year flood) or greater chance of occurring in any given year.

DESIGN FLOOD ELEVATION. The elevation of the “design flood,” including wave height, relative to the datum specified on the community’s legally designated flood hazard map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the building’s perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet (610 mm).

FLOOD HAZARD AREA. The greater of the following two areas:

1. The area within a flood plain subject to a 1-percent or greater chance of flooding in any given year.
2. The area designated as a flood hazard area on a community’s flood hazard map or as otherwise legally designated.

P309
FLOOD HAZARD RESISTANCE

P309.1 General. Plumbing systems and equipment in structures erected in flood hazard areas shall be constructed in accordance with the requirements of this section and the *Florida Building Code, Building*.

P309.2 Flood hazard. For structures located in flood hazard areas, the following systems and equipment shall be located and installed as required by Section 1612.4 of the *Florida Building Code, Building*:

1. Water service pipes.
2. Pump seals in individual water supply systems where the pump is located below the design flood elevation.
3. Covers on potable water wells shall be sealed, except where the top of the casing well or pipe sleeve is elevated to at least 1 foot (305 mm) above the design flood elevation.
4. Sanitary drainage piping.
5. Storm drainage piping.
6. Manhole covers shall be sealed, except where elevated to or above the design flood elevation.
7. Other plumbing fixtures, faucets, fixture fittings, piping systems and equipment.
8. Water heaters.
9. Vents and vent systems.

Exception: The systems listed in this section are permitted to be located below the elevation required by Section 1612.4 of the *Florida Building Code, Building* for utilities and attendant equipment provided that the systems are designed and installed to prevent water from entering or accumulating within their components and the systems are constructed to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding up to the design flood elevation.

309.3 Coastal high hazard areas. Structures located in coastal high hazard areas shall meet the requirements of Section 309.2. The plumbing systems, pipes and fixtures shall not be mounted on or penetrate through walls intended to break away under flood loads.

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5th Edition Florida Building Code, Fuel Gas

DESIGN FLOOD ELEVATION. The elevation of the "design flood," including wave height, relative to the datum specified on the community's legally designated flood hazard map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the building's perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet (610 mm).

FLOOD HAZARD AREA. The greater of the following two areas:

1. The area within a floodplain subject to a 1 percent or greater chance of flooding in any given year.

2. The area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

FG301.11 [General] Flood hazard. For structures located in flood hazard areas, the appliance, equipment and system installations regulated by this code shall be located at or above the elevation required by Section 1612.4 of the *Florida Building Code, Building* for utilities and attendant equipment and shall comply with the flood-resistant construction requirements of the *Florida Building Code, Building*.

Exception: The appliance, equipment and system installations regulated by this code are permitted to be located below the elevation required by Section 1612.4 of the *Florida Building Code, Building* for utilities and attendant equipment 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 such elevation.