2023 Advanced Building Code 8th Edition
Significant Code Changes – Internet
Course #1194.0

Course Provider:

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Objective

The objective of this course is to review the significant code changes in the 8th Edition update to the *2023 Florida Building Code,* as compared to the 7th Edition *2020 Florida Building Code.*

This is an advanced code course intended to fulfill the 1-hour Advanced Florida Building Code course requirement for engineers who practice engineering that is related to building design or systems. This course covers the most significant changes in the *2023 Florida Building Code, Building* and is designed for engineers of any discipline. This course covers only significant changes made to the FBC between chapters 14 and 23.

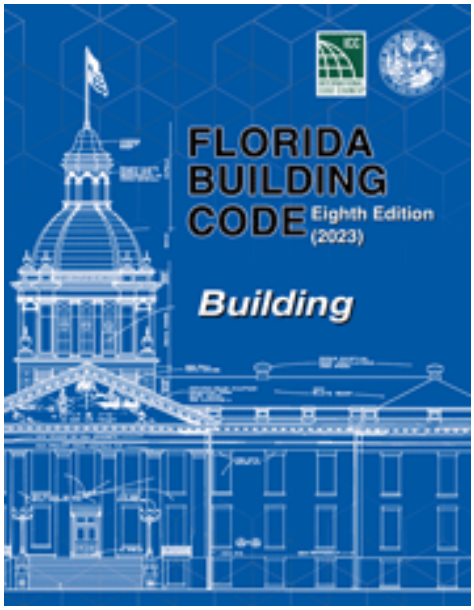

Image Source: ICC: Digital Codes, "2023 Florida Building Code, Eighth Edition." Accessed via https://codes.iccsafe.org/content/FLBC2023P1.

Introduction

The effective date is December 31, 2023, for the 8th Edition of the *Florida Building Code*. This code is based on the latest changes to the 2021 International Building Code® with additional provisions added per state statutes and building commission declaratory statements. This course only reviews the significant changes made to the code and does not review every single change. Reference the original text to ensure that the appropriate context is used during design.

The Florida Building code references other texts as well. Review the referenced materials that have been updated for this edition.

202 Definitions: Change of Occupancy

The scope of a change in occupancy has been revised to address conditions where no occupancy classification changes occur. A change of occupancy, as defined by the FBC, no longer applies to any change in occupancy classification. A change of occupancy now only applies where the FBC requires a greater degree of safety, accessibility, structural strength, fire protection, means of egress, ventilation or sanitation than exists in the current building and structure, and one of the following occurs:

- A change in occupancy classification
- A change in the purpose of, or a change in the level of activity within a building or structure.

Code excerpt's will be in blue text:

CHANGE OF OCCUPANCY. Either of the following shall be considered as a change of occupancy where this code requires a greater degree of safety, accessibility, structural strength, fire protection, means of egress, ventilation or sanitation than is existing in the current building or structure:

1. Any change in the occupancy classification of a building or structure.

2. Any change in the purpose of, or a change in the level of activity within, a building or structure.

454.1.9.9 Swim-up bars

New construction criteria have been added for swim-up bars.

454.1.9.9 Swim-up bars.

Swim-up bars shall comply with the requirements of Sections 454.1.9.9.1 through 454.1.9.9.7.

454.1.9.9.1

Swim-up bars are only permitted at transient public lodging establishments licensed under s. 509.013(4)(a)1, Florida Statutes, or at a theme park or entertainment complex as defined in s. 509.013(9), F.S.

Image Source: Florida News, "Florida officials have begun the rule development process to allow public swim-up pool bars." Accessed via https://www.cltampa.com/news/florida-officials-have-begun-the-rule-development-process-to-allow-public-swim-up-pool-bars-13209379

454.1.9.9.2

A swim-up bar shall be constructed in accordance with the applicable provisions of this code and within the limits of sound engineering practice. The maximum pool depth shall not exceed 54 inches (1372 mm). The disinfection equipment shall be capable of feeding 12 mg/L of halogen to the continuous recirculation flow of the filtration system. Attendants or lifeguards shall be provided in accordance with a safety/lifeguard plan approved by the Department of Health.

454.1.9.9.3

A swim-up bar shall be equipped with a recirculation system which provides for a maximum time of 2 hours for turnover of the entire pool water volume. Swim-up bar water quality shall be continuously sustained in accordance with Department of Health (DOH) Rule 64E-9.004, Florida Administrative Code, by the installation and use of an automated controller with chemical sensing probes for disinfection and pH control.

454.1.9.9.4

Signage complying with Section 454.1.2.3.5 must be posted to inform patrons that the public swimming pool has a swim-up bar that provides food and beverages, that spillages should be reported to staff for rapid cleanup, and that consumption of alcoholic beverages may cause drowsiness.

454.1.9.9.5

If the bar or counter is built into the edge of the pool, pool access complying with Section 454.1.2.5 shall be provided at both ends of the bar. A deck complying with Section 454.1.3.1 shall be provided, except, up to 50 percent of the pool perimeter may be obstructed by the bar. Gutter or skimmers are not required at or under the bar counter, however, they are required at the rest of the pool. An automatic water level controller shall be provided, and an overfill waste line with air gap shall be provided.

454.1.9.9.6

A smooth, easily cleanable poolside surface must be provided for patrons to place their food and beverage containers upon.

454.1.9.9.7

A swim-up bar may be physically combined or connected with other pool types, however, food and drink must be permitted over the entire body of water and the requirements of Section 454.1.9.9 shall apply to the entire water volume. A swim-up bar's water must not mix with any body of water that is not a swim-up bar and does not allow the consumption of food and beverages.

907.2.25 Group S (fire alarm and detection systems)

New section added requiring a manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 be installed in Group S public and self-storage occupancies three stories or greater in height for interior corridors and interior common areas. An exception to manual fire alarm boxes is provided where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1, and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

907.2.25 Group S.

A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group S public and self-storage occupancies three stories or greater in height for interior corridors and interior common areas. Visible notification appliances are not required within storage units.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1, and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

1010.1.6 Thresholds

Exception 2 has been revised to specifically permit thresholds at exterior doors of dwelling units or sleeping to be at the height necessary to comply with the water resistance requirements of Section 1709.5. Table 1010.1.7, which specified maximum differences between exterior and interior floor levels, has been deleted.

1010.1.6 Thresholds.

Thresholds at doorways shall not exceed 3/4 inch (19.1 mm) in height above the finished floor or landing for sliding doors serving dwelling units or 1/2 inch (12.7 mm) above the finished floor or landing for other doors. Raised thresholds and floor level changes greater than 1/4 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

Exceptions:

1. In occupancy Group R-2 or R-3, threshold heights for sliding and side-hinged exterior doors shall be permitted to be up to 7 3/4 inches (197 mm) in height if all of the following apply:

   1.1. The door is not part of the required means of egress.

1.2. The door is not part of an accessible route as required by Chapter 11.

2. For exterior doors serving dwelling units, or sleeping units, thresholds at doorways shall be allowed at a height necessary to comply with the water resistance requirements of Section 1709.5.

Changes to Chapter 14 – Exterior Walls

1404.2 Water Resistive barrier

The types of materials that qualify as water-resistive barriers has been expanded to include the following:

- No. 15 felt complying with ASTM D226 Type I.
- ASTM E2556, Type I or II.
- ASTM E331 in accordance with Section 1402.2.

1404.2 Water-resistive barrier.

Not fewer than one layer of water-resistive barrier material shall be attached to the studs or sheathing, with flashing as described in Section 1405.4, in such a manner as to provide a continuous water-resistive barrier behind the exterior wall veneer. Water-resistive barriers shall comply with one of the following:

1. No. 15 felt complying with ASTM D226, Type I.
2. ASTM E2556, Type I or II.
3. ASTM E331 in accordance with Section 1402.2.
4. Other approved materials installed in accordance with the manufacturer's installation instructions.

1405.2 Weather Protection

New language added clarifying that exterior wall coverings are required to be of adequate strength to resist the wind loads for cladding as specified in Chapter 16.

1405.2 Weather protection.

Exterior walls shall provide weather protection for the building. The materials of the minimum nominal thickness specified in Table 1405.2 shall be acceptable as approved weather coverings. Where the ultimate design wind speed, V_{ult}, is greater than 115 mph, claddings listed in Table 1405.2 must be of adequate strength to resist the wind loads for cladding specified in Chapter 16.

1405.14 Vinyl Siding

Section revised to limit the use of vinyl siding conforming to this section to the exterior walls of buildings where the design wind pressure does not exceed 30 psf. Where the design wind pressure exceeds 30 psf, tests or calculations indicating compliance with Chapter 16 are required to be submitted.

> 1405.14 Vinyl siding.
>
> Vinyl siding conforming to the requirements of this section and complying with ASTM D3679 shall be permitted on exterior walls where the design wind pressure determined in accordance with Section 1609 does not exceed 30 pounds per square foot (1.44 kN/m^2). Where the design wind pressure exceeds 30 pounds per square foot (1.44 kN/m^2), tests or calculations indicating compliance with Chapter 16 shall be submitted. Vinyl siding shall be secured to the building so as to provide weather protection for the exterior walls of the building.

1405.14.1.1 Fasteners and fastener penetration for wood construction

The fastener penetration depth for wood construction has been increased from ¾ inch to 1 ¼ inch.

1405.14.2.1 Starter Strip

New section added requiring the initial course of vinyl siding to be installed with a starter strip.

1405.14.2.2 Utility Trim

Under windows and at the top of walls, this new section requires vinyl siding to be secured with utility trim and snap locks.

1410 Soffits and Fascias at Roof Overhangs

New section providing design and construction requirements for common soffit materials. Requirements are similar to the soffit requirements in the FBCR. Two new figures have been added depicting proper attachment of vinyl soffit panels to resist wind loads. The span of vinyl soffit panels is now limited to 12 inches. Material requirements are specified for vinyl, fiber-cement, and hardboard soffit panels. A new prescriptive option for wood structural panel soffits is provided for design wind pressures up to 90 psf. New attachment requirements for aluminum fascias have also been added.

Section 1410 is quite long and will not be published here. We recommend all architects and engineers read through this section to better understand the minimum design requirements.

Changes to Chapter 15 – Roof Assemblies and Rooftop Structures

1504.2.1.4 Underlayment testing

New section added requiring underlayment for concrete and clay tile to be tested for uplift resistance in accordance with FM 4474 or UL 1897.

1504.5.1 Gutter securement for low-slope roofs

New section added requiring gutters that are used to secure the perimeter edge of the roof membrane on low-slope built-up, modified bitumen and single-ply roofs, are required to be designed, constructed and installed to resist wind loads in accordance with Section 1609 and shall be tested in accordance with Test Methods G-1 and G-2 of SPRI GT-1.

1507.1.1 Underlayment

The entire section and subsections have been reformatted to simplify the requirements and provide clarity.

The reference to synthetic underlayment has been deleted and has been replaced with a reference to ASTM D8257 which applies to synthetic underlayment.

The minimum width of self-adhering strips of polymer-modified bitumen membrane used with Table 15071.1 has been reduced from 4 inches to 3 ¾ inches.

Lapping and fastening requirements for the double layer underlayment system (Item 3, Section 1507.1.1.1) has been revised to accommodate underlayment products that are wider than 36 inches.

1518.2 Underlayments (HVHZ roof slopes 2:12 or greater
1518.2.1 Underlayment attachment

Underlayment types and installation for all roof coverings have been revised to be consistent with areas outside the HVHZ in Section 1507.1.1. The key changes are as follows:

- Where felt underlayment is used, it must be 30# or equivalent (ASTM D 226 Type II, ASTM D4869 Types III or IV).
- Underlayment complying with ASTM D8257 (synthetic underlayment) has been added as an option for some roof coverings.
- Lapping and fastening requirements for the double layer underlayment system (Item 3, Section 1518.2.1) has been revised to accommodate underlayment products that are wider than 36 inches.
- Where self-adhering strips/tapes are applied over roof deck joints, a 30# equivalent underlayment with enhanced fastening is required over the strips/tapes.

A new exception permits an existing self-adhered membrane to remain on the roof provided that, if required, re-nailing of the roof deck in accordance with Section 706.7.1 of the FBCEB can be confirmed or verified. An approved underlayment for the applicable roof coverings is required to be applied over the existing self-adhered membrane.

1518.2 Underlayments.

Underlayment for roof slopes 2:12 and greater shall conform to the applicable standards listed in this chapter. Underlayment materials required to comply with ASTM D226, D1970, D4869, D6757 and D8257 shall bear a label indicating compliance with the standard designation and, if applicable, type classification indicated. Underlayment for roof slopes 2:12 and greater shall be applied and attached in accordance with Section 1518.1, 1518.2, 1518.5, 1518.6, 1518.7, 1518.8, 1518.9, 1518.10 or 1518.11, as applicable.

Exceptions:

1. For areas of a roof that cover exterior walkways and roofs of agricultural buildings, underlayment shall comply with the manufacturer's installation instructions.

2. Compliance with Section 1518.2.1 is not required for structural metal panels that do not require a substrate or underlayment.

1518.2.1 Underlayment for asphalt shingles, metal roof panels or shingles, mineral surfaced roll roofing, slate and slate-type shingles.

Underlayment for asphalt shingles, metal roof panels or shingles, mineral surfaced roll roofing, slate and slate-type shingles shall comply with one of the following methods:

1. The entire roof deck shall be covered with an approved self-adhering polymer modified bitumen underlayment complying with ASTM D1970 installed in accordance with both the underlayment manufacturer's and roof covering manufacturer's installation instructions for the deck material, roof ventilation configuration and climate exposure for the roof covering to be installed.

   Exception: An existing self-adhering modified bitumen underlayment that has been previously installed over the roof decking and, where it is required, renailing of the roof sheathing in accordance with Section 706.7.1 of the Florida Building Code, Existing Building can be confirmed or verified. An approved underlayment in accordance with Table 1507.1.1.1 for the applicable roof covering shall be applied over the entire roof over the existing self-adhered modified bitumen underlayment.

2. A minimum 3 3/4-inch-wide (95 mm) strip of self adhering polymer-modified bitumen membrane complying with ASTM D1970 or self-adhering flexible flashing tape complying with AAMA 711, Level 3 [for exposure up to 176°F (80°C)], installed in accordance with the manufacturer's instructions for the deck material, shall be

applied over all joints in the roof decking. An approved underlayment in accordance with Table 1518.2.1 for the applicable roof covering shall be applied over the entire roof over the membrane strips.

3. Two layers of ASTM D226 Type II, D4869 Type III or IV, or D8257 underlayment shall be installed as follows: Apply a strip of underlayment for the first course that is half the width of a full sheet parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply a full sheet of underlayment for the second course. Apply the third course of underlayment overlapping the second course half the width of a full sheet plus 2 inches (51 mm). Overlap all successive courses half the width of a full sheet plus 1 inch (25.4 mm). End laps shall be 6 inches (152 mm) and shall be offset by 6 feet (1829 mm). Underlayment shall be attached to a nailable deck with corrosion-resistant fasteners with a maximum fastener spacing measured horizontally and vertically of 12 inches (305 mm) o.c. between side laps, and one row at the end and side laps fastened 6 inches (152 mm) o.c. Underlayment shall be attached using annular ring or deformed shank nails with metal or plastic caps with a nominal cap diameter of not less than 1 inch (25.4 mm). Metal caps are required where the ultimate design wind speed, Vult, equals or exceeds 170 mph (76 m/s). Metal caps shall have a thickness of not less than 32-gage sheet metal. The minimum thickness of the outside edge of plastic caps shall be 0.035 inch (0.889 mm). The cap nail shank shall be not less than 0.083 inch (2.1082 mm) for ring shank cap nails. The cap nail shank shall have a length sufficient to penetrate through the roof sheathing or not less than 3/4 inch (19.05 mm) into the roof sheathing.

TABLE 1518.2.1 UNDERLAYMENT WITH SELF-ADHERING STRIPS OVER ROOF DECKING JOINTS

ROOF COVERING	UNDERLAYMENT TYPE	UNDERLAYMENT ATTACHMENT	
		Roof Slope 2:12 and Less Than 4:12	Roof Slope 4:12 and Greater
Asphalt Shingles, Metal Roof Panels, Photovoltaic Shingles	ASTM D226 Type II ASTM D4869 Type III or IV ASTM D6757	Apply in accordance with Section 1518.2.1, Item 3	Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 4 inches; end laps shall be 6 inches and shall be offset by 6 feet. Underlayments shall be fastened with approved minimum 12 gage by $1^{1}/_{4}$ in. corrosion-resistant annular ring shank roofing nails fastened through minimum 32 gage by $1^{5}/_{8}$ in. diameter approved tin caps. Underlayment shall be attached to a nailable deck in a grid pattern of 12 inches between the overlaps, with 6-inch spacing at the overlaps. Nails shall be of sufficient length to penetrate through the sheathing or wood plank a minimum of $^{1}/_{8}$ in. or penetrate 1 inch or greater thickness of lumber a minimum of 1 in., except where architectural appearance is to be preserved, in which case a minimum of $^{3}/_{4}$ in. nail may be used.
Metal Roof Shingles, Mineral-Surface Roll Roofing, Slate and Slatetype Shingles, Wood Shingles, Wood Shake	ASTM D226 Type II ASTM D4869 Type III or IV ASTM D8257		

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s.

Changes to Chapter 16 – Structural Design

Table 1604.5

New occupancy type added to Risk Category III - buildings and other structures containing one or more public assembly spaces each having an occupant load greater than 300 and a cumulative occupant load of these public assembly spaces of greater than 2,500.

Buildings and structures containing a Group I-4 occupancy with an occupant load greater than 250 have been added as Risk Category III.

TABLE 1604.5
RISK CATEGORY OF BUILDINGS AND OTHER STRUCTURES

RISK CATEGORY	NATURE OF OCCUPANCY
I	Buildings and other structures that represent a low hazard to human life in the event of failure, including but not limited to: • ▪Agricultural facilities. • ▪Certain temporary facilities. • ▪Minor storage facilities. • ▪Screen enclosures.
II	Buildings and other structures except those listed in Risk Categories I, III and IV.
III	Buildings and other structures that represent a substantial hazard to human life in the event of failure, including but not limited to: • ▪Buildings and other structures whose primary occupancy is public assembly with an occupant load greater than 300. • ▪Buildings and other structures containing Group E occupancies with an occupant load greater than 250. • ▪Buildings and other structures containing educational occupancies for students above the 12th grade with an occupant load greater than 500. • ▪Group I-2 occupancies with an occupant load of 50 or more resident care recipients but not having surgery or emergency treatment facilities. • ▪Group I-3 occupancies. • ▪Any other occupancy with an occupant load greater than 5,000.▪ • ▪Power-generating stations, water treatment facilities for potable water, wastewater treatment facilities and other public utility facilities not included in Risk Category IV. • ▪Buildings and other structures not included in Risk Category IV containing quantities of toxic or explosive materials that: o Exceed maximum allowable quantities per control area as given in Table 307.1(1) or 307.1(2) or per outdoor control area in accordance with the *Florida Fire Prevention Code*; and o Are sufficient to pose a threat to the public if released.▪
IV	Buildings and other structures designated as essential facilities, including but not limited to: • ▪Group I-2 occupancies having surgery or emergency treatment facilities. • ▪Fire, rescue, ambulance and police stations and emergency vehicle garages. • ▪Designated earthquake, hurricane or other emergency shelters. • ▪Designated emergency preparedness, communications and operations centers and other facilities required for emergency response. • ▪Power-generating stations and other public utility facilities required as emergency backup facilities for Risk Category IV structures. • ▪Buildings and other structures containing quantities of highly toxic materials that: o Exceed maximum allowable quantities per control area as given in Table 307.1(2) or per outdoor control area in accordance with the *Florida Fire Prevention Code*; and o Are sufficient to pose a threat to the public if released.▪ • ▪Aviation control towers, air traffic control centers and emergency aircraft hangars. • ▪Buildings and other structures having critical national defense functions. • ▪Water storage facilities and pump structures required to maintain water pressure for fire suppression.

a. For purposes of occupant load calculation, occupancies required by Table 1004.5 to use gross floor area calculations shall be permitted to use net floor areas to determine the total occupant load.

b. Where approved by the building official, the classification of buildings and other structures as Risk Category III or IV based on their quantities of toxic, highly toxic or explosive materials is permitted to be reduced to Risk Category II, provided it can be demonstrated by a hazard assessment in accordance with Section 1.5.3 of ASCE 7 that a release of the toxic, highly toxic or explosive materials is not sufficient to pose a threat to the public.

1605.1 General (load combinations)

The strength design and allowable stress design load combinations in the code have been deleted. Revised Section 1605.1 now refers to ASCE 7 for strength and allowable stress design load combinations. The alternative allowable stress design load combinations have been retained.

New exception prohibits the use of the alternative allowable stress design load combinations where tornado loads govern design.

1606.2 Weights of materials of construction

Reference to weight of fixed service equipment has been removed from Section 1606.2 and new section specific to fixed service equipment has been added for correlation with ASCE 7. New section 1606.3 specifically addresses variable weight fixed service equipment.

1606.4 Photovoltaic panel systems

New section requiring weight of photovoltaic panel systems, their support system, and ballast to be considered as dead load.

1606.5 Vegetative and landscaped roofs

Criteria from Section 1607.12.3.1 regarding vegetative and landscaped roof dead loads has been relocated to new Section 1606.5.

1607.13 Roof loads

Reference to snow and earthquake loads has been deleted. New language requires consideration of tornado loads where applicable.

1607.13.4.4 Ground-mounted photovoltaic (PV) panel systems

Section revised to explicitly apply to ground-mounted photovoltaic panel systems.

1607.14.2 Vertical impact force (crane loads

Section revised to clarify that increasing the wheel loads determines the total load, not just the increase due to impact or vibration.

607.14.1 Maximum wheel load.

The maximum wheel loads shall be the wheel loads produced by the weight of the bridge, as applicable, plus the sum of the rated capacity and the weight of the trolley with the trolley positioned on its runway at the location where the resulting load effect is maximum.

1607.14.2 Vertical impact force.

The maximum wheel loads of the crane shall be increased by the following percentages to account for the effects of vertical impact or vibration:

Monorail cranes (powered)	25 percent
Cab-operated or remotely operated bridge cranes (powered)	25 percent
Pendant-operated bridge cranes (powered)	10 percent
Bridge cranes or monorail cranes with hand-geared bridge, trolley and hoist	0 percent

1607.16 Fixed ladders

New live loads added for fixed ladders to coordinate with ASCE 7.

Fixed ladders with rungs shall be designed to resist a single concentrated load of 300 lb (1.33 kN) in accordance with Section 4.5.4 of ASCE 7. Where rails of fixed ladders extend above a floor or platform at the top of the ladder, each side rail extension shall be designed to resist a single concentrated load of 100 lb (0.445 kN) in accordance with Section 4.5.4 of ASCE 7. Ship's ladders shall be designed to resist the stair loads given in Table 1607.1

1607.21.1 Horizontal sway loads

New section requires the design of stadiums and arenas with fixed seats to be designed for sway loads that are consistent with ICC 300. The load provisions listed are taken from Section 303.4.1 of the ICC 300.

1607.21 Seating for assembly uses.

Bleachers, folding and telescopic seating and grandstands shall be designed for the loads specified in ICC 300. Stadiums and arenas with fixed seats shall be designed for the horizontal sway loads in Section 1607.21.1.

1607.21.1 Horizontal sway loads.

The design of stadiums and arenas with fixed seats shall include horizontal swaying forces applied to each row of seats as follows:

1. 24 pounds per linear foot (0.35 kN/m) of seat applied in a direction parallel to each row of seats.

2. 10 pounds per linear foot (0.15 kN/m) of seat applied in a direction perpendicular to each row of seats.

The parallel and perpendicular horizontal swaying forces are not required to be applied simultaneously.

1609.3 (1) thru (4) Ultimate Design Wind Speed V_{ult}

Ultimate design wind speeds have been updated to correlate with ASCE 7-22. Wind speeds are unchanged for most of Florida except for the panhandle area where wind speeds have increased slightly in some areas. A new note has been added permitting location-specific wind speeds to be determined using the ASCE Wind Design Geodatabase.

https://asce7hazardtool.online/

Image Source: ASCE, "Updated ASCE 7-22 standard now available" Accessed via https://www.asce.org/publications-and-news/civil-engineering-source/article/2021/12/02/updated-asce-7-22-standard-now-available.

1609.1.2.1 Louvers

Regarding impact protection of louvers, the phrase "not assumed to be open" has been deleted. All louvers within 30 feet of grade are now required to be protected from impact in accordance with AMCA 540, the large missile test of ASTM E1996, or an approve impact-resistance standard.

1609.5 Tornado loads

New section added requiring the design and construction of Risk Category III and IV buildings and structures to be in accordance with Chapter 32 (Tornado Loads) of ASCE 7.

1609.5 Tornado loads.

The design and construction of Risk Category III and IV buildings and other structures shall be in accordance with Chapter 32 of ASCE 7, except as modified by this code.

1609.6 Roof systems.

Roof systems shall be designed and constructed in accordance with Sections 1609.6.1 through 1609.6.3, as applicable.

1609.6.1 Roof deck.

The roof deck shall be designed to withstand the wind pressures determined in accordance with ASCE 7. Where design for tornado loads is required, the roof deck shall be designed to withstand the greater of wind pressures or tornado pressures determined in accordance with ASCE 7.

1610.2 Uplift loads on floor and foundations

New section added addressing uplift loads on floors and foundations due to hydrostatic pressure and expansive soils.

> 1610.2 Uplift loads on floor and foundations.
>
> Basement floors, slabs on ground, foundations, and similar approximately horizontal elements below grade shall be designed to resist uplift loads where applicable. The upward pressure of water shall be taken as the full hydrostatic pressure applied over the entire area. The hydrostatic load shall be measured from the underside of the element being evaluated. The design for upward loads caused by expansive soils shall comply with Section 1808.6.

1611 Rain Loads

Section revised to correlate the rain load provisions with ASCE 7-22.

New language adds the ponding head deflection (dp) into the rain load calculation from the AISC Specification. A new SDSL pointer has been added to serve as a warning that the primary drainage system is blocked.

The design storm return period for determination of hydraulic head is now based on risk category.

Figure 1611.1 has been deleted.

Image Source: Chaffee Industrial Roofing, "Ponding on Flat Roofs What you Need to Know" Accessed via https://www.chaffeeroofing.com/blog/ponding-water-on-flat-roofs/

> SECTION 1611
>
> RAIN LOADS
>
> 1611.1 Design rain loads.
>
> Each portion of a roof shall be designed to sustain the load of rainwater as per the requirements of Chapter 8 of ASCE 7. Rain loads shall be based on the summation of the static head, d_s, hydraulic head, d_h, and ponding head, d_p using Equation 16-19. The hydraulic head shall be based on hydraulic test data or hydraulic calculations assuming a flow rate corresponding to a rainfall intensity equal to or greater than the 15-minute duration storm with return period given in Table 1611.1. The ponding head shall be based on structural analysis as the depth of water due to deflections of the roof subjected to unfactored rain load and unfactored dead load.

$R = 5.2(d_s + d_h + d_p)$ (Equation 16-19)

For SI: $R = 0.0098(d_s + d_h + d_p)$

where:

d_h = Hydraulic head equal to the depth of water on the undeflected roof above the inlet of the secondary drainage system for structural loading (SDSL) required to achieve the design flow in inches (mm).

d_p = Ponding head equal to the depth of water due to deflections of the roof subjected to unfactored rain load and unfactored dead load in inches (mm).

d_s = Static head equal to the depth of water on the undeflected roof up to the inlet of the secondary drainage system for structural loading (SDSL) in inches (mm).

R = Rain load in psf (kN/m^2).

SDSL is the roof draining system through which water is drained from the roof when the drainage systems listed in ASCE 7, Section 8.2(a) through (d) are blocked or not working.

TABLE 1611.1 DESIGN STORM RETURN PERIOD BY RISK CATEGORY

RISK CATEGORY	DESIGN STORM RETURN PERIOD
I & II	100 years
III	200 years
IV	500 years

1612.5 Flood hazard documentation

New language added permitting licensed professional surveys or mappers to prepare and seal flood hazard documentation.

For dry floodproofed nonresidential buildings construction documents are now required to include the flood emergency plan specified in Chapter 6 of ASCE 24 and the elevation to which the building is dry floodproofed.

In coastal high hazard areas and coastal A zones, construction documents are required to include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.7.2.2 of ASCE 24 for breakaway walls where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.7.2.1 of ASCE 24.

1616.2.1 Fences (HVHZ)

Section revised to clarify that the minimum design wind speeds for fences not exceeding 6 feet height are "allowable wind speeds."

1620.7 Tornado loads

New section added requiring the design and construction of Risk Category III and IV buildings and structures to be in accordance with Chapter 32 (Tornado Loads) of ASCE 7.

1620.7 Tornado Loads.

The design and construction of Risk Category III and IV buildings and other structures shall be in accordance with Chapter 32 of ASCE 7.

Image Source: Acuweather for Business, "The EF Scale: What is it and how are tornadoes measured?" Accessed via https://afb.accuweather.com/blog/the-ef-scale-what-is-it-and-how-are-tornadoes-measured

Changes to Chapter 17 – Special Inspections and Tests

1703.6.2.1 Concrete testing reports

New section requiring where testing of concrete on a project is required by the code, referenced standard, building official, or inspection agency, test reports are required to be provided to the building official or inspection agency, the registered design professional of record, and the material supplier concurrent when reporting results to the client.

1703.6.2.1 Concrete testing reports.

Where this code, a referenced standard, a building official or inspection agency requires testing of concrete on a project, test reports shall be provided to the building official or inspection agency, the registered design professional of record, and the material supplier concurrent when reporting results to the client.

Changes to Chapter 18 – Soils and Foundations

1807.2.4 Segmental retaining walls

New section added requiring dry-cast concrete units used in the construction of segmental retaining walls to comply with ASTM C1372

Table 1810.3.2.6 Allowable Stresses for Materials Used in Deep Foundation Elements

For concrete or grout in compression, 0.4 f'c is now permitted for permanent casing in accordance with Section 1810.3.5.3.4.

The upper maximum allowable stress limit for other steel pipes, tubes, or H-piles in compression has been increased to 24,000 psi.

The upper maximum allowable stress limit for other steel pipes, tubes, or H-piles in tension has been increased to 24,000 psi.

For nonprestressed reinforcement in tension, not within micropiles, the maximum allowable stress has been increase to $0.5f_y \leq 30{,}000$ psi for load combinations that do not include wind load and $0.5f_y \leq 40{,}000$ for load combinations that include wind loads.

Note b has been revised to clarify that the stresses apply to the net cross-sectional area (gross area - steel reinforcement area) not to the gross cross-sectional area.

TABLE 1810.3.2.6 ALLOWABLE STRESSES FOR MATERIALS USED IN DEEP FOUNDATION ELEMENTS

MATERIAL TYPE AND CONDITION	MAXIMUM ALLOWABLE STRESS[a]
1. Concrete or grout in compression[b]	
Cast-in-place with a permanent casing in accordance with Section 1810.3.2.7 or Section 1810.3.5.3.4	0.4 f'_c
Cast-in-place in other permanent casing or rock	0.33f'_c
Cast-in-place without a permanent casing	0.3 f'_c
Precast nonprestressed	0.33 f'_c
Precast prestressed	0.33 f'_c - 0.27 f_{pc}
2. Nonprestressed reinforcement in compression	0.4 $f_y \leq$ 30,000 psi
3. Steel in compression	
Cores within concrete-filled pipes or tubes	0.5 $F_y \leq$ 32,000 psi
Pipes, tubes or H-piles, where justified in accordance with Section 1810.3.2.8	0.5 $F_y \leq$ 32,000 psi
Pipes or tubes for micropiles	0.4 $F_y \leq$ 32,000 psi
Other pipes, tubes or H-piles	0.35 $F_y \leq$ 24,000 psi
Helical piles	0.6 $F_y \leq$ 0.5 F_u
4. Nonprestressed reinforcement in tension	
Within micropiles	
Other conditions	0.6 f_y
For load combinations that do not include wind loads	0.5 $f_y \leq$ 30,000 psi
For load combinations that include wind loads	0.5 $f_y \leq$ 40,000 psi
5. Steel in tension	
Pipes, tubes or H-piles, where justified in accordance with Section 1810.3.2.8	0.5 $F_y \leq$ 32,000 psi
Other pipes, tubes or H-piles	0.35 $F_y \leq$ 24,000 psi
Helical piles	0.6 $F_y \leq$ 0.5 F_u
6. Timber	In accordance with the ANSI/AWC NDS

a. f'_c is the specified compressive strength of the concrete or grout; f_{pc} is the compressive stress on the gross concrete section due to effective prestress forces only; f_y is the specified yield strength of reinforcement; F_y is the specified minimum yield stress of steel; F_u is the specified minimum tensile stress of structural steel.

b. The stresses specified apply to the gross cross-sectional area of the concrete for precast prestressed piles and to the net cross-sectional area for all other piles. Where a temporary or permanent casing is used, the inside face of the casing shall be considered the outer edge of the concrete cross-section.

1810.3.3.1 Allowable axial load

New exception added that exempts load testing where approved by the building official.

1810.3.3.1.9 Helical Piles

Image Source: Helical Piles of New York, "Helical Piles" Accessed via https://helicalpilesny.com/what-are-helical-piles/

Section revised to permit shaft resistance to be considered.

1810.3.3.1.9 Helical piles.

The allowable axial design load, Pa, of helical piles shall be determined as follows:

$P_a = 0.5 * P_u$ (Equation 18-4)

where P_u is the least value of:

1. Base capacity plus shaft resistance of the helical pile. The base capacity is equal to the sum of the areas of the helical bearing plates times the ultimate bearing capacity of the soil or rock comprising the bearing stratum. The shaft resistance is equal to the area of the shaft above the uppermost helical bearing plate times the ultimate skin resistance.
2. Ultimate capacity determined from well-documented correlations with installation torque.
3. Ultimate capacity determined from load tests when required by Section 1810.3.3.1.2.
4. Ultimate axial capacity of pile shaft.
5. Ultimate axial capacity of pile shaft couplings.
6. Sum of the ultimate axial capacity of helical bearing plates affixed to pile.

1810.3.11 Pile caps

Section revised to include a reference to grade beams in addition to pile caps.

Pile caps are now required to comply with ACI 318 in addition to this section.

1810.3.11 Pile caps

Pile caps shall conform with ACI 318 and this section. Pile caps shall be of reinforced concrete, and shall include all elements to which vertical deep foundation elements are

connected, including grade beams and mats. The soil immediately below the pile cap or grade beam shall not be considered as carrying any vertical load, with the exception of a combined pile raft. The tops of vertical deep foundation elements shall be embedded not less than 3 inches (76 mm) into pile caps or grade beam and the caps shall extend not less than 4 inches (102 mm) beyond the edges of the elements. The tops of elements shall be cut or chipped back to sound material before capping.

1810.4.1.2 Shafts in unstable soils

Section revised to permit stabilization of unstable holes by casing, slurry, or other approved method.

1810.4.1.3 Driving near uncased concrete

Section revised to require the previously completed element shall be replaced if driving near uncased concrete elements causes the concrete surface in any completed element to rise or drop significantly or bleed additional water.

The prohibition on the installation of driven uncased deep foundation elements in soils that could cause heave has been deleted.

1810.4.5 Vibratory driving

New exceptions have been added to requiring load tests when using vibratory drivers – 1) the pile installation is completed by driving with an impact hammer in accordance with Section 1810.3.3.1.1; 2) the pile is to be used only for lateral resistance.

1810.4.11 Helical piles

The term “maximum allowable” has been replaced with “manufacturer’s rated maximum installation torque resistance” to be consistent with the language that appears in many evaluation reports.

Changes to Chapter 19 – Concrete

1901.3 Anchoring to concrete

Section revised to add screws conforming to the requirements of ACI 318 as permissible anchoring devices to concrete.

1901.7 Tolerances for structural concrete

New section added addressing tolerances for concrete. Structural tolerances for cast-in-place concrete structural elements are required to be in accordance with ACI 117. Structural tolerances for precast concrete structural elements are required to be in accordance with ACI ITG-7

> 1901.7 Tolerances for structural concrete.
>
> Where not indicated in construction documents, structural tolerances for concrete structural elements shall be in accordance with this section.
> 1901.7.1 Cast-in-place concrete tolerances.
>
> Structural tolerances for cast-in-place concrete structural elements shall be in accordance with ACI 117.
>
> Exceptions:
>
> 1. Group R-3 detached one- or two-family dwellings are not required to comply with this section.
>
> .
>
> 2. Shotcrete is not required to comply with this section
>
> 1901.7.2 Precast concrete tolerances.
>
> Structural tolerances for precast concrete structural elements shall be in accordance with ACI ITG-7.
>
> Exception: Group R-3 detached one- or two-family dwellings are not required to comply with this section.

Changes to Chapter 20 – Aluminum

Table 2002.4 Design Wind Pressures Screened Enclosures (Strength Design or LRFD Only)

Vertical pressures on solid surfaces have been increased for correlation with ASCE 7.

Table 2002.4A Height Adjustment Factors

Height adjustment values have been revised for correlation with ASCE 7.

2002.8 Sun control structures

New section added addressing wind design requirements for sun control structures. Free-standing sun control structures are permitted to be designed using Risk Category I wind speeds. Sun control structures relying on a host structure for support are required to be designed using the wind speed applicable to the host structure.

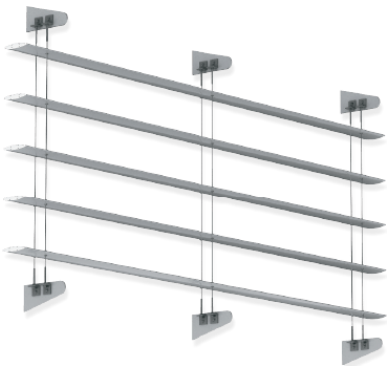

Image Source: Construction Specialties, "Cascade Sunshades" Accessed via https://www.c-sgroup.com/sun-control-solutions/cantilevered

Warning labels are required alerting the owner that operable louvers are required to be locked in the vertical open position when wind speeds are predicted to be 75 mph or greater.

> 2002.8 Sun control structure design.
>
> A registered design professional shall design sun control structures. 2002.8.1
>
> Free-standing sun control structures shall be permitted to be designed to resist wind speeds for Risk Category I of Figure 1609.3(4). Sun control structures relying on a host structure for support shall be designed for the risk category of the host structure. 2002.8.2
>
> Operable louvers shall be repositioned and locked in the vertical open position when wind speeds are predicted to be 75 mph (34 m/s) or greater. The contractor shall post a legible and readily visible permanent decal or sign stating words to the effect that the operable louvers are to be locked in the vertically open position when wind speeds are predicted to be 75 mph (34 m/s) and during a hurricane warning or alert as designated by the National Weather Service. The warning label should essentially read:
>
> THIS SUN CONTROL STRUCTURE SHALL HAVE

LOUVERED BLADES LOCKED IN THE VERTICAL
POSITION DURING A HURRICANE WARNING
OR ALERT AS DESIGNATED BY THE NATIONAL
WEATHER SERVICE OR WHEN WIND SPEEDS
ARE PREDICTED TO BE 75 MPH.

2002.8.3 Electrical installations.

All electrical components and installations shall comply with Chapter 27.

2003.10 Sun control structures (HVHZ)

New section added addressing wind design requirements for sun control structures. Wind speeds for sun control structures are required to be determined in accordance with Section 1620.

Warning labels are required alerting the owner that operable louvers are required to be locked in the vertical open position when wind speeds are predicted to be 75 mph or greater.

2003.10 Sun control structure design.

A registered design professional shall design sun control structures.
2003.10.1 Wind loads.

Basic wind speed in miles per hour (mph) shall be determined in accordance with Section 1620.2. Sun control structures, including exposed structures, components, and cladding, shall be designed to resist the wind loads as established in Section 1620.1.

2003.10.2 Operable louvers shall be repositioned and locked in the vertical open position when wind speeds are predicted to be 75 mph (34 m/s) or greater. The contractor shall post a legible and readily visible permanent decal or sign stating words to the effect that the operable louvers are to be locked in the vertically open position when wind speeds are predicted to be 75 mph (34 m/s) and during a hurricane warning or alert as designated by the National Weather Service. The warning label should essentially read:

THIS SUN CONTROL STRUCTURE SHALL HAVE
LOUVERED BLADES LOCKED IN THE VERTICAL
POSITION DURING A HURRICANE WARNING
OR ALERT AS DESIGNATED BY THE NATIONAL
WEATHER SERVICE OR WHEN WIND SPEEDS
ARE PREDICTED TO BE 75 MPH.

2003.10.3 Electrical installations.

All electrical components and installations shall comply with Chapter 27.

Changes to Chapter 21 – Steel

2214.2 Fabrication and erection of iron and steel (HVHZ)

Section revised to clarify the relationship between the HVHZ requirements and the non-HVHZ requirements for steel construction.

2214.2

The design, fabrication and erection of iron and steel for buildings and other structures shall be as set forth in this chapter. The additional requirements set forth in Sections 2215 through 2221 herein, inclusive, apply to structural steel for buildings and other structures located in high-velocity hurricane zones. The additional requirements set forth in Sections 2222 and 2223 herein, inclusive, apply to cold-formed members of sheet or strip steel and cold-formed steel light frame construction located in high-velocity hurricane zones.

Changes to Chapter 23 – Wood

2303.4.1.1 Truss design drawings

References to snow and seismic loads have been deleted in Item 5.6.

Item 14 has been revised to require the method and details of diagonal bracing be provided on the truss design drawings.

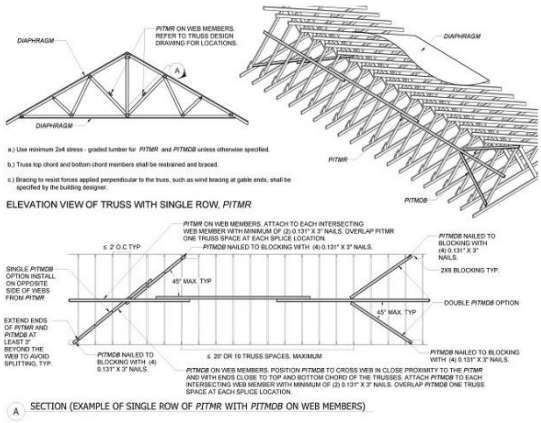

Image Source: ICC: Digital Codes, "2023 Florida Building Code, Eighth Edition." Accessed via https://codes.iccsafe.org/content/FLBC2023P1.

2303.4.1.1 Truss design drawings.

The written, graphic and pictorial depiction of each individual truss shall be provided to the building official for approval prior to installation. Truss design drawings shall also be provided with the shipment of trusses delivered to the job site. Truss design drawings shall include, at a minimum, the information specified below:

1. Slope or depth, span and spacing.
2. Location of all joints and support locations.

3. Number of plies if greater than one.

4. Required bearing widths.

5. Design loads as applicable, including:

   5.1. Top chord live load.

   5.2. Top chord dead load.

   5.3. Bottom chord live load.

   5.4. Bottom chord dead load.

   5.5. Additional loads and locations.

   5.6. Environmental design criteria and loads (wind, rain, etc.).

6. Other lateral loads, including drag strut loads.

7. Adjustments to wood member and metal connector plate design value for conditions of use.

8. Maximum reaction force and direction, including maximum uplift reaction forces where applicable.

9. Metal-connector-plate type, size and thickness or gage, and the dimensioned location of each metal connector plate except where symmetrically located relative to the joint interface.

10. Size, species and grade for each wood member.

11. Truss-to-truss connections and truss field assembly requirements.

12. Calculated span-to-deflection ratio and maximum vertical and horizontal deflection for live and total load as applicable.

13. Maximum axial tension and compression forces in the truss members.

14. Required permanent individual truss member restraint location and the method and details of restraint and diagonal bracing to be used in accordance with Section 2303.4.1.2.

2303.4.1.2 Permanent individual truss member restraint

New definitions for an Individual Truss Member; a Permanent Individual Truss Member Restraint (PITMR); and Permanent Individual Truss Member Diagonal Bracing (PITMDB) have been added to Chapter 2.

New prescriptive figures have been added to assist truss Installers and code officials in understanding when and how PITMR's and PITMDB's are to be installed.

A new section has been added addressing specialty projects where there is no diaphragm on the top or bottom chords. For this situation, a project specific PITMR and PITMDB design is required.

We have not published the building code text here. We highly recommend viewing this section in its entirety.

2303.7 Shrinkage

Section revised to delete the language "fabricated in a green condition" and clarifies that consideration is to be given to effects of cross-grain dimensional change resulting from changes in moisture content after installation. Deletion of the language "fabricated in a green condition broadens the applicability because design considerations for dimensional change in reference design documents apply for both "green" and "dry" material.

2304.9 Lumber decking

New language has been added clarifying that alternative layup patterns and alternative fastening options substantiated by engineering analysis are permitted.

2304.9.2 Layup patterns

Language regarding the use of alternate layup patterns has been relocated to Section 2304.9.

Table 2304.10.1 Fastening Schedule

Numerous fastener sizes and spacing have been revised to correlate with the loads from ASCE 7 and the AWC WFCM.

New Footnote g states that all nails and staples are carbon steel meeting ASTM F1667. Connections using nails and staples of other materials, such as stainless steel, are required to be designed by acceptable engineering practice or approved under Section 104.11.

2304.12.1 Locations requiring water-borne preservatives or naturally durable wood

Section revised to clarify that only locations specified in Sections 2304.12.1.1 through 2304.12.1.5 require the use of waterborne preservatives. Some oil-borne preservatives are permitted for use for ground-contact locations.

2304.12.2.6 Ventilation required beneath balcony or elevated walking surface

Section has been revised to clarify that the ventilation requirements apply to enclosed framing in exterior balconies and elevated walking surfaces that have weather-exposed surfaces.

Table 2306.1.4 Allowable Loads for Lumber Decking

The term "flexure" has been changed to "moment" throughout the table.

The moment equation for 3-inch and 4-inch decking has been revised to be consistent with lumber decking design documents WCD2 and AITC 112.

2314.4.6 Standards (HVHZ)

Structural Glued Laminated Timber PS56 has been deleted.

New language has been added recognizing the use of oriented strand board (OSB) as floor sheathing in interior applications without requiring HVHZ product approval.

2315.2 Wood structural panels used as floor sheathing in interior applications

New section added requiring wood structural panels used as floor sheathing in interior applications to be rated for Exposure 1 or Exterior in accordance with PS 1 or PS 2.

Changes to Chapter 35 – Referenced Standards

In general, the approved versions of the referenced standards have been updated. Here is a sample of some of the reference standards that have been updated.

AA ADM1—2020	Aluminum Design Manual: Part 1—Specification for Aluminum Structures
ACI 117—10	Specification for Tolerances for Concrete Construction and Materials
ACI ITG-7—09	Specification for Tolerances for Precast Concrete
ACI 318—19	Building Code Requirements for Structural Concrete
AISI S100—16(2020) w/S2—20	North American Specification for the Design of Cold-Formed Steel Structural Members, 2016 Edition (Reaffirmed 2020), with Supplement 2, 2020 Edition
APA ANSI 117—2020	Standard Specification for Structural Glued Laminated Timber of Softwood Species
APA ANSI A190.1—2022	Product Standard for Structural Glued Laminated Timber
APA ANSI/APA PRG 320—2019	Standard for Performance-Rated Cross-Laminated Timber
APA ANSI/APA PRP 210—2019	Standard for Performance-Rated Engineered Wood Siding
APA ANSI/APA PRR 410—2021	Standard for Performance-Rated Engineered Wood Rim Boards
ASCE 7—22	Minimum Design Loads and Associated Criteria for Buildings and Other Structures
ACI 318—19	Building
ASME/A17.1—2019/CSA B44—2019	Safety Code for Elevators and Escalators
ASME A17.3—2020	Safety Code for Existing Elevators and Escalators
ASME A17.7—2007/CSA B44—07(R2019)	Performance-Based Safety Code for Elevators and Escalators
ASME A18.1—2020	Safety Standard for Platform Lifts and Stairway Chairlifts
ASME B16.18—2018	Cast Copper Alloy Solder Joint Pressure Fittings

ASME B16.22—2018 Wrought Copper and Copper Alloy Solder Joint Pressure Fittings

ASME B20.1—2021 Safety Standard for Conveyors and Related Equipment

ASME B31.3—2020 Process Piping

ASME A13.1—2020 Scheme for the Identification of Piping Systems

ASTM - A lot of the ASTM standards have been revised to the most current standards. Please review this entire section.

AWC STJR—2021 Span Tables for Joists and Rafters

AWC ANSI/AWC PWF—2021 Permanent Wood Foundation Design Specification

AWC ANSI/AWC SDPWS—2021 Special Design Provisions for Wind and Seismic

PS 1—19 Structural Plywood

PS 2—18 Performance Standard for Wood Structural Panels

ICC 500—20 ICC/NSSA Standard on the Design and Construction of Storm Shelters

ICC 600—20 Standard for Residential Construction in High-Wind Regions

ICC 1100—18 Standard for Spray-Applied Foam Plastic Insulation

NFPA - National Fire Protection Association has updated a high percentage of their standards as well and they are too numerous to list here. Please visit this section if fire protection standards concern you.

PTI DC—10.5-19 Standard Requirements for Design and Analysis of Shallow Post-Tensioned Concrete Foundations on Expansive and Stable Soils

RCSC—20 Specification for Structural Joints Using High-Strength Bolts, 2020

DDM04—15 Diaphragm Design Manual, 4th Edition, 2015, with Addendum 1 (2015) and Addendum 2 (2016)

SJI—18 Structural Design of Steel Joist Roofs to Resist Ponding Loads, Technical Digest No. 3, 2018

GT-1—2016 Test Standard for Gutter Systems

References to codes in plans and specifications need to be consistent with the current Building Code.

Conclusion

While the objective of this course was to review the significant code changes in the 8th Edition (2023) update to the *Florida Building Code,* as compared to the 7th Edition 2020 *Florida Building Code,* it does not include all changes. Reference the current code and the current referenced standards in implementing the code.

References

International Code Council, Inc. (2020). *2020 FLORIDA BUILDING CODE, 7TH EDITION | ICC DIGITAL CODES*. Iccsafe.org. https://codes.iccsafe.org/content/FLBC2020P1

International Code Council, Inc. (2023). *2023 FLORIDA BUILDING CODE, EIGHTH EDITION | ICC DIGITAL CODES*. Iccsafe.org. https://codes.iccsafe.org/content/FLBC2023P1

International Code Council, Inc. (2023). 2023 Florida Building Code [Online image, Book Cover]. In *ICC: Digital Codes*. https://codes.iccsafe.org/content/FLBC2023P1

2023 Advanced Building Code - Significant Code Changes - Quiz

Updated: 11/10/2023

1. Test or calculations must be submitted for Vinyl siding when the wind pressures exceed _____ .
   a. 10 psf
   b. 20 psf
   c. 30 psf
   d. 40 psf

2. Gutters are required to be designed, constructed and installed to resist wind loads in accordance with Section 1609 when _____.

   a. the wind pressure exceeds 30 psf.
   b. they are attached to attached to school buildings.
   c. they are used to secure the perimeter edge of the roof membrane on low-slope built-up, modified bitumen and single-ply roofs.
   d. they located with 100 yards of the ocean.

3. Photovoltaic panel system self-weight, ballast weight, and support system weight shall be considered as _____ loads.

   a. dead
   b. live
   c. collateral
   d. hydrostatic

4. The ultimate wind speed maps for Florida for various building risk categories have been updated to match _____.

   a. ASCE 7-05
   b. ASCE 7-10
   c. ASCE 7-16
   d. ASCE 7-22

5. Buildings and structures containing a Group I-4 occupancy with an occupant load greater than 250 have been added as Risk Category _____.

   a. I
   b. II
   c. III
   d. IV.

6. Tornado wind loads may apply to certain buildings in risk categories ____ and ____.

   a. I and II
   b. II and III
   c. III and IV
   d. IV and V

7. The allowable axial design load for helical piles consists of the _____.

   a. base capacity plus shaft resistance
   b. base capacity plus buoyancy.
   c. shaft resistance only
   d. base capacity of the helical plates only.

8. The Ponding head is equal to the depth of water due to deflections of the roof subjected to _____ rain load and _____ dead load in inches.

   a. unfactored, factored
   b. unfactored, unfactored
   c. factored, factored
   d. ultimate, ultimate

9. Timber truss drawings must include the required permanent individual truss member restraint location. In addition to this, the drawings must now also include the method and details of restraint and diagonal _____ to be used.

   a. plates
   b. bracing
   c. plywood
   d. nails and screws

10. True or False? In 2303.7 the deletion of the language “fabricated in a green condition” broadens the applicability because design considerations for dimensional change in reference design documents apply for both “green” and “dry” material.

    a. True
    b. False