Analysis of Changes for the 8th Edition (2023) Florida Codes

Changes to the Florida Building Code, Mechanical

This *Analysis of Changes for the 8th Edition (2023) of the Florida Building Code* is intended to provide a comprehensive comparison of the provisions in the *7th Edition (2020) Florida Building Code, Mechanical* (FBCM) and the *8th Edition (2023) Florida Building Code, Mechanical*. The 7th Edition (2020) FBCM is the base code for the *8th Edition (2023)* FBCM. The model code used to update the *8th Edition (2023)* FBCM is the *2021 International Mechanical Code* (IMC). However, not all changes in the 2021 IMC are included in the *8th Edition (2023)* FBCM. As a result of changes from the 2021 IMC and Florida-specific amendments, certain provisions and criteria of the code have changed. This *Analysis* will serve as a useful tool to facilitate the transition to the new code.

This *Analysis* is arranged so that comparable provisions in the two codes can be easily located. The left two columns contain section numbers and a brief overview of the corresponding requirements from the *7th Edition (2020)* FBCM. The next two columns contain section numbers and a brief overview of the corresponding requirements in the *8th Edition (2023)* FBCM. The far-right column contains a brief analysis or comment on the differences between the provisions.

This *Analysis* is not intended to replace or interpret the provisions contained in either the *7th Edition (2020)* or the *8th Edition (2023)* FBCM. This information simply points out the differences. The *Analysis* is not designed to be used without the aid of the representative code books, as all the details pertaining to a specific section may or may not be provided. However, this *Analysis* will provide an easy means for identifying differences in the two codes, as well as enabling the user to locate issue specific provisions in the *8th Edition (2023)* FBCM by means of a numbered section cross reference.

This *Analysis* provides a cross-reference for most of the sections that changed in the *8th Edition (2023)* FBCM. In some cases, sections were grouped together due to substantial differences. This grouping enables the extent of the differences to be more readily identified.

Notable changes deemed to be the most significant or to have the greatest impact have been highlighted in yellow.

7th Edition (2020) FBCM		8th Edition (2020) FBCM		Analysis
Section	**Requirement**	**Section**	**Requirement**	
Chapter 1: Scope and Administration				
No changes.				
Chapter 2: Definitions				
-	-	202	Definitions: Direct evaporative cooling	New definition added to clarify the difference between direct and indirect evaporative cooling. Direct evaporative cooling is the evaporative cooling process where water evaporates directly into the air stream, reducing the air's dry-bulb temperature and raising its humidity level.
202	Definitions: Flammability classification (refrigerant)	202	Definitions: Flammability classification (refrigerant)	Definition revised to remove mandatory code requirements from the definition. The word "shall" has been removed.
-	-	202	Definitions: Indirect evaporative cooling	New definition added to clarify the difference between direct and indirect evaporative cooling. Indirect evaporative cooling is the evaporative cooling process where water evaporates into a secondary air stream, removing heat from a primary air stream utilizing a heat exchanger.
202	Definitions: Press-connect joint	202	Definitions: Press-connect joint	Definition revised to clarify that a bite ring is also a component of a press-connect joint.
202	Definitions: Refrigerant safety classifications	202	Definitions: Refrigerant safety classifications	Definition revised to correlate with ASHRAE 34.
202	Definitions: Toxicity classification (refrigerant)	202	Definitions: Toxicity classification (refrigerant)	Definition revised to remove mandatory code requirements from the definition. The word "shall" has been removed.
-	-	202	Definitions: Unvented alcohol fuel burning decorative appliance	A new definition has been added for a new type of decorative appliance. New requirements for unvented alcohol fuel-burning appliances have been added to new Section 929
Chapter 3: General Regulations				
301.18	Seismic resistance	-	-	Section deleted and shown as Reserved.
-	-	307.1.1	Identification (condensate disposal, fuel-burning appliance)	New section added requiring the termination of concealed condensate

				piping to be marked to indicate whether the piping is connected to the primary or secondary drain.
-	-	307.2.1.1	Condensate discharge	New section added specifying the appropriate locations for receiving condensate waste and prohibits discharge to any plumbing drain, waste or vent pipe and into any plumbing fixture other than a floor sink, floor drain, trench drain, mop sink, hub drain, standpipe, utility sink or laundry sink.
307.2.2	Drain pipe materials and sizes	307.2.2	Drain pipe materials and sizes	Section revised to permit the use of PE-RT and PVDF pipe materials.
-	-	307.2.3.3	Identification (auxiliary and secondary drain systems)	New section added requiring the termination of concealed condensate piping to be marked to indicate whether the piping is connected to the primary or secondary drain.
Chapter 4: Ventilation				
401.4	Intake opening location	401.4	Intake opening location	New language has been added to Item 3 permitting there to be no separation between intake air openings and living space exhaust air openings of an individual dwelling unit or sleeping unit where an approved factory-built intake/exhaust combination termination fitting is used to separate the air streams in accordance with the manufacturer's instructions.
403.2.1	Recirculation of air	403.2.1	Recirculation of air	New language has been added requiring the design and installation of dehumidification systems for pools and spas to be in accordance with ANSI/ACCA 10 Manual SPS.
Table 403.3.1.1	Minimum Ventilation Rates	Table 403.3.1.1	Minimum Ventilation Rates	For commercial laundries, the people outdoor airflow rate has been changed to 5 cfm/person and the area outdoor airflow rate has been changed to 0.12 cfm/ft^2. Note g has been revised for consistency with ASHRAE 62.1. Mechanical exhaust is

				now required for the occupancies Note g applies to. For occupancies other than science laboratories, where there is a wheel-type energy recovery ventilation (ERV) unit in the exhaust system design, the volume of air leaked from the exhaust airstream into the outdoor airstream within the ERV is required to be less than 10 percent of the outdoor air volume.
403.3.1.5	Balancing	608	Balancing	Balancing requirements for air distribution, ventilation, and exhaust systems have been revised for clarity and relocated to new Section 608.
403.3.2.4	Ventilating equipment	403.3.2.4	Ventilating equipment	Section revised to require all fans providing exhaust or outdoor air to be listed and labeled to provide the minimum required airflow in accordance with ANSI/AMCA 210-ANSI/ASHRAE 51.
407.1	General (ambulatory care facilities and Group I-2 occupancies)	407.1	General (ambulatory care facilities and Group I-2 occupancies)	Section revised to required mechanical ventilation for ambulatory care facilities and Group I-2 occupancies to also comply with NFPA 99.
Chapter 5: Exhaust Systems				
501.3.1	Location of exhaust outlets	501.3.1	Location of exhaust outlets	New language has been added to Item 3 permitting there to be no separation between intake air openings and living space exhaust air openings of an individual dwelling unit or sleeping unit where an approved factory-built intake/exhaust combination termination fitting is used to separate the air streams in accordance with the manufacturer's instructions.
502.9.5	Flammable and combustible liquids	502.9.5	Flammable and combustible liquids	A new exception has been added for the storage of beer, distilled spirits and wines in barrels and casks conforming to the requirements of the Florida Fire Prevention Code
-	-	502.20.1	Operation (manicure and pedicure stations)	A new section has been added requiring the exhaust system for manicure and pedicure stations to have controls that

				operate the system continuously when the space is occupied.
-	-	504.4.1	Termination location (exhaust installation, clothes dryers)	A new section has been added requiring exhaust duct terminations to be in accordance with the dryer manufacturer's installation instructions. Where the manufacturer's instructions do not specify a termination location, the exhaust duct is required to terminate not less than 3 feet (914 mm) in any direction from openings into buildings, including openings in ventilated soffits.
-	-	504.6	Booster fans prohibited	A new section has been added that prohibits the installation of domestic booster fans in dryer exhaust systems.
506.3.3	Grease duct supports	506.3.3	Grease duct supports	The reference to seismic loads has been deleted.
506.3.7	Prevention of grease accumulation in grease ducts	506.3.7	Prevention of grease accumulation in grease ducts	A new exception has been added that permits factory-built grease ducts to be installed at a slope that is in accordance with the listing and manufacturer's installation instructions.
506.3.9	Grease duct horizontal cleanouts	506.3.9	Grease duct horizontal cleanouts	New language added requiring cleanouts serving horizontal sections of grease ducts to be located within 3 feet of horizontal discharge fans.
506.5.2	Pollution control units	506.5.2	Pollution control units	Item 1 has been revised to require pollution control units to be listed and labeled in accordance with UL 8782. In Item 3, the mounting and support requirements for pollution control units have been clarified and now correlate with the requirements for grease duct supports. In Item 4, where enclosed duct systems are connected to a pollution control unit, such units are required to be listed and labeled in accordance with UL 2221 or ASTM E2336, for location in an enclosure

				having the same fire-resistance rating as the duct enclosure. In Item 5, clearances between pollution control units and combustibles are now required to be in accordance with the unit's listing.
507.1	General (commercial kitchen hoods)	507.1	General (commercial kitchen hoods)	A new exception has been added for smoker ovens with integral exhaust systems, provided that the appliance is installed in accordance with the manufacturer's installation instructions, is listed and tested for the application and complies with Chapter 5.
507.2	Type I hoods	507.2	Type I hoods	A new exception to the required Type I hood has been added for solid fuel or combination gas and solid fuel pizza ovens if the oven is tested and listed using direct venting as allowed in NFPA 96. The venting system is required to be constructed and installed per the conditions of listing of the oven and of the duct or chimney used for venting, and applies to pizza ovens listed with natural draft or forced draft venting.
510.6.5	Makeup air (hazardous exhaust system)	510.6.5	Makeup air (hazardous exhaust system)	Section editorially revised for clarity.
511.1	Dust, stock and refuse conveying systems	511.1	Dust, stock and refuse conveying systems	Section revised to require dust, stock and refuse conveying systems to also comply with the FFPC.
511.1.5	Explosion relief vents	511.1.5	Explosion control	Section revised to add the language "that produce combustible dusts in such a manner that the concentration and conditions create a fire or explosion hazard based on a Dust Hazard" which is a phrase being applied and updated in other areas of the codes for the required assessment of the potential hazard.
514.2	Prohibited applications (energy recovery ventilation systems)	514.2	Prohibited applications (energy recovery ventilation systems)	Energy recovery ventilation systems are no longer prohibited from be used in

				commercial kitchen exhaust systems serving Type II hoods.
Chapter 6: Duct Systems				
602.2	Construction (plenums)	602.2	Construction (plenums)	Section revised to specifically prohibit direct evaporative cooling systems from discharging into a gypsum board supply air plenum and allow direct evaporative cooling systems to discharge in a gypsum board return air plenum.
602.2.1.8	Pipe and duct insulation within plenums	602.2.1.8	Pipe and duct insulation within plenums	New language has been added that prohibits the use of pipe and duct insulation to be used to reduce the maximum flame spread and smoke-developed indexes except where the pipe or duct and its related insulation, coatings and adhesives are tested as a composite assembly in accordance with Section 602.2.1.7.
603.5.1	Gypsum ducts	603.5.1	Gypsum ducts	Section revised to specifically prohibit direct evaporative cooling systems from discharging into a gypsum board supply air plenum and allow direct evaporative cooling systems to discharge in a gypsum board return air plenum.
604.3	Coverings and linings	604.3	Coverings and linings	A new exception has been added that allows a greater smoke-developed index for some applications of foam plastic insulation on the exterior surfaces of ducts in attics or crawlspaces under certain specified conditions. The exception applies only to foam insulation meeting the requirements of Section 2603 of the FBCB and the ignition barrier requirements of Section 2603.4.1.6 of the FBCB.
Chapter 7: Combustion Air				
No changes.				
Chapter 8: Chimneys and Vents				
-	-	801.21	Blocked vent switch	A new section has been added requiring Oil-fired appliances to be equipped with a device that will stop burner operation in the event that the venting system is obstructed.

				Such device is required to have a manual reset and be installed in accordance with the manufacturer's instructions.
Chapter 9: Specific Appliances, Fireplaces and Solid Fuel-Burning Equipment				
905.1	General (fireplace stoves and room heaters)	905.1	General (fireplace stoves and room heaters)	New language has been added requiring new wood-burning residential hydronic heaters to be EPA certified.
908.4	Support and anchorage (cooling towers, evaporative condensers and fluid coolers)	908.4	Support and anchorage (cooling towers, evaporative condensers and fluid coolers)	The reference to seismic restraints being as required by the FBCB has been deleted.
916.1	General (pool and spa heaters)	916.1	General (pool and spa heaters)	Section revised to permit pool and spa heat pump water heaters to comply with UL/CSA 60335-2-40.
-	-	920.4	Prohibited uses (unit heaters)	A new section has been added that prohibits the use of suspended-type unit heaters in corridors, exit access stairways and ramps, exit stairways and ramps and patient sleeping areas in Group I-2 and ambulatory care facilities.
-	-	929	Unvented Alcohol Fuel-Burning Decorative Appliances	New section added requiring unvented alcohol fuel-burning decorative appliances to be listed and labeled in accordance with UL 1370 and be installed in accordance with the conditions of the listing, manufacturer's installation instructions and Chapter 3.
Chapter 10: Boilers, Water Heaters and Pressure Vessels				
1004.1	Standards (boilers)	1004.1	Standards (boilers)	Section revised to require controls and safety devices for boilers with fuel input ratings of less than 12,500,000 Btu/hr to meet the requirements of ASME CSD-1. Controls and safety devices for boilers with inputs greater than or equal to 12,500,000 Btu/hr are required to meet the requirements of NFPA 85.
Chapter 11: Refrigeration				
1101.2	Factory-built equipment and appliances	1101.2	Factory-built equipment and appliances	Section revised to permit listed and labeled self-contained, factory-built equipment and appliances to also be tested in accordance with UL 60335-2-89.

Chapter 12: Hydronic Piping				
Table 1202.4	Hydronic Pipe	Table 1202.4	Hydronic Pipe	CPVC/AL/CPVC pipe complying with ASTM F2855 has been added to the table. ASTM F3253 and CSA B137.5 have been added as reference standards for PEX tubing.
Table 1202.5	Hydronic Pipe Fittings	Table 1202.5	Hydronic Pipe Fittings	CPVC pipe complying with ASSE 1061, ASTM D2846, ASTM F438 or ASTM F439 has been added to the table. ASTM F3253 has been added as a reference standard for PEX fittings. ASTM F2159 and ASTM F3253 have been added as reference standards for plastic fittings. ASTM F438 and ASTM F439 have been deleted as reference standards for plastic fittings.
1203.9	CPVC plastic pipe	1203.9	CPVC plastic pipe	Mechanical joints have been added as an option for CPVC pipe.
-	-	1203.10	CPVC/AL/CPVC plastic pipe	New section added requiring joints between CPVC/AL/CPVC plastic pipe or fittings to be mechanical solvent-cemented or threaded joints conforming to Section 1203.3.
Table 1210.4	Ground-Source Loop Pipe	Table 1210.4	Ground-Source Loop Pipe	CSA C448 and NSF 358-3 have been added as reference standards for PEX pipe. CSA C448 and NSF 358-4 have been added as reference standards for PE-RT pipe.
Table 1210.5	Ground-Source Loop Pipe Fittings	Table 1210.5	Ground-Source Loop Pipe Fittings	CSA C448 and NSF 358-3 have been added as reference standards for PEX fittings. CSA C448 and NSF 358-4 have been added as reference standards for PE-RT fittings.

1210.6.2	Preparation of pipe ends (plastic pipe ground-source heat pump loop systems)	1210.6.2	Preparation of pipe ends (plastic pipe ground-source heat pump loop systems)	Section revised to require pipe cuts to be prepared in accordance with the manufacturer's instructions.
1210.8	Installation (piping, valves, fittings, and connections)	1210.8	Installation (piping, valves, fittings, and connections)	Section revised to require piping, valves, fittings, and connections to be installed in accordance with ANSI/CSA/IGSHPA C448 and the manufacturer's instructions.
Chapter 13: Fuel Oil Piping and Storage				
1301.4	Fuel tanks, piping and valves	1301.4	Fuel tanks, piping, fittings and valves	Fittings have been added to the scope of this section.
Table 1302.3	Fuel Oil Piping	Table 1302.3	Fuel Oil Piping	ASTM F3226 has been added as a reference standard for copper or copper-alloy pipe and fittings, copper or copper-alloy tubing and fittings, steel and stainless steel pipe and fittings, and steel and stainless steel tubing and fittings. ASTM A269 has been added as a reference standard for steel and stainless steel tubing and fittings. ASTM A312 has been added as a reference standard for steel and stainless steel pipe and fittings.
1302.8	Flexible connectors and hoses	1302.8	Flexible connectors and hoses	The reference to UL 536 has been deleted. New language requires flexible connectors and hoses to be acceptable for the intended application for flammable and combustible liquids.
1303.3	Joint preparation and installation	1303.3	Joint preparation and installation	Press-connect joints have been added to the scope of this section.
1303.3.2	Mechanical joints	1303.3.5	Press-connect joints	The requirements for press-connect joints have been relocated to new Section 1303.3.5.
1303.6	Copper or copper alloy pipe	1303.6	Copper or copper alloy pipe	Press-connect joints have been added to the scope of this section.
1303.7	Copper or copper alloy tubing	1303.7	Copper or copper alloy tubing	Section revised for clarity and unnecessary language has been removed.
1303.9	Steel pipe	1303.9	Steel and stainless steel pipe	Stainless steel pipe and press-connect joints have been added to the scope of this section.

1303.10	Steel tubing	1303.10	Steel and stainless steel tubing	Stainless steel pipe and press-connect joints have been added to the scope of this section.
Chapter 14: Solar Systems				
1402.4.2	Rooftop-mounted solar thermal collectors and systems	1402.4.2	Rooftop-mounted solar thermal collectors and systems	Section revised to clarify that the supports between the rooftop-mounted solar collectors and the roof (for example, sleepers, curbs and mounting systems), and the attachments to the roof are required to be of non-combustible materials or FRT wood.