

Analysis of Changes to the 2007 Florida Building Code, Fuel Gas

Detailed side-by-side comparison

This *Analysis of Changes to the 2007 Florida Codes* is intended to provide a comprehensive comparison of the provisions in the *2004 Florida Building Code, Fuel Gas (FBCFG)* and the *2007 Florida Building Code, Fuel Gas*. The *2003 International Fuel Gas Code* was the base code for the 2004 FBCFG. The *2006 International Existing Building Code* is the base code for the 2007 FBCFG. As a result of changing the base code specific provisions have changed significantly in addition to other technical changes. This *Analysis* will serve 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 description of the topic of the requirements from the 2004 FBCFG. The next two columns contain section numbers and a brief description of the topic of the corresponding requirements in the 2007 FBCFG. The far right column contains an analysis or comment on the differences between the provisions. For many entries, the basis for the change is also addressed.

This *Analysis* is not intended to replace or interpret the provisions contained in either the 2004 FBCFG or the 2007 FBCFG. This information simply points out the differences. The *Analysis* is not designed to be used without the aide 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 significant differences in the two codes, as well as enabling the user to locate issue specific provisions in the 2007 FBCFG by means of a numbered section cross reference.

This *Analysis* provides a cross-reference for the majority of the sections that changed in the 2007 FBCFG. In some cases, sections were grouped together due to substantial differences. This grouping enables the context of the differences to be more easily identified.

Chapter 2: Definitions				
2004 FBCFG		2007 FBCFG		Analysis
Section	Requirement	Section	Requirement	
202	Definitions: Approved	202	Definitions: Approved	Language revised from "approved by the code official or authority having jurisdiction" to "acceptable to the code official or authority having jurisdiction."
202	-	202	Definitions: Connector, Appliance	New definition added defining "appliance connector."
202	Definitions: Connector	202	Definitions: Connector, chimney or vent	The term "connector" was changed to "connector, chimney or vent" in recognition of the specific function of that type of connector.
202	-	202	Definitions: Dwelling unit	New definition for "dwelling unit" added. Definition is consistent with the FBCB definition of "dwelling unit."

202	Definitions: Fuel gas	202	Definitions: Fuel gas	Hydrogen gas has been removed from the definition of "fuel gas" due to lack of being used in the code.
202	Definitions: Mechanical exhaust system	202	-	Definition of mechanical exhaust system has been deleted.
202	Definitions: Point of delivery	202	Definitions: Point of delivery	Definition of point of deliver, for undiluted LPG systems is revised to be the outlet of the first regulator that reduces the pressure to 2 psig or less.
202	Definitions: Regulator, medium-pressure (MP Regulator)	202	Definitions: Regulator, medium-pressure (MP Regulator)	Definition is revised to define MP Regulators as those that reduce the pressure from the range of greater than 0.5 psig and less than or equal to 5 psig.
202	-	202	Definitions: Sleeping unit	New definition of sleeping unit added.
202	-	202	Definitions: Vent piping	New definition of vent piping added. Subcategories include "breather" and "relief."
Chapter 3: General Regulations				
301.3	Listed and labeled	301.3	Listed and labeled	New language added requiring appliances to be listed and labeled for the application in which they are used.
301.7	Fuel types	301.7	Fuel types	Section revised to delete the reference to altitude as appliances are not listed for altitude. New I
		301.7.1	Appliance fuel conversion	New language permits conversion when the installation instructions, the serving gas supplier or equipment manufacturer is consulted.
303.3	Prohibited locations	303.3	Prohibited locations	Section revised and reorganized for clarity and consistency in interpretation.
303.4	Protection from physical damage	303.4	Protection from vehicle impact damage	Section revised to clarify that protection from physical damage applies to protection from vehicle impact damage
304.1	General, combustion, ventilation and dilution air	304.1	General, combustion, ventilation and dilution air	"Gas utilization equipment" changed to "appliances."
304.2	Appliance/equipment location	304.2	Appliance location	"Equipment" changed to "appliances."
304.3	Draft hood/regulator location	304.3	Draft hood/regulator location	"Equipment" changed to "appliances."
304.5.3.1	Combining spaces on the same story	304.5.3.1	Combining spaces on the same story	"Gas utilization equipment" changed to "appliances."
304.5.3.2	Combining spaces in different stories	304.5.3.2	Combining spaces in different stories	"Gas utilization equipment" changed to "appliances."
304.6.1	Two-permanent-openings method	304.6.1	Two-permanent-openings method	"Equipment" changed to "appliances."
304.6.2	One-permanent-opening method	304.6.2	One-permanent-opening method	"Equipment" changed to "appliances."
304.10	Louvers and grills	304.10	Louvers and grills	"Equipment" changed to "appliances."

304.11	Combustion air ducts	304.11	Combustion air ducts	Item 1 revised to clarify that the "or other material" is to have equivalent corrosion resistance, strength, and rigidity as galvanized steel. Exception to item 7 has been revised to remove the requirement that the appliance be installed in accordance with its listing.
304.12	Protection from fumes and gases	304.12	Protection from fumes and gases	"Equipment" room changed to "mechanical room."
-	-	305.3	Elevation of ignition source	Requires appliances with an ignition source to have the ignition source elevated at least 18 inches above the floor in hazardous locations, public garages, private garages, repair garages, motor fuel-dispensing facilities and parking garages. Exception provided for appliances listed as flammable vapor ignition resistant.
-	-	305.3.1	Parking garages	Requires two-doorway separation where a parking garage is connected with any room in which there is a fuel-fire appliance, except that a single doorway is permitted where the source of ignition is elevated as required in Section 305.3. Exception states this requirement does not apply to appliance installations in accordance with Section 305.4.
306.3	Appliances in attics	306.3	Appliances in attics	Passageway maximum length has been reduced from 20 feet to 6 feet. Exception 2 which permitted a passageway length of 50 feet where the passageway is not less the 6 feet high for its entire length has been deleted.
306.3.1	Electrical requirements	306.3.1	Electrical requirements	Section revised to apply to a lighting fixture "with a receptacle outlet." Clarifies that the lighting fixture is intended to light the passageway and service area.
-	-	306.3.2	Air-handling units	Permits the installation of air-handling units in residential attics provided the 4 specified criteria are met. Requires a notice (Notice to Homeowner) to be posted on the electric service panel. Specific language for the notice is provided.
306.4.1	Electrical requirements	306.4.1	Electrical requirements	"Lighting fixture" changed to "luminaire."
306.5.1	Sloped roofs	306.5.1	Sloped roofs	New language requires the guards to extend not less than 42 inches above the platform and be constructed to prevent the passage of a 21-inch diameter sphere.

306.6	Guards	306.6	Guards	Deleted "fans" from scope. Adds roof hatch openings to scope of guard extension limitations.
-	-	307.1	Evaporators and cooling coils	New section added requiring condensate systems for equipment and appliances containing evaporators and cooling coils.
-	-	307.5	Auxiliary drain pan	New section requiring category IV condensing appliances to be provided with auxiliary drain pans where damage to any building component could occur as a result of stoppage in the condensate drainage system. Auxiliary drain pan is not required for appliances that automatically shut down.
Table 308.2	Reduction of Clearances with Specified forms of protection	Table 308.2	Reduction of Clearances with Specified forms of protection	Deleted "listing" from the scope of Note k.
308.2	Clearances for indoor air-conditioning equipment	308.3	Clearances for indoor air-conditioning appliances	"Equipment" changed to "appliances."
308.3.1	Equipment installed in rooms that are large in comparison with the size of the equipment	308.3.1	Appliances installed in rooms that are large in comparison with the size of the appliance	"Equipment" changed to "appliances."
308.3.2	Equipment installed in rooms that are not large in comparison with the size of the equipment	308.3.2	Appliances installed in rooms that are not large in comparison with the size of the appliance	"Equipment" changed to "appliances."
308.3.3	Clearance reduction	308.3.3	Clearance reduction	"Equipment" changed to "appliances."
308.3.5	Clearance from supply ducts	308.3.5	Clearance from supply ducts	"Equipment" changed to "appliances."
308.4	Central-heating boilers and furnaces	308.4	Central-heating boilers and furnaces	"Equipment" changed to "appliances."
308.4.1	Equipment installed in rooms that are large in comparison with the size of the equipment	308.4.1	Appliances installed in rooms that are large in comparison with the size of the appliance	"Equipment" changed to "appliances."
308.4.2	Equipment installed in rooms that are not large in comparison with the size of the equipment	308.4.2	Appliances installed in rooms that are not large in comparison with the size of the appliance	"Equipment" changed to "appliances."
310.1	Gas pipe bonding	310.1	Gas pipe bonding	"Equipment" changed to "appliances."

Chapter 4: Gas Piping Installations				
401.5	Identification	401.5	Identification	"Black steel pipe" changed to read "steel pipe.". Exception that made this section applicable only to where other similar piping or tubing could be confused with gas lines has been deleted.
402.1	General considerations	402.1	General considerations	"Gas utilization equipment" changed to "appliances."
402.2	Maximum gas demand	402.2	Maximum gas demand	"Gas utilization equipment" changed to "appliances."
402.5	Allowable pressure drop	402.5	Allowable pressure drop	"Equipment" changed to "appliance."
402.6	Maximum design operating pressure	402.6	Maximum design operating pressure	Item 3.4 revised to read "Boiler or mechanical rooms."
402.6.1	Liquefied petroleum gas systems	402.6.1	Liquefied petroleum gas systems	Reference to specific chapter in NFPA 58 changed from Chapter 7 to Chapter 10.
403.5.4	Corrugated stainless steel tubing	403.5.4	Corrugated stainless steel tubing	Section revised to simply require corrugated stainless steel tubing to be listed in accordance with ANSI LC 1/CSA 6.26.
403.6	Plastic pipe, tubing and fittings	403.6	Plastic pipe, tubing and fittings	"Outside" changed to "outdoors."
-	-	403.6.3	Regular vent piping	New section requiring plastic pipe, tubing and fittings used to connect regulator vents to remote vent terminations to be PVC conforming to UL 651. PVC vent piping is prohibited from being installed indoors.
404.1	Prohibited locations, piping system installation	404.1	Prohibited locations, piping system installation	Section revised to prohibit piping installed downstream of the point of delivery from extending through any townhouse unit other than the unit served.
404.5	Protection against physical damage	404.5	Protection against physical damage	Distance from the nearest edge of wood studs, joists or rafters for when shield plates are required for holes and notches has been lowered to 1 inch from 1.5 inches.
404.6	Piping in solid floors	404.6	Piping in solid floors	"Casing" changed to "conduit" throughout section. New language added that requires the conduit to be vented above grade to the outdoors and installed to prevent the entry of water and insects.
405.2	Metallic pipe	405.2	Metallic pipe	In Item 1, bending "equipment" changed to bending "tools."
405.3	Plastic pipe	405.3	Plastic pipe	In Item 4, bending "equipment" changed to bending "tools."
405.4	Mitered bends	405.4	Mitered bends	Section providing permitting the use of mitered bends with limitations has been deleted.
406.1.3	New branches	406.1.3	New branches	Section revised to apply to new branches installed to new appliances, regardless of whether the new branches are from the point of delivery.

406.3.3	Equipment disconnection	406.3.3	Appliance and equipment disconnection	"Components" changed to "appliances" and "equipment components" changed to "appliances." As applicable in this section, the outlet is now required to be capped. Plugging is not permitted.
406.3.4	Valve isolation	406.3.4	Valve isolation	Components changed to "appliances." Section now applies to appliances and equipment designed for operating pressures equal to or greater than the test pressure. Closing of the individual appliance or equipment shutoff valve is now required to isolate the appliance or equipment.
406.6	System and equipment leakage test	406.6	Piping system, appliance and equipment leakage check	Leakage "testing" changed to leakage "check."
406.6.3	Test for leakage	406.6.3	Leak check	"Test" changed to "check."
406.6.4	Placing equipment in operation	406.6.4	Placing appliances and equipment in operation	"Gas utilization equipment" changed to "appliances and equipment." "Tested" for leakage changed to "checked" for leakage.
409.1.1	Valve approval	409.1.1	Valve approval	Section revised to refer to Table 409.1.1 standards applicable to shutoff valves per the pressure and application. New Table 409.1.1 specifies the applicable reference standards for shutoff valves based on the pressure and application of the valve.
		Table 409.1.1	Manual gas valve standards	
410.1	Pressure regulators	410.1	Pressure regulators	Section revised to require line gas pressure regulators to be listed as complying with ANSI Z21.80.
410.3	Venting of regulators	410.3	Venting of regulators	Section revised to simply require vents for regulators to be vented directly to the outdoors for clarity. Vent is required to be designed to prevent the entry of insects, as well as water and foreign objects.
-	-	410.3.1	Vent piping	New section added primarily to specify the conditions under which vent lines can, and cannot, be manifolded. Requires vent piping serving relief vents to be run independently to the outdoors. Vent piping serving only breather vents is permitted to be connected in a manifold arrangement as applicable.

411.1	Connecting appliances, appliance connections	411.1	Connecting appliances, appliance and manufactured home connections	<p>Scope revised to limit the application of this section to connections to the piping system, "except as required by Section 411.1.1. See new Section 411.1.1.</p> <p>New Item 2 has been added recognizing the use of CSST as a piping material for connecting appliances to the piping system.</p> <p>Item 3 (Item 4 in 2007 Code) has been revised to refer to ANSI Z21.24 instead of the manufacturers installation instructions for appliance connectors.</p> <p>New Item 8 permits listed and labeled outdoor appliance connectors in compliance with ANSI Z21.75/CSA 6.27.</p>
-	-	411.1.1	Commercial cooking appliances	New section requiring movable appliance connectors for commercial cooking appliances that can be moved. Appliance connectors required to be listed as complying with ANSI Z21.69
411.1.2	Appliance fuel connectors	411.1.3	Connector installation	Section 411.1.2 reorganized into separate sections and topics for clarity.
-	-	411.2	Manufactured home connections	New section requiring connectors installed in accordance with ANSI Z21.75/CSA 6.27 to connect manufactured homes to the yard gas distribution system.
-	-	413.2.3	General, CNG motor vehicle fuel-dispensing facilities	New section addressing residential fueling appliances. Capacity of the residential fueling appliance is limited to 5 standard cubic feet per minute.
413.3	Location of dispensing operations and equipment	413.3	Location of dispensing operations and equipment	New Item 3 added referencing new Section 413.4.3 for residential fueling appliances and equipment.
-	-	413.4	Residential fueling appliance installation	New section providing installation requirements for residential fueling appliances. Provisions are consistent with the provisions of NFPA 52.
-	-	416	Overpressure protection devices	New section addressing provisions for overpressure protection for high-pressure gas systems. Provisions are mainly applicable to large commercial and industrial installations and come from Section 5.9 of the National Fuel Gas Code.

Chapter 5: Chimneys and Vents				
-	-	502.7	Protection against physical damage	New section requiring protection of vents with shield plates in concealed locations where a vent installed through holes and notches in studs, joists, and rafters that are less than 1.5 inches from nearest edge of the member.
503.1	General, venting of equipment	503.1	Venting of appliances	"Equipment" changed to "appliances."
503.2	Venting systems required	503.2	Venting systems required	"Equipment" changed to "appliances," including all subsections.
503.3	Design and construction	503.3	Design and construction	"Equipment" changed to "appliances," including all subsections.
503.3.4	Ventilating hoods and exhaust systems	503.3.4	Ventilating hoods and exhaust systems	"Equipment" changed to "appliances," including all subsections.
-	-	503.3.6	Above-ceiling air-handling spaces	New section providing specific requirements for venting systems that pass through an above-ceiling air-handling space or nonducted portion of an air-handling system.
503.4.1	Plastic piping	503.4.1	Plastic piping	"Equipment" changed to "appliances."
503.4.2	Special gas vent	503.4.2	Special gas vent	Installation in accordance with the listing has been deleted.
Table 503.4	Type of venting system to be used	Table 503.4	Type of venting system to be used	"Equipment" changed to "appliances."
503.5.1	Factory-built chimneys	503.5.1	Factory-built chimneys	Installation in accordance with the listing has been deleted.
503.5.3	Masonry chimneys	503.5.3	Masonry chimneys	Installation in accordance with the listing has been deleted in the exception.
503.5.4	Chimney termination	503.5.4	Chimney termination	"Gas utilization equipment" changed to "appliance." "Equipment" changed to "appliances."
503.5.5.1	Incinerator venting	503.5.5.1	Incinerator venting	Gas utilization equipment changed to "appliance."
503.5.6.3	Unsafe chimneys	503.5.6.3	Unsafe chimneys	"Equipment" changed to "appliances."
503.5.7.1	Solid fuel-burning appliances	503.5.7.1	Solid fuel-burning appliances	Gas utilization equipment changed to "appliance."
503.5.7.2	Liquid fuel-burning appliances	503.5.7.2	Liquid fuel-burning appliances	"Gas utilization equipment" changed to "appliance." "Equipment" changed to "appliances."
503.5.8	Support of chimneys	503.5.8	Support of chimneys	Installation in accordance with the listing has been deleted.
503.5.10	Space surrounding lining or vent	503.5.10	Space surrounding lining or vent	Installation in accordance with the listing has been deleted.
503.6.3	Roof penetration	503.6.6	Roof penetration	Requires the termination of fast vent through a roof to be with a listed cap or listed roof assembly.
503.6.4	Offsets	503.6.9.2	Vent offsets	Scope of section revised to state "Type B and L vents sized in accordance with Item 2 or 3 of Section 503.6.9.1." "Equipment" changed to "appliances."

503.6.5	Gas vents installed within masonry chimneys	503.6.3	Gas vents installed within masonry chimneys	Installation in accordance with the listing has been deleted.
503.6.6	Gas vent terminations	503.6.4	Gas vent terminations	Item 1 has been reorganized into 2 items for clarity.
-	-	503.6.7	Forced air inlets	Requires gas vents to terminate not less than 3 feet above any forced air inlet.
503.6.9.2	Category II, III, and IV appliances	503.6.9.3	Category II, III, and IV appliances	"Equipment" changed to "appliances."
503.6.10	Gas vents serving appliances on more than one floor	503.6.10	Gas vents serving appliances on more than one floor	New language added that states that for the purposes of this section, crawl spaces, basements and attics are considered as floor levels.
503.6.10.1	Equipment separation	503.6.10.1	Appliance separation	"Equipment" changed to "appliances." "Habitable" space changed to "occupiable" space.
503.6.10.2	Sizing	503.6.10.2	Sizing	"Equipment" changed to "appliances."
503.6.11	Support of gas vents	503.6.11	Support of gas vents	Installation in accordance with the listing has been deleted.
503.7.2	Cold climate	503.7.2	Cold climate	"Equipment" changed to "appliances." New language defines cold climate as regions where the 99-percent winter design temperature is below 32° F.
503.7.3	Termination	503.7.3	Termination	"Equipment" changed to "appliances."
503.7.4	Limitations of use	503.7.4	Limitations of use	"Equipment" changed to "appliances."
Table 503.7.7	Clearances for connectors	Table 503.7.7	Clearances for connectors	"Equipment" changed to "appliances."
503.7.8	Size of single-wall metal pipe	503.7.8	Size of single-wall metal pipe	"Equipment" changed to "appliances."
503.8	Venting system termination location	503.8	Venting system termination location	Reference to "See Appendix C" has been deleted.
503.9	Condensation drainage	503.9	Condensation drainage	"Equipment" changed to "appliances."
503.10.1	Where required	503.10.1	Where required	"Equipment" changed to "appliances."
503.10.2.1	General	503.10.2.1	General	"Equipment" changed to "appliances."
503.10.2.2	Vent connectors located in unconditioned areas	503.10.2.2	Vent connectors located in unconditioned areas	"Equipment" changed to "appliances."
503.10.2.3	Residential-type appliance connectors	503.10.2.3	Residential-type appliance connectors	Includes Category I appliances in the scope of this section.
503.10.2.4	Low-heat equipment	503.10.2.4	Low-heat equipment	"Equipment" changed to "appliances."
503.10.2.5	Medium-heat appliances	503.10.2.5	Medium-heat appliances	"Equipment" changed to "appliances."
503.10.3.1	Single draft hood and fan-assisted	503.10.3.1	Single draft hood and fan-assisted	"Equipment" changed to "appliances."
503.10.3.5	Size increase	503.10.3.5	Size increase	"Equipment" changed to "appliances."
503.10.9	Length of vent connector	503.10.9	Length of vent connector	Language permitted "Except as provided for in Section 503.10.3" has been deleted and replace with "except for engineered systems."

503.10.14	Passage through ceilings, floors or walls	503.10.14	Passage through ceilings, floors or walls	Language prohibiting vent connectors from passing through any ceiling floor or fire-resistance-rated wall has been deleted. Section revised to prohibit single-wall metal pipe connectors from passing through any wall, floor or ceiling except as permitted in Section 503.7.4 and 503.10.15. The exception for vent connectors made of listed Type B or Type L vent material has been deleted.
503.10.16	Medium-heat connectors	503.10.16	Medium-heat connectors	"Equipment" changed to "appliances."
503.12	Draft hoods and draft controls	503.12	Draft hoods and draft controls	"Equipment" changed to "appliances," including all subsections.
503.13	Manually operated dampers	503.13	Manually operated dampers	"Equipment" changed to "appliances."
503.15	Obstructions	503.15	Obstructions	Reference to installation "with the terms of their listing" has been replaced with installed "manufacturer's installation instructions." "Equipment" changed to "appliances."
504.2.3	Vent offsets	504.2.3	Vent offsets	The use of the term "turns" has been replaced with "elbow."
504.2.7	Liner system sizing	504.2.7	Liner system sizing and connections	New language added that requires connections between chimney liners and listed double-wall connectors to be made with listed adapters designed for such purpose.
504.2.9	Chimney and vent location	504.2.9	Chimney and vent location	New language added stating that a Type B vent is not considered to be exposed to the outdoors where it passes through an unventilated enclosure or chase insulated to a value of not less than R8. Installation in accordance with the listing has been deleted from the exception.
-	-	504.2.13	Draft hood conversion accessories	New section that requires draft hood conversion accessories for use with masonry chimneys venting listed Category I fan-assisted appliances to be in accordance with the listing and the manufacturer's installation instructions.
-	-	504.3.9.1	Tee and wye fittings	New section requiring tee and wye fittings connected to a common vent to be considered as part of the common vent and constructed of materials consistent with the common vent.
504.3.12	Vent height measurement	504.3.12	Vent height measurement	"Units of equipment" changed to "appliances."

504.3.19	Liner system sizing	504.3.19	Liner system sizing and connections	<p>New language added that requires where double-wall connectors are required, tee and wye fittings used to connect to the common vent chimney liner to be listed for double-wall fittings.</p> <p>New language added that requires connections between chimney liners and listed double-wall fittings to be made with listed adapters designed for such purpose.</p>
504.3.20	Chimney and vent location	504.3.20	Chimney and vent location	<p>New language added stating that a Type B vent is not considered to be exposed to the outdoors where it passes through an unventilated enclosure or chase insulated to a value of not less than R8.</p> <p>Installation in accordance with the listing has been deleted from the exception.</p>
-	-	504.3.23	Draft hood conversion accessories	New section that requires draft hood conversion accessories for use with masonry chimneys venting listed Category I fan-assisted appliances to be in accordance with the listing and the manufacturer's installation instructions.
Table 504.3(4)	Exterior masonry chimney	Table 504.2(6)	Exterior masonry chimney	Table relocated.
505.1.1	Commercial cooking appliances vented by exhaust hoods	505.1.1	Commercial cooking appliances vented by exhaust hoods	<p>New language added that prohibits gas piping installed to bypass a solenoid valve where a solenoid valve is installed in the gas piping as part of an interlock system.</p> <p>A new exception states that an interlock between the cooking appliance(s) and the exhaust hood system is not required where heat sensors or other approved methods automatically activate the exhaust hood system when cooking.</p>

Chapter 6: Specific Appliances				
608.1	General, vented wall furnaces	608.1	General, vented wall furnaces	ANSI Z21.49 has been deleted as one of the reference standards for testing vented wall furnaces.
609.1	General, floor furnaces	609.1	General, floor furnaces	ANSI Z21.48 has been deleted as one of the reference standards for testing floor furnaces.
610.1	General, duct furnaces	610.1	General, duct furnaces	ANSI Z 83.8 has replaced ANSI Z83.9 as one of the reference standards for testing duct furnaces.
621.7	Unvented log heaters	621.7	Unvented decorative room heaters	"Log" heaters changed to "decorative room" heaters.
-	-	621.7.1	Ventless firebox enclosures	New section requiring ventless firebox enclosures used with unvented decorative room heaters to be listed as complying with ANSI Z21.91.
622.1	General, vented room heaters	622.1	General, vented room heaters	ANSI Z21.1 has been deleted as one the reference standards for testing vented room heaters.
630.2	Support, infrared radiant heaters	630.2	Support, infrared radiant heaters	Superfluous language ("safely and adequately") has been deleted.
633.1	General, fuel cell power plants	633.1	General, stationary fuel-cell power plants	Editorial revisions for consistency in terminology with the FBCM. Reference standard for testing stationary fuel-cell power systems with a power output not exceeding 10 MW has been changed from ANSI Z21.83 to ANSI CSA America FC 1.
-	-	635	Gaseous hydrogen systems	New section requiring gaseous hydrogen systems to be installed in accordance with the FFPC and FBCB.

Chapter 7: Gaseous Hydrogen Systems

701.1	Scope	701.1	Scope	Language requiring containers provided with pyrophoric materials to also comply with the FFPC has been deleted. Language requiring containers having residual gaseous hydrogen to be considered as full for the purposes of the controls required has been deleted.
703.1	Hydrogen-generating and refueling operations	703.1	Hydrogen-generating and refueling operations	Numerous revisions were made to these sections with the intent being to limit the hydrogen-generating refueling area in size (850 sq ft) and number of vehicles being refueled (3), instead of limiting the number of hydrogen-fueled vehicles stored.
703.1.1	Natural ventilation	703.1.1	Natural ventilation	
703.1.1.1	Two openings	703.1.1.1	Two openings	Section reworded for clarity and improving interpretation and enforcement.
703.1.2	Mechanical ventilation	703.1.2	Mechanical ventilation	New language requires equipment and appliances having an ignition source to be located such that the source of ignition is below the mechanical ventilation outlet(s).
704.1.2.2	Identification	704.1.2.2	Identification of hydrogen piping systems	Section revised for consistency with ANSI A13.1.
704.1.2.3	Piping design and construction	704.1.2.3	Piping design and construction	Section revised to apply to tubing materials as well as piping materials. Type 304, Type 304L, and Type 316 stainless steel has been replaced with 300 series stainless steel as acceptable materials for piping and tubing. Specific references to pressure and temperature has been replace with "operating conditions."
704.1.2.3.1	Prohibited locations	704.1.2.3.1	Prohibited locations	Section revised to require that piping is not permitted to be concealed or covered by the surface of any wall, floor, or ceiling.
704.1.2.3.2	Piping in solid partitions and walls	704.1.2.3.2	Interior piping	Provisions in the 2004 Code have been deleted and replace with provisions that require that piping located inside of buildings be in exposed locations and provided with ready access for visual inspection, exception for through penetrations.
704.1.2.3.3	Piping in concealed locations	704.1.2.3.3	Underground piping	Provisions in the 2004 Code have been deleted and replaced with provisions that require underground piping, including joints and fittings, to be protected from corrosion and installed in accordance with approved engineering methods.

704.1.2.3.5	Protection from physical damage	704.1.2.3.5	Protection from physical damage	Distance from the nearest edge of wood studs, joists or rafters for when shield plates are required for holes and notches has been increased from 1 inch to 1.5 inches.
704.1.2.3.6	Piping in solid floors	-	-	Section deleted.
704.1.2.3.8	Settlement	704.1.2.3.7	Settlement	Section revised to require protection for piping passing through any concrete or masonry wall.
704.1.2.4	Joints	704.1.2.4	Joints	Section revised to require joints, gaskets, and sealants used in hydrogen service to comply with ASME B31.3.
-	-	704.1.2.4.1	Brazed joint	New section requiring brazed joints to have a melting point greater than 1000° F.
-	-	704.1.2.4.2	Electrical continuity	New section requiring mechanical joints to maintain electrical continuity through the joint or a bonding jumper is required around the joint.
705.2	Inspections	705.2	Inspections	Section revised to remove the mandatory reference to ASME B31.3 for inspection procedures. Language now permits ASME B31.3 as an option.
705.3	Pressure test	705.3	Pressure test	Sections 705.3, 705.4, and 705.5 were revised to provide enforceable coverage for the inspections and testing that is lacking in ASME B31.3.
705.3.1	Test duration	705.3.1	Hydrostatic leak test	
705.3.2	Test gauges	705.3.6	Test gauges	
-	-	705.3.2	Pneumatic leak tests	
-	-	705.3.3	Test limits	
-	-	705.3.4	Test medium	
-	-	705.3.5	Test duration	
-	-	705.3.7	Test preparation	
-	-	705.3.7.1	Expansion joints	
-	-	705.3.7.2	Equipment disconnection	
-	-	705.3.7.3	Equipment isolation	
705.4	Detection of leaks and defects	705.4	Detection of leaks and defects	
705.4.1	Corrections	705.4.1	Corrections	
-	-	705.5	Purging of gaseous hydrogen piping systems	
-	-	705.5.1	Removal from service	
-	-	705.5.2	Placing in operation	
-	-	705.5.3	Discharge of purged gases	
-	-	705.5.3.1	Vent pipe outlets for purging	
-	-	705.5.4	Placing equipment in operation	

706.1	General, location of gaseous hydrogen systems	706	General, location of gaseous hydrogen systems	Scoping language revised to refer to new criteria specified for indoor and outdoor gaseous hydrogen systems. Exception permitting dispensing equipment to not be separated from canopies has been deleted.
706.2	Location on property	706.2	Indoor gaseous hydrogen systems	Provisions for the location of indoor gaseous hydrogen systems have been revised for clarity and correlation with the FBCB regarding hydrogen cutoff rooms.
		706.3	Outdoor gaseous hydrogen systems	
706.3	Hydrogen cutoff rooms	-	-	Section deleted and direct reference to Section 420 of the FBCB is provided for hydrogen cutoff rooms in Section 706.2.
707.2	Purging, operation and maintenance of gaseous hydrogen systems	707.2	Purging, operation and maintenance of gaseous hydrogen systems	Section revised to clarify scope of this section applies to piping systems other than those purged in accordance with Section 705.5. Revision allows purging in accordance with the manufacture's instructions as well as the FFPC.