

New Hampshire Building Code

Effective July 1, 2022

This courtesy summary of the New Hampshire Building Code amendments is provided for the convenience of the user by the Building Code Review Board and consists of the applicable codes and amendments which have been reviewed and approved by the Board through November 20, 2021, ratified by the General Court per HB1681-2022, and signed by the Governor on July 1, 2022.

This document is correct to the best of the board's knowledge, however, for the legal record of the applicable codes and amendments, refer to the above ratification legislation and the specific amendment exhibits.

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Applicable Codes

Per HB1681-2022, RSA 155-A:1, IV, the New Hampshire Building Code means the adoption by reference of the:

- International Building Code 2018
- International Existing Building Code 2018
- International Energy Conservation Code 2018
- International Mechanical Code 2018
- International Plumbing Code 2018
- International Residential Code 2018
- International Swimming Pool and Spa Code 2018
- National Electrical Code 2020
- All amendments reviewed and approved by the BCRB as of November 30, 2021

Per RSA 155-A:2, 1:

The state building code in effect at the time that the application for the building permit required by RSA 155-A:4 is received by the governing authority shall remain in effect for the duration of the work covered by that permit. This requirement notwithstanding, for a period of 6 months after the effective date of the code adopted under RSA 155-A:1, IV, a concurrency period is established, allowing building permits, and other required documents, at the election of the applicant, to show compliance using either the code in effect just prior the effective date of the code adopted under RSA 155-A:1, IV, or the code adopted under RSA 155-A:1, IV, but not a combination of the 2 codes.

International Building Code® 2018 amendments

1) Amend Section 101.1 as follows (BD-18-01-21):

101.1 Title. These regulations shall be known as the *Building Code* of [NAME OF JURISDICTION] the State of New Hampshire hereinafter referred to as "this code."

2) Amend Section 101.4 as follows (BD-18-02-21):

101.4 Referenced codes. The other codes listed in §101.4.1 through §101.4.7 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.

101.4.1 Gas. ~~The provisions of the *International Fuel Gas Code* shall apply to the installation of gas piping from the point of delivery, gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.~~ Fuel gas systems shall comply with the New Hampshire State Fire Code as amended.

101.4.2 Mechanical. The provisions of the *International Mechanical Code* shall apply to the installation, alterations, repairs, and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air conditioning and refrigeration systems, incinerators, and other energy-related systems.

101.4.3 Plumbing. The provisions of the *International Plumbing Code* shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. ~~The provisions of the *International Private Sewage Disposal Code* shall apply to private sewage disposal systems.~~ Private sewage disposal systems shall comply with RSA 485-A:29-44.

101.4.4 Property maintenance. ~~The provisions of the *International Property Maintenance Code* shall apply to existing structures and premises; equipment and facilities; light, ventilation, space heating, sanitation, life and fire safety, hazards; responsibilities of owners, operators and occupants; and occupancy of existing premises and structures.~~ [RESERVED]

101.4.5 Fire prevention. ~~The provisions of the *International Fire Code*~~ New Hampshire State Fire Code as amended shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, repair, alteration or removal of fire suppression and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

101.4.6 Energy. The provisions of the *International Energy Conservation Code* shall apply to all matters governing the design and construction of buildings for energy efficiency.

101.4.7 Existing buildings. The provisions of the *International Existing Building Code* shall apply to matters governing the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

3) Amend Section 102.6 as follows (BD-18-03-21):

102.6 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as otherwise specifically provided in this code, ~~the International Existing Building Code, the International Property Maintenance Code or the International Fire Code~~ or the New Hampshire State Fire Code as amended.

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

102.6.2 Buildings previously occupied. The legal occupancy of any building existing on the date of adoption of this code shall be permitted to continue without change, except as otherwise specifically provided in this code, ~~the International Fire Code or International Property Maintenance Code~~, the New Hampshire State Fire Code as amended, or as is deemed necessary by the *building official* for the general safety and welfare of the occupants and the public.

4) Add new Section 1011.12.3 as follows (BD-18-04-21):

1011.12.3 Equipment and appliances on roofs or elevated structures. Where *equipment* requiring access or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access such equipment or appliances, an interior or exterior means of access shall be provided. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) in height or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). Such access shall not require the use of portable ladders. Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.

Exception: This section shall not apply to Group R-3 occupancies.

5) Amend Section 1105.1 as follows (BD-18-05-21):

1105.1 Public entrances. In addition to *accessible* entrances required by Sections 1105.1.1 through 1105.1.7~~2~~, at least 60 percent of all *public entrances* shall be *accessible*.

[Exceptions and Sections 1105.1.1 through 1105.1.7 are unchanged]

1105.1.8 At least one of the required *accessible public entrances* in Groups A, E, I-1, I-2, I-3, R-1 and R-2 shall be equipped with either full power-operated or low energy power-operated automatic doors in compliance with ICC A117.1.

1105.1.9 At least one of the required *accessible public entrances* in Groups B and M greater than or equal to 1,000 net square feet (93 m²) in size, and the nonresidential portion of live/work units per Section 419 greater than or equal to 1,000 net square feet (93 m²) shall be equipped with either full power-operated or low energy power-operated automatic doors in compliance with ICC A117.1.

1105.1.9.1 Required *accessible public entrances* in Groups B and M less than 1,000 net square feet (93 m²) in size and the nonresidential portion of live/work units per Section 419 less than 1,000 square feet (93 m²), where automatic doors are not provided, an electric signaling device to alert the owner of a presence at the door shall be provided.

6) Add new Section 1109.2.1.2.1 as follows (BD-18-06-21):

New Hampshire Building Code Courtesy Summary dated: 5-5-22

1109.2.1.2.1 Changing station. In assembly occupancies with an occupant load of 1,500 or greater and in mercantile occupancies of 40,000 aggregate square feet (3716 m²) or greater, a permanently mounted, powered, height adjustable adult changing station that complies with Section 603.5 of ICC A117.1 shall be provided in the family or assisted-use toilet room. Each room shall have signage meeting the requirements of ICC A117.1 indicating the presence of the changing station. Central directories, if provided, shall indicate the location(s) of the changing stations.

7) Add new Section 1109.2.4 as follows (BD-18-07-21):

1109.2.4 Diaper changing tables. In Groups A, B, E, I-4 child day care, M and R-1 hotels and motels, on each floor level containing a public toilet room, both male and female occupants shall have access to at least one diaper changing table complying with Section 603.5 of ICC A117.1. Each room shall have signage indicating the presence of the diaper changing table. Toilet rooms not providing a diaper changing table shall have signage providing directions to the nearest diaper changing table location. Central directories, if provided, shall indicate the location(s) of the diaper changing tables. Signs shall meet the requirements of ICC A117.1.

Exception: Groups B and M less than 1,000 net square feet (93 m²) in size.

8) Amend Section 1608.2 as follows (BD-18-08-21):

1608.2 Ground snowloads. The ground snowloads to be used in determining the design snow loads for roofs shall be determined in accordance with ASCE 7 or Figure 1608.2 for the contiguous United States and Table 1608.2 for Alaska. Site-specific case studies shall be made in areas designated "CS" in Figure 1608.2. Ground snow loads for sites at elevations above the limits indicated in Figure 1608.2 and for all sites within the CS areas shall be *approved*. Ground snow load determination for such sites shall be based on an extreme value statistical analysis of data available in the vicinity of the site using a value with a 2-percent annual probability of being exceeded (50-year mean recurrence interval). Snow loads are zero for Hawaii, except in mountainous regions as *approved* by the *building official*.

1608.2.1. Ground snowloads are permitted to be determined in accordance with Table 1 of *Ground Snow Loads for New Hampshire* ERDC/CRREL TR-02-6.

9) Amend Section 2701.1 as follows (BD-18-09-21):

2701.1 Scope. The provisions of this chapter and NFPA 70, as referenced in RSA 155-A:1, IV, shall govern the design, construction, erection and installation of the electrical components, appliances, equipment and systems used in buildings and structures covered by this code. The New Hampshire State Fire Code as amended ~~International Fire Code, the International Property Maintenance Code~~ and NFPA 70 shall govern the use and maintenance of electrical components, appliances, equipment and systems. The International Existing Building Code and NFPA 70 shall govern the alteration, repair, relocation, replacement and addition of electrical components, appliances, or equipment and systems.

10) Amend Section 2902.2 as follows (BD-18-10-21):

2902.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for *dwelling units* and *sleeping units*.
2. Separate facilities shall not be required in structures or tenant spaces with a total *occupant load*, including both the employees and customers, of 15 or less.
3. Separate facilities shall not be required in mercantile occupancies in which the maximum *occupant load* is 100 or less.
4. Separate facilities shall not be required in business occupancies in which the maximum *occupant load* is 25 or fewer.
5. Separate facilities shall not be required in assembly occupancies that serve food with a total *occupant load*, including both employees and customers, of less than 25.

11) Amend Section 3001.2 as follows (BD-18-13-21):

3001.2 Emergency elevator communication systems ~~for the deaf, hard of hearing and speech impaired~~. An elevator emergency communication system shall be provided complying with the requirements in ASME A17.1/CSA B44. ~~An emergency two-way communication system shall be provided that:~~

- ~~1. Is a visual and text-based and a video-based 24/7 live interactive system.~~
- ~~2. Is fully accessible by the deaf, hard of hearing and speech impaired, and shall include voice-only options for hearing individuals.~~
- ~~3. Has the ability to communicate with emergency personnel utilizing existing video conferencing technology, chat/text software or other approved technology.~~

12) Amend Section 3103.1.2 as follows (BD-18-11-21):

3103.1.2 Permit required. Temporary structures that cover an area greater than 120 square feet (11.16 m²), including connecting areas or spaces with a common *means of egress* or entrance that are used or intended to be used for the gathering together of 10 or more persons, shall not be erected, operated or maintained for any purpose without obtaining a *permit* from the *building official*.

3103.1.2.1 Tents that cover an area of 400 square feet (37.2 m²) or greater, including connecting areas or spaces with a common *means of egress* or entrance that are used or intended to be occupied by people shall not be erected, operated or maintained for any purpose without obtaining a *permit* from the *building official*.

13) Adopt Appendix C in its entirety per Section 101.2.1 (BD-18-12-21):

APPENDIX C
GROUP U – AGRICULTURAL BUILDINGS
Adopt Appendix C in its entirety per Section 101.2.

End of *International Building Code*® 2018 amendments

International Existing Building Code® 2018 amendments

1) Amend Section 101.1 as follows (EX-18-01-21):

R101.1 Title. These regulations shall be known as the *Existing Building Code* of ~~[NAME OF JURISDICTION]~~ the State of New Hampshire hereinafter referred to as "this code."

2) Amend Section 101.2 as follows (EX-18-02-21):

101.2 Scope. The provisions of this code shall apply to the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

Exception: Detached one- and two-family dwellings and multiple single-family dwellings (Townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures not more than three stories above grade plane in height, shall comply with this code or Appendix J of the International Residential Code.

3) Amend Section 102.4 as follows (EX-18-03-21):

102.4 Referenced codes and standards. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections 102.4.1 and 102.4.2. All references in this code to the *International Fuel Gas Code*, *International Property Maintenance Code*, and *International Fire Code*, are superseded by the New Hampshire amendment to the *International Building Code*, 101.4 Referenced Codes.

Exception: No change.
[Remainder of Section unchanged]

4) Amend Section 202 adding the definition as follows (EX-18-04-21):

AGGREGATE AREA: The sum total of the *building area* of all *stories* of a building, including *basements*.

5) Amend Section 305.4.1 as follows (EX-18-08-21):

305.4.1 Partial change in occupancy. Where a portion of the building is changed to a new occupancy classification, any alterations shall comply with Sections 305.6, 305.7, and 305.8, as amended.

6) Amend Section 305.5 as follows (EX-18-09-21):

305.5 Additions. Provisions for new construction, as amended, shall apply to additions. An addition that affects the accessibility to, or contains an area of, primary function shall comply with the requirements of Sections 305.7.

7) Add new Section 305.8.16 as follows (EX-18-05-21):

305.8.16 Diaper changing tables. The requirements of this section apply to Level III alterations and changes of occupancy. In Groups A, B, E, I-4 child day care, M and R-1 hotels and motels, on each floor level containing a public toilet room, both male and female occupants shall have access to at least one diaper changing table complying with ICC A117.1. Each room shall have signage indicating the presence of the diaper changing table. Toilet rooms not providing a diaper changing table shall have signage providing directions to the nearest diaper changing table location. Central directories, if provided, shall indicate the location(s) of the diaper changing tables. Signs shall meet the requirements of ICC A117.1.

Exception: Groups B and M less than 1,000 net square feet (93 m²) in size.

8) Add new Section 305.8.17 as follows (EX-18-06-21):

305.8.17 Changing station. The requirements of this section apply to Level III alterations and changes of occupancy. In assembly occupancies with an occupant load of 1,500 or greater and in mercantile occupancies of 40,000 aggregate square feet (3716 m²) or greater, a permanently mounted, powered, height adjustable adult changing station that complies with Section 603.5 of ICC A117.1 shall be provided in the altered toilet rooms, providing access to both male and female occupants, or family or assisted-use toilet room. Each room shall have signage meeting the requirements of ICC A117.1 indicating the presence of the changing station. Central directories, if provided, shall indicate the location(s) of the changing stations.

9) Amend Section 912.5.1 as follows (EX-18-07-21):

912.5.1 Height and area for change to higher hazard category. When a change of occupancy classification is made to a higher hazard category as shown in Table 912.5, heights and areas of buildings and structures shall comply with the requirements of Chapter 5 of the *International Building Code* for the new occupancy classification.

Exception: In other than Groups H, F-1 and S-1, in lieu of fire walls, use of fire barriers having a fire-resistance rating of not less than that specified in Table 706.4 of the *International Building Code*, constructed in accordance with Section 707 of the *International Building Code*, shall be permitted to meet area limitations required for the new occupancy in buildings protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the *International Building Code*.

1012.5.1.1 Fire wall alternative. In other than Groups H, F-1 and S-1, fire barriers and horizontal assemblies constructed in accordance with Sections 707 and 711, respectively, of the *International Building Code* shall be permitted to be used in lieu of fire walls to subdivide the building into separate buildings for the purpose of complying with the area limitations required for the new occupancy where all of the following conditions are met:

1. The buildings are protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the *International Fire Building Code*.

[Remainder of Section unchanged]

End of *International Existing Building Code*® 2018 amendments

International Energy Conservation Code® 2018 amendments

1) Amend Section C101.1 as follows (EN-18-01-21):

C101.1 Title. These regulations shall be known as the *Energy Conservation Code* of ~~[NAME OF JURISDICTION]~~ the State of New Hampshire hereinafter referred to as "this code."

2) Amend Section C101.5 as follows (EN-18-02-21):

C101.5 Compliance. *Residential buildings* shall meet the provisions of IECC—Residential Provisions. *Commercial buildings* shall meet the provisions of IECC—Commercial Provisions.

Exception: Any structure three stories or less above grade plane in height and less than 4,000 square feet (372 m²) in gross floor area is permitted to show compliance with the 2018 *International Energy Conservation Code* – Residential Provisions rather than the 2018 *International Energy Conservation Code* – Commercial Provisions which would otherwise be applicable.

3) Delete Section C406 (EN-18-03-21):

**SECTION C406
ADDITIONAL EFFICIENCY PACKAGE OPTIONS**
[Delete Section in its entirety]

4) Delete Section C408 (EN-18-04-21):

**SECTION C408
SYSTEM COMMISSIONING**
[Delete Section in its entirety]

5) Amend Section R101.1 as follows (EN-18-05-21):

R101.1 Title. These regulations shall be known as the *Energy Conservation Code* of ~~[NAME OF JURISDICTION]~~ the State of New Hampshire hereinafter referred to as "this code."

6) Amend Section R101.5 as follows (EN-18-06-21):

R101.5 Compliance. *Residential buildings* shall meet the provisions of IECC—Residential Provisions. *Commercial buildings* shall meet the provisions of IECC—Commercial Provisions. Log structures shall meet the provisions of ICC-400 2017 Standard on Design and Construction of Log Structures.

Exception: Any structure three stories or less above grade plane in height and less than 4,000 square feet (372 m²) in gross floor area is permitted to show compliance with the 2018 *International Energy Conservation Code* – Residential Provisions rather than the 2018 *International Energy Conservation Code* – Commercial Provisions which would otherwise be applicable.

End of *International Energy Conservation Code®* 2018 amendments

International Mechanical Code® 2018 amendments

1) Amend Section 101.1 as follows (ME-18-01-21):

101.1 Title. These regulations shall be known as the *Mechanical Code* of [NAME OF JURISDICTION] the State of New Hampshire hereinafter referred to as "this code."

2) Amend Section 101.2 as follows (ME-18-02-21):

101.2 Scope. This code shall regulate the design, installation, maintenance, alteration and inspection of mechanical systems that are permanently installed and utilized to provide control of environmental conditions and related processes within buildings. This code shall also regulate those mechanical systems, system components, equipment and appliances specifically addressed herein. The installation of fuel gas distribution piping and equipment, fuel gas-fired appliances and fuel gas-fired appliance venting systems shall be regulated by the *International Fuel Gas Code* New Hampshire State Fire Code as amended.

Exception: Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not having more than three stories high with separate means of egress and their accessory structures shall comply with the *International Residential Code*.

3) Amend Section 106.5.2 as follows (ME-18-03-21):

106.5.2 Fee schedule. The fees for mechanical work shall be as indicated in the following schedule: determined by the local jurisdiction.

[JURISDICTION TO INSERT APPROPRIATE SCHEDULE]

4) Delete Section 106.5.3 (ME-18-04-21):

106.5.3 Fee refunds. [Delete Section in its entirety] ~~The code official shall authorize the refunding of fees as follows:~~

- ~~1. The full amount of any fee paid hereunder which was erroneously paid or collected.~~
- ~~2. Not more than [SPECIFY PERCENTAGE] percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.~~
- ~~3. Not more than [SPECIFY PERCENTAGE] percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan review effort has been expended.~~

~~The code official shall not authorize the refunding of any fee paid except upon written application filed by the original permittee not later than 180 days after the date of fee payment.~~

5) Amend Section 108.4 as follows (ME-18-05-21):

108.4 Violation penalties. Any person who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair mechanical work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a [SPECIFY OFFENSE] punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF

~~DAYS], or both such fine and imprisonment~~ subject to penalties as prescribed by law. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

6) Amend Section 108.5 as follows (ME-18-06-21):

108.5 Stop work orders. Upon notice from the code official that mechanical work is being done contrary to the provisions of this code or in a dangerous or unsafe manner, such work shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work on the system after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be ~~liable for a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars~~ subject to penalties as prescribed by law.

7) Amend Section 202 by adding the definitions as follows (ME-18-12-21):

BIOMASS. As defined in New Hampshire Administrative Rules Env-A 1401.03(d).

BIOMASS FUEL For use in this section, biomass fuels are defined as "solid" organic matter, ~~not including woods derived from construction or demolition debris; wood that has been chemically treated; or agricultural crops or aquatic plants or byproducts from such crops or plants which have been used to rehabilitate a contaminated or brownfields site through a process known as "phytoremediation".~~

8) Add New Section 301.19 as follows (ME-18-08-21):

301.19 HVAC Systems Testing & Balancing. HVAC systems shall be balanced in accordance with generally accepted engineering standards. Air and water flow rates shall be measured and adjusted to deliver final flow rates within the tolerances provided in the product specifications. Test and balance activities shall include air system and hydronic system balancing.

301.19.1 Air systems balancing. Each supply air outlet and zone terminal device shall be equipped with means for air balancing in accordance with the requirements of Chapter 6 of the *International Mechanical Code*. Discharge dampers used for air-system balancing are prohibited on constant-volume fans and variable-volume fans with motors 10hp (18.6kW) and larger. Air systems shall be balanced in a manner to first minimize throttling losses then, for fans with system power of greater than 1hp (0.746 kW), fan speed shall be adjusted to meet design flow conditions.

Exception: Fans with fan motors of 1hp (0.746 kW) or less are not required to be provided with a means for air balancing.

301.19.2 Hydronic systems balancing. Individual hydronic heating and cooling coils shall be equipped with means for balancing and measuring flow. Hydronic systems shall be proportionately balanced in a manner to first minimize throttling losses, then the pump impeller shall be trimmed, or pump speed shall be adjusted to meet design flow conditions. Each hydronic system shall have either the capability to measure pressure across pump, or test ports at each side of each pump.

Exceptions: The following equipment is not required to be equipped with a means for balancing or measuring flow:

1. Pumps with pump motors 5 hp (3.7 kW) or less.
2. Where throttling results in no greater than 5 percent of the nameplate horsepower draw above that required if the impeller were trimmed.

301.19.3 System balancing report. A written report describing the activities and measurement completed in accordance with generally accepted engineering standards and Testing & Balancing industry standards.

9) Amend Section 606.2 as follows (ME-18-09-21):

606.2 Where required. Smoke detectors shall be installed where indicated in Sections 606.2.1 through 606.2.34.

Exception: Smoke detectors shall not be required where air distribution systems are incapable of spreading smoke beyond the enclosing walls, floors and ceilings of the room or space in which the smoke is generated.

606.2.1 Location of Smoke detectors. Smoke detectors shall be installed downstream of the air filters and ahead of any branch connections in air supply systems with a design capacity greater than 2,000 cfm (0.9 m³/s).

606.2.12 Return air systems. Smoke detectors shall be installed in return air systems with a design capacity greater than 2,000 cfm (0.9 m³/s), in the return air duct or *plenum* upstream of any filters, *exhaust air* connections, outdoor air connections, or decontamination *equipment* and appliances.

Exception: Smoke detectors are not required in the return air system where all portions of the building served by the air distribution system are protected by area smoke detectors connected to a fire alarm system in accordance with the *International Fire Code*. The area smoke detection system shall comply with Section 606.4.

606.2.23 Common supply and return air systems. Where multiple air-handling systems share common supply or return air ducts or plenums with a combined design capacity greater than 2,000 cfm (0.9 m³/s), the return air system shall be provided with smoke detectors in accordance with Section 606.2.1.

Exception: Individual smoke detectors shall not be required for each fan-powered terminal unit, provided that such units do not have an individual design capacity greater than 2,000 cfm (0.9 m³/s) and will be shut down by activation of one of the following:

1. Smoke detectors required by Sections 606.2.1 and 606.2.3.
2. An *approved* area smoke detector system located in the return air *plenum* serving such units.
3. An area smoke detector system as prescribed in the exception to Section 606.2.1.

In all cases, the smoke detectors shall comply with Sections 606.4 and 606.4.1.

606.2.34 Return air risers. Where return air risers serve two or more stories and serve any portion of a return air system having a design capacity greater than 15,000 cfm (7.1 m³/s), smoke detectors shall be installed at each story. Such smoke detectors shall be located upstream of the connection between the return air riser and any air ducts or plenums.

10) Add New Section 930.1 as follows (ME-18-10-21):

930.1 Solid Fuel-Burning Boilers. Solid Fuel-Burning Boilers listed and conforming to European Committee for Standardization 2012 EN 303-5, "Heating Boilers – Part 5: Heating Boilers for Solid-Fuels, Manually and Automatically Stoked, Nominal Heat Output of Up to 300 Kw – Terminology, Requirements, Testing and Marking" shall be permitted for biomass fuels when all data plates; warning

labels; limits on temperature and pressure of relief valves; installation, operations, and maintenance manuals; all operating and safety gauges and controls; and construction and emissions specification documents are provided in English using U.S. customary system units of measurement. All pipe connections shall meet the North American ASTM standards for pipe and fittings.

11) Add New Section 1004.1.1 as follows (ME-18-11-21):

1004.1.1 Solid Fuel-Burning Boilers. Solid fuel-burning boilers listed and conforming to European committee for standardization 2012 EN 303-5 “Heating Boilers – Part 5: Heating Boilers for Solid-Fuels, Manually and Automatically Stoked, Nominal Heat Output of Up to 300 Kw – Terminology, Requirements, Testing and Marking” shall be permitted for biomass fuels when all data plates; warning labels; limits on temperature and pressure of relief valves; installation, operations, and maintenance manuals; all operating and safety gauges and controls; and construction and emissions specification documents are provided in English using U.S. customary system units of measurement. All pipe connections shall meet the North American ASTM standards for pipe and fittings.

12) Amend Chapter 15 adding as follows (ME-18-07-21):

CEN European Committee for Standardization

CEN-CENELEC Management Centre

Avenue Marnix 17

B-100 Brussels

Tel: +32 2 550 08 11

Fac: +32 2 550 08 19

EN European Standard

303-5 Heating Boilers - Part 5: Heating Boilers for Solid-Fuels. Manually and Automatically Stoked. Nominal Heat Output of Up to 500 Kw -Terminology. Requirements, Testing and Marking (2012)

End of *International Mechanical Code*® 2018 amendments

International Plumbing Code® 2018 amendments

1) Amend Section 101.1 as follows (PL-18-01-21):

101.1 Title. These regulations shall be known as the *Plumbing Code* of ~~[NAME OF JURISDICTION]~~ the State of New Hampshire hereinafter referred to as "this code."

2) Amend Section 101.2 as follows (PL-18-02-21):

101.2 Scope. The provisions of this code shall apply to the erection, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of plumbing systems within this jurisdiction. This code shall also regulate nonflammable medical gas, inhalation anesthetic, vacuum piping, nonmedical oxygen systems and sanitary and condensate vacuum collection systems. The installation of fuel gas distribution piping and equipment, fuel gas-fired water heaters, and water heater venting systems shall be regulated by the *International Fuel Gas Code* New Hampshire State Fire Code as amended. Provisions in the appendices shall not apply unless specifically adopted.

Exception: Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not having more than three stories high with separate means of egress and their accessory structures shall comply with the *International Residential Code*.

3) Amend Section 106.6.2 as follows (PL-18-03-21):

106.6.2 Fee schedule. The fees for all plumbing work shall be as determined by the local jurisdiction. Indicated in the following schedule:

~~[JURISDICTION TO INSERT APPROPRIATE SCHEDULE]~~

4) Delete Section 106.6.3 (PL-18-04-21):

106.6.3 Fee refunds. ~~[Delete Section in its entirety] The code official shall authorize the refunding of fees as follows:~~

- ~~1. The full amount of any fee paid hereunder which was erroneously paid or collected.~~
- ~~2. Not more than [SPECIFY PERCENTAGE] percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.~~
- ~~3. Not more than [SPECIFY PERCENTAGE] percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan review effort has been expended.~~

~~The code official shall not authorize the refunding of any fee paid except upon written application filed by the original permittee not later than 180 days after the date of fee payment.~~

5) Amend Section 108.4 as follows (PL-18-05-21):

108.4 Violation penalties. Any person who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair plumbing work in violation of the approved construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a ~~[SPECIFY OFFENSE]~~ punishable by a fine of not more than ~~[AMOUNT]~~ dollars or by imprisonment not exceeding ~~[NUMBER OF DAYS]~~, or both

~~such fine and imprisonment subject to penalties as prescribed by law.~~ Each day that a violation continues after due notice has been served shall be deemed a separate offense.

6) Amend Section 108.5 as follows (PL-18-06-21):

108.5 Stop work orders. Upon notice from the code official that plumbing system is being done contrary to the provisions of this code or in a dangerous or unsafe manner, such work shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work on the system after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be ~~liable for a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars~~ subject to penalties as prescribed by law.

7) Amend Section 305.4.1 as follows (PL-18-07-21):

305.4.1 Sewer depth. *Building sewers* that connect to private sewage disposal systems shall conform to RSA 485-A relative to minimum depth below finished grade be a minimum [NUMBER] inches (mm) ~~below finished grade at the point of septic tank connection.~~ *Building sewers* that connect to public sewers shall be a minimum depth of [NUMBER] 48 inches (1219 mm) below grade or adequately insulated to afford the same protection whenever a condition arises that the 48 inches (1219 mm) cannot be attained.

8) Amend Section 403.2 as follows (PL-18-08-21):

403.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for *dwelling units* and *sleeping units*.
2. Separate facilities shall not be required in structures or tenant spaces with a total *occupant load*, including both the employees and customers, of 15 or less.
3. Separate facilities shall not be required in mercantile occupancies in which the maximum *occupant load* is 100 or less.
4. Separate facilities shall not be required in business occupancies in which the maximum occupant load is 25 or fewer.
5. Separate facilities shall not be required in assembly occupancies that serve food with a total *occupant load*, including both employees and customers, of less than 25.

9) Amend Section 701.2 as follows (PL-18-11-21):

701.2 Sewer required. Every building in which plumbing fixtures are installed and all premises having drainage piping shall be connected to a public sewer, where available, or an approved private sewage disposal system in accordance with ~~the International Private Sewage Disposal Code~~ RSA 485-A:29-44.

10) Amend Section 705.11.2 as follows (PL-18-12-21):

705.11.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A ~~purple~~ primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564 or CSA CAN/CSA-B137.3, CSA CAN/CSA-B181.2 or CSA CAN/CSA-B182 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM 2855. Solvent-cement joints shall be permitted above or below ground.

11) Amend Section 904.1 as follows (PL-18-13-21):

904.1 Roof extension. All open pipes that extend through a roof shall be terminated at least [NUMBER] 18 inches (457 mm) above the roof, except that where a roof is to be used for any purpose other than weather protection, the vent extensions shall be run at least 7 feet (2134 mm) above the roof.

12) Adopt Appendix B in its entirety per Section 101.2 (PL-18-14-21):

APPENDIX B
RATES OF RAINFALL FOR VARIOUS CITIES
Adopt Appendix B in its entirety per Section 101.2.

13) Adopt Appendix C in its entirety per Section 101.2 (PL-18-15-21):

APPENDIX C
STRUCTURAL SAFETY
Adopt Appendix C in its entirety per Section 101.2.

End of *International Plumbing Code*® 2018 amendments

International Residential Code® 2018 amendments

1) Amend Section R101.1 as follows (RE-18-01-21):

R101.1 Title. These provisions shall be known as the *Residential Code for One- and Two-Family Dwellings* of [NAME OF JURISDICTION] the State of New Hampshire and shall be cited as such and will be referred to herein as "this code."

2) Add Section R101.3.1 as follows (RE-18-02-21):

R101.3.1 Toilet Facilities for Workers. Toilet facilities shall be provided for construction workers and such facilities shall be maintained in a sanitary condition. Construction worker toilet facilities of the non-sewer type shall conform to ANSI Z4.3.

3) Amend Section R105.2 as follows (RE-18-03-21):

R105.2 Work exempt from permit. Exemption from *permit* requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this *jurisdiction*. *Permits* shall not be required for the following:

Building:

1. One-story detached *accessory structures*, provided that the floor area does not exceed 200 square feet (18.58 m²).

1.1 Tents under 400 square feet (37.2 m²).

[Remainder of section unchanged]

4) Amend Section R102.7 as follows (RE-18-04-21):

R102.7 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code, ~~the *International Property Maintenance Code* or the *International Fire Code*~~, or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

5) Amend Section R202 adding the definition as follows (RE-18-06-21):

BIOMASS. As defined in New Hampshire Administrative Rules Env-A 1401.03(d).

6) Amend Section R202 adding the definition as follows (RE-18-05-21):

BIOMASS FUEL. For use in this section, biomass fuels are defined as "solid" organic matter, not including woods derived from construction or demolition debris; wood that has been chemically treated; or agricultural crops or aquatic plants or byproducts from such crops or plants which have been used to rehabilitate a contaminated or brownfields site through a process known as "phytoremediation".

7) Amend TABLE R301.2(1) as follows (RE-18-07-21):

Add footnote "p" to the Ground Snow Load column of Table R301.2(1).

TABLE R301.2(1) CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA																
GROUND SNOW LOAD ^a	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP ^c	ICE BARRIER UNDERLAYMENT REQUIRED ^d	FLOOD HAZARDS ^e	AIR FREEZING INDEX ^f	MEAN ANNUAL TEMP ^g			
	Speed ^a (mph)	Topographic effects ^b	Special wind region ^h	Windborne debris zone ^h		Weathering ⁱ	Frost line depth ^j	Termites ^k								
MANUAL J DESIGN CRITERIA ^a																
Elevation	Latitude		Winter heating	Summer cooling	Altitude correction factor		Indoor design temperature	Design temperature cooling			Heating temperature difference					
Cooling temperature difference	Wind velocity heating		Wind velocity cooling	Coincident wet bulb	Daily range		Winter humidity	Summer humidity								

p. The jurisdiction shall fill in this part of the table with the ground snow load from Figure R301.2(5) or from Table 1 of *Ground Snow Loads for New Hampshire* ERDC/CRREL TR-02-6.

8) Amend Section R302.13 as follows (RE-18-08-21):

R302.13 Fire protection of floors. Floor assemblies that are not required elsewhere in this code to be fire-resistance rated, shall be provided with a 1/2-inch (12.7 mm) gypsum wallboard membrane, 5/8-inch (16 mm) wood structural panel membrane, or equivalent on the underside of the floor framing member. Penetrations or openings for ducts, vents, electrical outlets, lighting, devices, luminaires, wires, speakers, drainage, piping and similar openings or penetrations shall be permitted.

Exceptions:

1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Section P2904, NFPA 13D, or other approved equivalent sprinkler system.
2. Floor assemblies located directly over a crawl space not intended for storage or fuel-fired appliances.
3. Portions of floor assemblies shall be permitted to be unprotected where complying with the following:
 - 3.1. The aggregate area of the unprotected portions does not exceed 80 square feet (7.4 m²) per story
 - 3.2. Fireblocking in accordance with Section R302.11.1 is installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly.
4. Wood floor assemblies using dimension lumber or structural composite lumber equal to or greater than 2-inch by 10-inch (50.8 mm by 254 mm) nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.
5. Floor assemblies having been protected by an alternative method that has been evaluated as meeting the criteria for alternative methods of construction as outlined in R104.11.

9) Amend Section R310.1 as follows (RE-18-09-21):

R310.1 Emergency escape and rescue opening required. *Basements, habitable attics* and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where *basements* contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a *yard* or court that opens to a public way.

Exceptions:

1. Storm shelters and *basements* used only to house mechanical *equipment* not exceeding a total floor area of 200 square feet (18.58 m²).
2. Where the *dwelling* or *townhouse* is equipped with an automatic sprinkler system installed in accordance with Section P2904, sleeping rooms in *basements* shall not be required to have emergency escape and rescue openings provided that the *basement* has one of the following:
 - 2.1 One means of egress complying with Section R311 and one emergency escape and rescue opening.
 - 2.2 Two means of egress complying with Section R311.
3. Emergency escape and rescue openings required by Section 310.1 are permitted to be omitted where the building is protected by a sprinkler system complying with Section R313.

10) Amend Section R313.2 as follows (RE-18-10-21):

R313.2 One- and two-family dwellings automatic fire systems. ~~An automatic residential fire sprinkler system shall not be installed~~ required in one- and two-family *dwellings*.

Exception: ~~An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential sprinkler system.~~

R313.2.1 Design and installation. Automatic residential fire sprinkler systems shall be designed and installed in accordance with Section P2904 or NFPA 13D.

R313.2.2 One- and Two-Family dwellings automatic fire systems. Buildings provided with an automatic residential fire sprinkler system shall be allowed to exercise all credits regarding egress in accordance with RSA 155-A:2 II.

11) Amend Section M2001.1.1 as follows (RE-18-11-21):

M2001.1.1 Standards. Oil-fired boilers and their control systems shall be *listed* and *labeled* in accordance with UL 726. Electric boilers and their control systems shall be *listed* in accordance with UL 834. Boilers shall be designed and constructed in accordance with the requirements of ASME CSD-1 and as applicable, the ASME Boiler and Pressure Vessel Code, Sections I and IV. Gas-fired boilers shall conform to the requirements listed in Chapter 24. Solid Fuel-Burning Boilers listed and conforming to European Committee for Standardization 2012 EN 303-5 "Heating Boilers – Part 5: Heating Boilers for Solid-Fuels, Manually and Automatically Stoked, Nominal Heat Output of Up to 300 Kw – Terminology, Requirements, Testing and Marking" shall be permitted for biomass fuels when all data plates; warning labels; limits on temperature and pressure of relief valves; installation, operations, and maintenance manuals; all operating and safety gauges and controls; and construction and emissions specification documents are provided in English using U.S. customary system units of measurement. All pipe connections shall meet the North American ASTM standards for pipe and fittings.

12) Amend Section N1103.3.4 as follows (RE-18-13-21):

N1103.3.4 (R403.3.4) Duct leakage (Prescriptive). The total leakage of the ducts, where measured in accordance with Section R403.3.3, shall be as follows:

1. Rough-in test: The total leakage shall be less than or equal to 4 ~~6~~ cubic feet per minute (~~113.3~~ 170 L/min) per 100 square feet (9.29 m²) of conditioned floor area where the air handler is installed at the time of the test. Where the air handler is not installed at the time of the test, the

total leakage shall be less than or equal to ~~3~~ 4 cubic feet per minute (~~85~~ 113.3 L/min) per 100 square feet (9.29 m²) of conditioned floor area.

2. Postconstruction test: Total leakage shall be less than or equal to ~~4~~ 8 cubic feet per minute (~~113.3~~ 226.6 L/min) per 100 square feet (9.29 m²) of conditioned floor area.

13) Delete Chapter 24 in its entirety and add the following (RE-18-14-21):

**CHAPTER 24
FUEL GAS**

G2401.1. Fuel gas systems shall comply with the New Hampshire State Fire Code as amended.

14) Amend Section P2603.5.1 as follows (RE-18-15-21):

P2603.5.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall conform to RSA 485-A relative to minimum depth below finished grade ~~be a minimum of [NUMBER] inches (mm) below finished grade at the point of septic tank connection.~~ Building sewers that connect to public sewers shall be a minimum depth of ~~[NUMBER]~~ 48 inches (1219 mm) below grade or adequately insulated to afford the same protection whenever a condition arises that the 48 inches (1219 mm) cannot be attained.

15) Amend Section P2903.10 as follows (RE-18-16-21):

P2903.10 Hose bibb. Hose bibbs subject to freezing, including the “frost-proof” type, shall be equipped with an accessible stop-and-waste-type valve inside the building so that they can be controlled and/or drained during cold periods.

~~**Exception:** Frostproof hose bibbs installed such that the stem extends through the building insulation into an open heated or semi-conditioned space need not be separately valved (see Figure P2903.10).~~

16) Amend Section P3003.9.2 as follows (RE-18-18-21):

P3003.9.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. ~~An purple primer, or other~~ approved primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564 or CSA B137.3, CSA B181.2 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM 2855. Solvent-cement joints shall be permitted above or below ground.

17) Amend Section P3103.1 as follows (RE-18-19-21):

P3103.1 Roof extension. Open vent pipes that extend through a roof shall be terminated at least ~~6~~ 18 inches (~~152~~ 457 mm) above the roof or 6 inches (152 mm) above the anticipated snow accumulation, whichever is greater, except that where a roof is to be used for any purpose other than weather protection the vent extension shall be run at least 7 feet (2134 mm) above the roof.

18) Delete Chapters 34 – 43 in their entirety and add the following (RE-18-20-21):

Refer to the *National Electrical Code* as referenced in RSA 155-A:1, IV.

19) Amend Chapter 44 as follows (RE-18-21-21):

CEN European Committee for Standardization

CEN-CENELEC Management Centre

Avenue Marnix 17

B-100 Brussels

Tel: +32 2 550 08 11

Fac: +32 2 550 08 19

EN European Standard

303-5 Heating Boilers - Part 5: Heating Boilers for Solid-Fuels. Manually and Automatically Stoked. Nominal Heat Output of Up to 500 Kw -Terminology, Requirements, Testing and Marking (2012)

20) Adopt Appendix J in its entirety per Section R102.5 and add the following (RE-18-22-21):

APPENDIX J

EXISTING BUILDINGS AND STRUCTURES

Adopt Appendix J in its entirety per Section 101.2.

21) Adopt Appendix Q in its entirety per Section R102.5 and add the following (RE-18-23-21):

APPENDIX Q

TINY HOUSES

Adopt Appendix Q in its entirety per Section 101.2.

End of *International Residential Code*® 2018 amendments

International Swimming Pool and Spa Code® 2018 amendments

1) Amend Section 101.1 as follows (SP-18-01-21):

R101.1 Title. These regulations shall be known as the *Swimming Pool and Spa Code* of ~~[NAME OF JURISDICTION]~~ the State of New Hampshire hereinafter referred to as "this code."

2) Amend Section 105.1 as follows (SP-18-02-21):

105.1 When required. Any owner, or owner's authorized agent who desires to construct, enlarge, alter, repair, move, or demolish a pool or spa or to erect, install, enlarge, alter, repair, remove, convert or replace any system, the installation of which is regulated by this code, or to cause any such work to be performed, shall first make application to the code official and obtain the required permit for the work.

105.1.1 NH Department of Environmental Services Approval. All swimming pools and spas, meeting the definition of public bathing space or public bathing facility per Env-Wq 1100 rules, shall secure NHDES approval in addition to local jurisdiction approval.

3) Amend Section 105.6.2 as follows (SP-18-03-21):

105.6.2 Fee schedule. The fees for work shall be as indicated in the following schedule:
[LOCAL JURISDICTION TO INSERT APPROPRIATE SCHEDULE]

4) Delete Section 105.6.3 as follows (SP-18-04-21):

105.6.3 Fee refunds. [Delete Section in its entirety] ~~The code official shall authorize the refunding of fees as follows:~~

- ~~1. The full amount of any fee paid hereunder that was erroneously paid or collected.~~
- ~~2. Not more than [SPECIFY PERCENTAGE] percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.~~
- ~~3. Not more than [SPECIFY PERCENTAGE] percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan review effort has been expended.~~

~~The code official shall not authorize the refunding of any fee paid except upon written application filed by the original permittee not later than 180 days after the date of fee payment.~~

5) Amend Section 107.4 as follows (SP-18-05-21):

107.4 Violation penalties. Any person who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair a pool or spa in violation of the *approved* construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a ~~[SPECIFY OFFENSE]~~, punishable by a fine of not more than ~~[AMOUNT]~~ dollars or by imprisonment not exceeding ~~[NUMBER OF DAYS]~~, or both such fine and imprisonment subject to penalties as prescribed by law. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

6) Amend Section 107.5 as follows (SP-18-06-21):

107.5 Stop work orders. Upon notice from the *code official*, work on any system that is being performed contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such

notice shall be in writing and shall be given to the owner of the property, or to the owner's authorized agent, or to the person performing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be ~~liable to a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars~~ subject to penalties as prescribed by law.

7) Amend Section 302.1 as follows (SP-18-07-21):

302.1 Electrical. Electrical requirements for aquatic facilities shall be in accordance with the edition of NFPA 70 referenced in RSA 155-A:1, IV or the *International Residential Code*, as applicable in accordance with Section 102.7.1.

Exception: Internal wiring for portable *residential* spas and portable *residential* exercise spas.

End of *International Swimming Pool and Spa Code*® 2018 amendments

NFPA 70™ – National Electrical Code® 2020 amendments

1) Amend Section 210.5(C)(1) as follows (EL-20-01-21):

210.5 Identification for Branch Circuits

(C) Identification of Ungrounded Conductors Ungrounded conductors shall be identified in accordance with 210(C) (1) or (2), as applicable

(1) Branch Circuits Supplied from More Than One Nominal Voltage System. Where the premises wiring system has branch circuits supplied by more than one nominal voltage system, each ungrounded conductor of a branch circuit shall be identified by ~~phase or line~~ and system at all termination, connection, and splice points in compliance with 210(5)(C)(1)(a) or (b)

(a) *Means of Identification* The means of identification shall be permitted to be by separate color coding, marking tape, tagging, or other approved means.

(b) *Posting of Identification Means* The method utilized for conductors originating within each branch circuit panelboard or similar branch-circuit distribution equipment shall be documented in a manner that is readily available or shall be permanently posted at each branch-circuit panelboard or similar branch-circuit distribution equipment. The label shall be of sufficient durability to withstand the environment involved and shall not be handwritten

2) Amend Section 210.8(A) as follows (EL-20-02-21):

210.8(A) Dwelling Units. All 125-volt, single phase 15 and 20 ampere ~~through 250-volt~~ receptacles installed in the locations specified in 210.8(A)(1) through (A)(~~11~~10) ~~and supplied by single-phase branch circuits rated 150 volts or less to ground~~ shall have ground-fault circuit-interrupter protection for personnel.

(1) – (4) unchanged

(5) Unfinished basements

Exception unchanged

(6) – (10) unchanged

~~(11) Indoor Damp and Wet Locations~~

3) Amend Section 210.8(B) as follows (EL-20-03-21):

210.8(B) Other Than Dwelling Units. All 125-volt ~~through 250-volt~~ receptacles supplied by single-phase branch circuits ~~rated 150 volts or less to ground, 50 20 amperes or less, and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 100 amperes or less,~~ installed in the locations specified in 210.8(B)(1) through (B)(12) shall have ground-fault circuit-interrupter protection or personnel.

(1) – (5) unchanged

(6) Indoor ~~damp~~ and wet locations

(7) – (12) unchanged

4) Delete Section 210.8(E) as follows (EL-20-04-21):

210.8 (E) Equipment Requiring Servicing. [Delete Section in its entirety] ~~GFCI protection shall be provided for the receptacles required by 210.63.~~

5) Delete Section 210.8(F) as follows (EL-20-05-21):

210.8(F) Outdoor Outlets. [Delete Section in its entirety] ~~All outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have ground-fault circuit interrupter protection for personnel.~~

6) Amend Section 210.12 as follows (EL-20-06-21):

210.12 Arc-Fault Circuit- Interrupter Protection. Arc-fault circuit-interrupter protection shall be provided as required in 210.12(A), (B), ~~(C)~~ and ~~(D)~~ (C). The arc-fault circuit interrupter shall be installed in a readily accessible location.

Exception: Arc fault circuit interrupter protective devices required by 210.12(A), (B), and (C) shall be permitted to be removed and replaced with non-AFCI devices as permitted by RSA 155-A:3-c.

210.12(A) Dwelling Units. unchanged

210.12(B) Dormitory Units. All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets and devices installed in dormitory unit bedrooms, living rooms, hallways, closets, ~~bathrooms~~, and similar rooms shall be protected by any of the means described in 210.12(A)(1) through (6).

~~**210.12(C) Guest Rooms, Guest Suites, and Patient Sleeping Rooms in Nursing Homes and Limited-Care Facilities.** All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets and devices installed in guest rooms and guest suites of hotels and motels and patient sleeping rooms in nursing homes and limited-care facilities shall be protected by any of the means described in 210.12(A)(1) through (6).~~

210.12(D) (C) Branch Circuit Extensions or Modifications — Dwelling Units, Dormitory Units, and Guest Rooms and Guest Suites. Where branch circuit wiring for any of the areas specified in 210.12(A), (B), or (C) is modified, replaced, or extended, the branch circuit shall be protected by one of the following:

- (1) By any of the means described in 210.12(A)(1) through (A)(6)
- (2) A listed outlet branch-circuit-type AFCI located at the first receptacle outlet of the existing branch circuit

Exception: AFCI protection shall not be required where the extension of the existing branch circuit conductors is not more than 1.8 m (6 ft) and does not include any additional outlets or devices, other than splicing devices. This measurement shall not include the conductors inside an enclosure, cabinet, or junction box.

7) Amend Section 210.52(C) as follows (EL-20-07-21):

210.52 Dwelling Unit Receptacle Outlets

(C) Countertops and Work Surfaces. In kitchens, pantries, breakfast rooms, dining rooms, and similar areas of dwelling units, receptacle outlets for countertop and work surfaces that are 300 mm (12 in.) or wider shall be installed in accordance with 210.52(C)(1), through (C)(~~34~~) and shall not be considered as the receptacle outlets required by 210.52(A).

(1) For the purposes of this section, receptacles installed in accordance with 210.52(C)(1)(a) or (C)(1)(b) shall be considered as one receptacle outlet.

~~(a) where using multi-outlet assemblies, e~~ Each 300 mm (12 in.) of a multi-outlet assembly containing two or more receptacles installed in individual or continuous lengths ~~shall be considered to be one receptacle outlet.~~

(b) Each two receptacles installed in the same device box.

(42) Wall Spaces. Receptacle outlets shall be located so there is no point along the wall line is more than 600 mm (24 in.) measured horizontally from a receptacle outlet in that space.

Exception: Receptacle outlets shall not be required directly behind a range, counter-mounted cooking unit, or sink in the installation described in Figure 210.52(C)(1).

(23) Island and Peninsula Countertops and Work Surfaces: Receptacle outlets shall be installed in accordance with 210.52(C)(23)(a) and (C)(23)(b).

(a) Locations With Countertop or Work Surface Wall Spaces.

(1) At least one receptacle outlet shall be installed where the location is also provided with countertop or work surfaces totaling more than 1.2 linear meters (4 linear feet).

(b) Locations Without Countertop or Work Surface Wall Spaces. Receptacle outlets shall be installed in accordance with (1) or (2). Receptacle outlets shall be permitted to be located as determined by the installer, designer, or building owner.

(a1) At least one receptacle outlet shall be provided for the first 0.84 m² (9ft²), or fraction thereof, of the countertop or work surface. A receptacle outlet shall be provided for every additional 1.7 m² (18 ft²), or fraction thereof, the countertop or work surface.

(b2) At least one receptacle outlet shall be located within 600 mm (2 ft) of the outer end of a peninsular countertop or work surface. ~~Additional required receptacle outlets shall be permitted to be located as determined by the installer, designer, or building owner. The location of the receptacle outlets shall be in accordance with 210.52(C)(3).~~ A peninsula countertop is measured from the connected perpendicular wall.

(34) Receptacle Outlet Location. Receptacle outlets shall be located in one or more of the following:

(1) On or Above Countertop or Work Surfaces: On or above, but not more than 500 mm (20 in), above the countertop or work surfaces.

(2) In Countertop or Work Surfaces: Receptacle outlets assemblies listed for use in countertop or work surfaces shall be permitted in countertop or work surfaces.

(3) Below countertop or work surfaces: Not more than 300 mm (12 in) below the countertop or work surface. Receptacles installed below a countertop or work surface shall not be located where the countertop or work surface extends more than 150 mm (6 in.) beyond its support base.

Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, sinks, or rangetops as covered in 210.52(C)(1), Exception, or appliances occupying assigned space shall not be considered as these required outlets.

Informational Note No. 1: See 406.5(E) and 406.5(G) for installation of receptacles in countertops and 406.5(F) and 405.5(G) for installations of receptacles in work surfaces. See 380.10 for installations of multioutlet assemblies.

Informational Note No. 2: See Annex J and ANSI/ICC A117.1-2009, Standard on Accessible and Usable Buildings and Facilities.

8) Amend Section 210.63(B)(2) as follows (EL-20-08-21):

210.63(B)(2) Indoor Equipment Requiring Dedicated Equipment Spaces. ~~Where~~ For equipment, other than service equipment, ~~requires~~ requiring dedicated equipment space as specified in 110.26(E), the required receptacle outlet shall be located within the same room or area as the electrical equipment ~~and shall not be connected to the load side of the equipment's branch circuit disconnecting means.~~

9) Delete Section 230.67 as follows (EL-20-09-21):

230.67 Surge Protection. [Delete Section in its entirety]

~~(A) Surge Protective Device. All services supplying dwelling units shall be provided with a surge protective device (SPD).~~

~~(B) Location. The SPD shall be an integral part of the service equipment or shall be located immediately adjacent thereto.~~

~~*Exception: The SPD shall not be required to be located in the service equipment as required in (B) if located at each next level distribution equipment downstream toward the load.*~~

~~(C) Type. The SPD shall be a Type 1 or Type 2 SPD.~~

~~(D) Replacement. Where service equipment is replaced, all of the requirements of this section shall apply.~~

10) Amend Section 230.71(B) as follows (EL-20-10-21):

230.71 Maximum Number of Disconnects.

(B) Two to Six Service Disconnecting Means.

Two to six service disconnects shall be permitted for each service permitted by 230.2 or for each set of service entrance conductors permitted by 230.40, Exception No. 1, 3, 4, or 5. The two to six service disconnecting means shall be permitted to consist of a combination of any of the following:

- (1) Separate enclosures with a main service disconnecting means in each enclosure
- (2) Panelboards with a main service disconnecting means in each panelboard enclosure
- (3) Switchboard(s) where there is only one service disconnect in each separate vertical section where there are barriers separating each vertical section
- (4) Service disconnects in switchgear or metering centers where each disconnect is located in a separate compartment
- (5) Metering Centers with barriers as required in article 230.62(C)

11) Amend Section 250.140 as follows (EL-20-11-21):

250.140 Frames of Ranges and Clothes Dryers. Frames of electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the circuit for these appliances shall be connected to the equipment grounding conductor in the manner specified by 250.134 or 250.138.

Exception No.1: For existing branch-circuit installations only where an equipment grounding conductor is not present in the outlet or junction box, the frames of electric ranges, wall-mounted ovens, counter mounted cooking units, clothes dryers, and outlet or junction boxes that are part of the circuit for these appliances shall be permitted to be connected to the grounded circuit conductor if all the following conditions are met.

- (1) The supply circuit is 120/240-volt, single-phase, 3-wire; or 208Y/120-volt derived from a 3-phase, 4-wire, wye-connected system.
- (2) The grounded conductor is not smaller than 10 A WG copper or 8 A WG aluminum.
- (3) The grounded conductor is insulated, or the grounded conductor is uninsulated and part of a Type SE service-entrance cable and the branch circuit originates at the service equipment.
- (4) Grounding contacts of receptacles furnished as part of the equipment are bonded to the equipment.

Exception No. 2: For existing branch-circuit installations only where the equipment supplies a dwelling unit(s) and there is no equipment grounding conductor present in the outlet or junction box, the frames of the appliances specified in Exception No. 1 shall be permitted to be connected to the grounded conductor provided all the conditions specified in (1), (2) and (4) of Exception No. 1 are met, the grounded conductor of the circuit supplying the appliance(s) is part of a nonmetallic sheathed cable and it is insulated or covered within the supply enclosure so it does not make contact with any normally non-current-carrying metal parts.

12) Amend Section 314.27(C) as follows (EL-20-12-21):

314.27(C) Boxes at Ceiling-Suspended (Paddle) Fan Outlets.

Outlet boxes or outlet box systems used as the sole support of a ceiling-suspended (paddle) fan shall be listed, shall be marked by their manufacturer as suitable for this purpose, and shall not support ceiling-suspended (paddle) fans that weigh more than 32 kg (70 lb). For outlet boxes or outlet box systems designed to support ceiling-suspended (paddle) fans that weigh more than 16 kg (35 lb), the required marking shall include the maximum weight to be supported.

~~Outlet boxes mounted in the ceilings of habitable rooms of dwelling occupancies in a location acceptable for the installation of a ceiling-suspended (paddle) fan shall comply with one of the following:~~

- ~~(1) Listed for the sole support of ceiling-suspended (paddle) fans~~
- ~~(2) An outlet box complying with the applicable requirements of 314.27 and providing access to structural framing capable of supporting of a ceiling-suspended (paddle) fan bracket or equivalent~~
Where spare, separately switched, ungrounded conductors are provided to a ceiling-mounted outlet box, in a location acceptable for a ceiling-suspended (paddle) fan in one-family, two-family, or multifamily dwellings, the outlet box or outlet box system shall be listed for sole support of a ceiling suspended (paddle) fan.

13) Amend Section 334.10 as follows (EL-20-13-21):

334.10 Uses Permitted. Type NM, Type NMC, and Type NMS cables shall be permitted to be used in the following, except as prohibited in 334.12:

- (1) No change.

- (2) Multi-family dwellings permitted to be of Types III, IV, and V construction.
- (3) Other structures permitted to be of Types III, IV and V construction. Except as permitted by 334.10
- ~~(6),~~ Cables shall be concealed within walls, floors, or ceilings that provide a thermal barrier of material that has at least a 15-minute finish rating as identified in listings of fire-rated assemblies.

Exception to (2) and (3): For buildings or structures required to be of Type I or Type II construction, Type NM, Type NMC, and Type NMS cables shall be permitted to be used, provided that where so applied in buildings or structures exceeding three stories above grade, circuits run in Type NM, NMC or NMS cable shall not leave the floor or dwelling unit from which the circuits originate

- (4) No change.
- (5) No change.
- (6) Exposed within:
- a. dropped and suspended ceiling cavities.
 - b. accessible attics and roof spaces.
 - c. unfinished basements and crawl spaces.

Except as Permitted by 334.30 (B) (2) for connections to luminaires and equipment, cables shall be installed to closely follow the surface of framing members, running boards, or the equivalent.

14) Amend Section 334.12 as follows (EL-20-13-21):

334.12 Uses Not Permitted.

(A) Types NM, NMC, and NMS. Types NM, NMC, and NMS cables shall not be permitted as follows:

- (1) In any dwelling or structure not specifically permitted in 334.10(1), (2), (3) and (5)
- ~~(2) Exposed within a dropped or suspended ceiling cavity in other than one- and two-family and multifamily dwellings.~~
- ~~(32)~~ As service-entrance cable.
- ~~(43)~~ In commercial garages having hazardous (classified) locations as defined in 511.3.
- ~~(54)~~ In theaters and similar locations, except where permitted in 518.4(8).
- ~~(65)~~ In motion picture studios.
- ~~(76)~~ In storage battery rooms.
- ~~(87)~~ In hoistways or on elevators or escalators.
- ~~(98)~~ Embedded in poured cement, concrete, or aggregate.
- ~~(109)~~ In hazardous (classified) locations, except where specifically permitted by other articles in this Code.

15) Amend Section 406.12 as follows (EL-20-14-21):

406.12 Tamper-Resistant Receptacles. All 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles in the areas specified in 406.12(1) through ~~(6)~~ (8) shall be listed tamper-resistant receptacles.

- (1) – (5) unchanged
- ~~(6) Subset of assembly occupancies described in 518.2 to include places of awaiting transportation, gymnasiums, skating rinks, and auditoriums~~
- ~~(7)~~(6) Dormitory units
- ~~(8) Assisted living facilities~~

16) Amend Section 422.5(A) as follows (EL-20-15-21):

422.5 Ground-Fault Circuit-Interrupter (GFCI) Protection for Personnel.

(A) **General.** Appliances identified in 422(A)(1) through (A)(7) rated 150 volts or less to ground and 60 20 amperes or less, single ~~or 3~~ phase, shall be provided with Class A GFCI protection for personnel. Multiple Class A GFCI protective devices shall be permitted but shall not be required.

17) Amend Section 422.16(B)(2) as follows (EL-20-16-21):

422.16(B)(2) Built-in Dishwashers and Trash Compactors.

Built-in dishwashers and trash compactors shall be permitted to be cord-and-plug-connected with a flexible cord identified as suitable for the purpose in the installation instructions of the appliance manufacturer where all of the following conditions are met:

- (1) For a trash compactor, the length of the cord shall be 0.9 m to 1.2 m (3 ft to 4 ft) measured from the face of the attachment plug to the plane of the rear of the appliance.
- (2) For a built-in dishwasher, the length of the cord shall be 0.9 m to 2.0 m (3 ft to 6.5 ft) measured from the face of the attachment plug to the plane of the rear of the appliance.
- (3) Receptacles shall be located to protect against physical damage to the flexible cord.
- (4) The receptacle for a trash compactor shall be located in the space occupied by the appliance or adjacent thereto.
- (5) The receptacle for a built-in dishwasher shall be located in the space adjacent to the space occupied by the dishwasher.

~~Where the flexible cord passes through an opening, it shall be protected against damage by a bushing, grommet, or other approved means.~~

- (6) The receptacle shall be accessible.
- (7) The flexible cord shall have an equipment grounding conductor and be terminated with a grounding-type attachment plug.

Exception: A listed appliance distinctly marked to identify it as protected by a system of double insulation shall not be required to be terminated with a grounding-type attachment plug

18) Amend Section 440.14 as follows (EL-20-17-21):

440.14 Location. Disconnecting means shall be located within sight from, and readily accessible from the air-conditioning or refrigerating equipment. The disconnecting means shall be permitted to be installed on or within the air-conditioning or refrigerating equipment.

The disconnecting means shall not be located on panels that are designed to allow access to the air-conditioning or refrigeration equipment or to obscure the equipment nameplate(s).

Exception No. 1: Where the disconnecting means provided in accordance with 430.102(A) is lockable in accordance with 110.25 and the refrigerating or air-conditioning equipment is essential to an industrial process in a facility with written safety procedures, and where the conditions of maintenance and supervision ensure that only qualified persons service the equipment, a disconnecting means within sight from the equipment shall not be required.

Exception No. 2: Where an attachment plug and receptacle serve as the disconnecting means in accordance with 440.13, their location shall be accessible but shall not be required to be readily accessible

Exception no. 3: The disconnect for an indoor unit of a ductless mini-split system shall not be required if the disconnect for the outdoor condensing unit that feeds the indoor unit is lockable in the open position in accordance with 110.25.

19) Amend Section 450.9 as follows (EL-20-18-21):

450.9 Ventilation. The ventilation shall dispose of the transformer full-load heat losses without creating a temperature rise that is in excess of the transformer rating.

Informational Note No. 1: See IEEE C57.12.00-2015, *General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers*, and IEEE C57.12.01-2015, *General Requirements for Dry-Type Distribution and Power Transformers*.

Informational Note No. 2: Additional losses occur in some transformers where nonsinusoidal currents are present, resulting in increased heat in the transformer above its rating. See IEEE C57.110-2008, *Recommended Practice for Establishing Liquid-Filled and Dry-Type Power and Distribution Transformer Capability When Supplying Nonsinusoidal Load Currents*, where transformers are utilized with nonlinear loads.

Transformers with ventilating openings shall be installed so that the ventilating openings are not blocked by walls or other obstructions. The required clearances shall be clearly marked on the transformer. ~~Transformer top surfaces that are horizontal and readily accessible shall be marked to prohibit storage.~~

20) Delete Section 680.4 as follows (EL-20-19-21):

680.4 Inspections After Installation. [Delete Section in its entirety]

~~The authority having jurisdiction shall be permitted to require periodic inspection and testing.~~

End of NFPA 70™ – National Electrical Code® 2020 amendments