

APPENDIX J - EXISTING BUILDINGS & STRUCTURES - AMENDMENTS

The ninth edition building code became first effective on October 20, 2017 and, with a shortened concurrency period, the new code came into full force and effect on **January 1, 2018**.

The new, ninth edition code is based on modified versions of the following **2015 International Codes as published by the International Code Council (ICC)**.

- The International Building Code (IBC);
- International Residential Code (IRC);
- International Existing Building Code (IEBC);
- International Mechanical Code (IMC);
- International Energy Conservation Code (IECC);
- International Swimming Pool and Spa Code (ISPSC);
- Portions of the International Fire Code (IFC).

Massachusetts amends these code fairly significantly to accommodate for unique issues in the commonwealth. This package of amendments revises the IRC only. Please see base code amendments for changes to other listed codes that comprise the ninth edition.

Please remember that the Massachusetts amendments posted on-line are **unofficial versions** and are meant for convenience only. Official versions of the Massachusetts amendments may be purchased from the State House Bookstore @ [Shop the Bookstore](#) and any of the I-Codes may be purchased from the International Code Council (ICC) @ iccsafe.org.

Additionally, the ICC publishes transition documents that identify changes from the 2009 to the 2015 I-Codes for those who may have interest.

- [International Building Code \(IBC\) Transition](#)
- [International Residential Code \(IRC\) Transition](#).

Note: *The residential code is part of the overall building code, which is referred to as 780 CMR. It is considered to be Chapter 51 in the overall code, which is why you will see reference to 780 CMR Chapter 51 in the amendments. The residential code is applicable to detached one- and two-family dwellings, multiple-family dwellings (townhouses) not more than three stories in height above the grade plane and/or their accessory structures not more than three stories in height above grade. See the base code for other building types.*

51.00: continued

AF103.4.2 Revise the subsection as follows:

AF103.4.2 Soil-gas-retarder. A soil-gas-retarder shall be placed on top of the gas-permeable layer prior to casting the slab or placing the floor assembly. The soil-gas retarder shall cover the entire floor area with separate sections lapped not less than 12 inches (305 mm) and shall extend upward six inches and be sealed to the wall with an ASTM C290 class 25 or higher sealant or equal. The soil-gas-retarder shall fit closely around any pipe, wire, or other penetrations of the material. Punctures or tears in the material shall be sealed or covered. Under-slab insulation, if used, shall be placed on top of the sheeting.

AF103.4.3 Revise the subsection as follows:

AF103.4.3 "T" Fitting and Vent Pipe. Before a slab is cast or other floor system is installed, a "T" fitting shall be inserted below the slab or other floor system and the soil-gas-retarder. The "T" fitting shall be connected to a three-inch minimum vertical vent pipe. The vent pipe shall extend through the conditioned space of the dwelling and terminate not less than 12 inches (305 mm) above the roof in a location not less than ten feet (3,048 mm) away from any window or other opening into the conditioned spaces of the building that is less than two feet (610 mm) below the exhaust point. The horizontal legs of the "T" fitting shall connect to two five-foot long pieces of four-inch diameter perforated pipe laid horizontally in a 50 in² bed of gravel, filled with the same gravel as used in the gas-permeable layer.

Appendix G: PIPING STANDARDS FOR VARIOUS APPLICATIONS (Reserved)

Appendix H: PATIO COVERS (Adopted in full)

Appendix I: PRIVATE SEWAGE DISPOSAL (Adopted as amended)

AI101.1 Revise the section as follows:

AI101.1 Scope. Private sewage disposal systems shall conform to the requirements of 310 CMR 15.000: *The State Environmental Code, Title 5: Standard Requirements for the Siting, Construction, Inspection, Upgrade and Expansion of On-site Sewage Treatment and Disposal Systems and for the Transport and Disposal of Septage*, and any additional legal restrictions imposed by the municipal health department.

Appendix J: EXISTING BUILDINGS AND STRUCTURES (Adopted as amended)

AJ101.1 Revise the section as follows:

AJ101.1 General. The purpose of *Appendix J* is to encourage the continued use or reuse of legally existing buildings and structures. The provisions of *Appendix J* are intended to permit work in existing buildings that is consistent with the purpose of 780 CMR 51.00. Compliance with these provisions shall be deemed to meet the requirements of 780 CMR 51.00.

Features of existing construction which do not meet the requirements of 780 CMR 51.00 for new construction shall be presumed to have met the regulations, codes or laws in effect at the time of construction or alteration and, if so, shall be deemed to be existing nonconforming. Unless stated otherwise, nothing in *Appendix J* shall require the upgrading or replacement of any existing nonconforming feature or component of an existing building, provided the feature, component or system is in serviceable condition. Components or features of an existing building which, in the opinion of the building official, are dangerous, unsafe, damaged, significantly deteriorated or which otherwise present a threat to occupants or to public safety shall be remediated in accordance with 780 CMR 51.00.

Any new building system or portion thereof shall conform to 780 CMR 51.00 for new construction to the fullest extent practicable. However, individual components of an existing building system may be repaired or replaced without requiring that system to comply fully with 780 CMR 51.00 unless specifically required by *Appendix J*.

For compliance of work governed by other codes, including the specialized codes, see section R101.4.

51.00: continued

AJ102.1 Revise the section as follows:

AJ102.1 General. Regardless of the category of work being performed, the work shall not cause the structure to become unsafe or adversely affect the performance of the building; shall not cause a system regulated by 780 CMR 51.00 to become unsafe, hazardous, insanitary or overloaded; and unless expressly permitted by these provisions, shall not make the building any less compliant with 780 CMR 51.00 or to any previously approved alternative arrangements than it was before the work was undertaken.

AJ102.3 Revise the section as follows:

AJ102.3 Smoke, Carbon Monoxide and Heat Protection. Smoke, carbon monoxide and heat protection shall be provided when required by this section and designed, located and installed in accordance with the provisions for new construction. See sections R314, R314.5, and R315.

AJ102.3.1 through AJ102.3.3 Add the subsections as follows:

AJ102.3.1 Adding or Creating One or More Sleeping Rooms.

1. **Single-family Dwelling.** When one or more sleeping rooms are added or created to an existing dwelling, the entire dwelling shall be provided with smoke, heat and carbon monoxide protection.
2. **Two-family Dwelling.** When one or more sleeping rooms are added or created to one dwelling unit, that unit shall be provided with smoke, heat and carbon monoxide protection detectors. When sleeping rooms are added or created to both units, the entire building shall be provided with smoke, heat and carbon monoxide protection.
3. **Townhouses Dwelling Unit.** When one or more sleeping rooms are added or created to an existing dwelling unit, the entire unit shall be provided with smoke, heat, and carbon monoxide protection.

AJ102.3.2 Complete Reconstruction. If a dwelling or townhouse building undergoes reconstruction such that more than 50% of walls and ceilings are open to framing, then the entire existing building shall be provided with smoke, heat and carbon monoxide protection.

AJ102.3.3 Adding an Attached Garage. If a garage is created under or attached to an existing dwelling unit, a heat detector shall be provided in the garage in accordance with R314.8.

AJ102.7.1 Add subsection as follows:

AJ102.7.1 Documentation of Compliance Alternatives. The building official shall ensure that the BBRS is provided with information regarding any and all compliance alternatives accepted by the building official within two weeks of acceptance.

AJ102.10 through AJ102.14 Add sections and associated subsections as follows:

AJ102.10 Unlined Chimneys. Where new HVAC appliances are connected to an unlined chimney, the chimney lining requirements of 248 CMR: *Board of State Examiners of Plumbers and Gas Fitters* or 527 CMR: *Board of Fire Prevention Regulations*, as applicable, and those of the appliance manufacturer, shall be satisfied. If the appliance is a solid fuel-burning appliance, the chimney shall be relined to satisfy requirements both of the code for new construction and those of the manufacturer, as applicable.

AJ102.11 Latent Conditions. When latent conditions are observed and which are determined by the licensed construction supervisor, the owner or the building official to be dangerous or unsafe, or when a component or system is determined to be unserviceable, said conditions shall be corrected in accordance with applicable provisions of 780 CMR 51.00. A building permit shall be obtained or the building permit shall be amended in accordance with the provisions of section R105 in order to reflect the necessary required work and the approval shall be obtained from the building official prior to commencement of the corrections.

51.00: continued

Exception: If the public safety so warrants, corrective actions are permitted to be made prior to amending the building permit application, providing that the building official is notified in writing within 24 hours of actions taken pursuant to this exception. This exception shall not be construed as to authorize constructive approval nor set aside the requirements to amend the permit application, nor shall the authority of the building official to enforce 780 CMR 51.00 be abridged. Such corrective actions shall be documented by the construction supervisor or the owner and submitted to the building official within 48 hours of the completion of the action under this exception. Such corrective work shall not be concealed until the building official has inspected and approved the work.

AJ102.12 Energy Efficiency. See section N1100.

AJ102.13 Roofing and Reroofing. See Chapter 9 of 780 CMR 51.00 generally and section R907.

AJ102.14 Accessibility for Persons with Disabilities. Accessibility requirements shall be in accordance with 521 CMR: *Architectural Access Board*.

AJ103.1 Revise the subsection as follows:

AJ103.1 General. If a building permit is required at the request of the prospective permit applicant, the building official or his or her legal designee may meet with the prospective applicant to discuss plans for any proposed work under these provisions prior to the application for the permit. The purpose of this preliminary meeting is for the building official to gain an understanding of the prospective applicant's intentions for the proposed work, and to determine, together with the prospective applicant, the specific applicability of these provisions.

AJ301.1.2 Delete the subsection in its entirety.

AJ301.2 and AJ301.3 Delete in their entirety.

AJ401.2.1 Add the subsection as follows:

AJ401.2.1 Emergency Escape and Rescue Windows. For one- and two-family dwellings and townhouses of no more than three stories in height, all emergency escape windows from sleeping rooms shall have a net clear opening of 3.3 ft² (0.307 m²). The minimum net clear opening shall be 20 inches by 24 inches (508 mm by 610 mm) in either direction except that windows in sleeping rooms of existing dwellings which do not conform to these requirements may be replaced without conforming to these dimensional requirements, provided that the windows do not significantly reduce the existing opening size.

Exception: Replacement windows utilized as emergency escape and rescue windows, other than double-hung windows, shall generally conform to the requirements of this section without conforming to the cited dimensional requirements, provided that such replacement windows do not significantly reduce the existing opening size.

AJ401.4 Replace the subsection as follows:

AJ401.4 Structural. Unreinforced masonry townhouse buildings shall have parapet bracing and wall anchors installed at the roofline whenever a reroofing permit is issued if required by 780 CMR 34.00: *Existing Structures*. Such parapet bracing and wall anchors shall be of an approved design. Where renovations may decrease the structural performance of the existing building, such proposed activities shall be evaluated by a registered design professional for adequacy, prior to such actual structural renovation.

AJ501.1 Revise the subsection as follows:

AJ501.1 Newly Constructed Elements. Additions, newly constructed elements, components and systems shall comply with the requirements of 780 CMR 51.00.

Exceptions:

1. Operable windows may be added without requiring compliance with the light and ventilation requirements of section R303.
2. Newly installed electrical equipment shall comply with the requirements of section AJ501.5.

51.00: continued

AJ501.4 Revise the subsection as follows:

AJ501.4 Structural. The minimum design loads for the structure shall be the loads applicable at the time the building was constructed, provided that a dangerous condition is not created. Structural elements that are uncovered during the course of the alteration and that are found to be unsound or dangerous shall be made to comply with the applicable requirements of 780 CMR 51.00. Where alterations may decrease the structural performance of the existing building, such proposed activities shall be evaluated by a registered design professional for adequacy, prior to such actual structural alterations.

AJ501.5 Revise the subsection as follows:

AJ501.5 Electrical Equipment and Wiring. *See 527 CMR 12.00: Massachusetts Electrical Code (Amendments).*

AJ601.5 Add a subsection as follows:

AJ601.5 Structural. Where reconstruction may decrease the structural performance of the existing building, such proposed activities shall be evaluated by a registered design professional for adequacy, prior to such actual structural reconstruction.

AJ701 Add a section as follows:

AJ701 HISTORIC BUILDINGS

AJ701.1 General. For historic building requirements, *see 780 CMR 34.00: Existing Building Code.*

Appendix K: SOUND TRANSMISSION (Adopted in full)

Appendix L: PERMIT FEES (*see 801 CMR 4.00: Rates, as applicable*) (Reserved)

Appendix M: HOME DAY CARE – R-3 OCCUPANCY (Reserved)

Appendix N: VENTING METHODS (Reserved)

Appendix O: AUTOMATIC VEHICULAR GATES (Adopted in full)

Appendix P: SIZING OF WATER PIPING SYSTEM (Reserved)

Appendix Q (Reserved)

Appendix R: LIGHT STRAW-CLAY CONSTRUCTION (Reserved)

Appendix S: STRAWABLE CONSTRUCTION (Reserved)

Appendix T: RECOMMENDED PROCEDURE FOR WORST-CASE TESTING OF ATMOSPHERIC VENTING SYSTEMS UNDER N1102.4 OR N1105 CONDITIONS \leq 5 ACH₅₀ (Reserved)

Appendix U: SOLAR-READY PROVISIONS – DETACHED ONE- AND TWO-FAMILY DWELLINGS, MULTIPLE SINGLE-FAMILY DWELLINGS (TOWNHOUSES)
(Adopted as amended)

Delete Appendix U and replace as follows:

SECTION AU101 (RB101) SCOPE

AU101.1 (RB101.1) General. These provisions shall be applicable for new construction, except additions.

51.00: continued

SECTION AU102 (RB102) GENERAL DEFINITIONS

SOLAR-READY ZONE. A section or sections of the roof or building overhang designated and reserved for the future installation of a solar photovoltaic or solar thermal system.

SECTION AU103 (RB103) SOLAR-READY ZONE

AU103.1 (RB103.1) General. New detached one- and two-family dwellings, and multiple single-family dwellings (townhouses) with not less than 600 ft² (55.74 m²) of roof area oriented between 110° and 270° of true north shall comply with sections AU103.2 through AU103.8 (RB103.2 through RB103.8).

EXCEPTIONS:

1. New residential buildings with a permanently installed on-site renewable energy system.
2. A building with a solar-ready zone that is shaded for more than 70% of daylight hours annually.
3. Buildings and structures as designed and shown in construction documents that do not meet the conditions for a solar-ready zone area.

AU103.2 (RB103.2) Construction Document Requirements for Solar-ready Zone. Construction documents shall indicate the solar-ready zone where applicable.

AU103.3 (RB103.3) Solar-ready Zone Area. The total solar-ready zone area shall consist of an area not less than 300 ft² (27.87 m²) exclusive of mandatory access or set back areas as required by 527 CMR: *Board of Fire Prevention Regulations*. New multiple single-family dwellings (townhouses) three stories or less in height above grade plane and with a total floor area less than or equal to 2,000 ft² (185.8 m²) per dwelling shall have a solar-ready zone area of not less than 150 ft² (13.94 m²). The solar-ready zone shall be composed of areas not less than five feet (1,524 mm) in width and not less than 80 ft² (7.44 m²) exclusive of access or set back areas as required by 527 CMR.

AU103.4 (RB103.4) Obstructions. Solar-ready zones shall consist of an area free from obstructions, including but not limited to vents, chimneys, and roof-mounted equipment.

Note: Nothing in AU103.4 (RB103.4) shall require any construction documents to be redesigned or reconfigured so as to create a solar-ready zone area.

AU103.5 (RB103.5) Roof Load Documentation. The structural design loads for roof dead load and roof live load shall be clearly indicated on the construction documents.

AU103.6 (RB103.6) Interconnection Pathway. Construction documents shall indicate pathways for routing of conduit or plumbing from the solar-ready zone to the electrical service panel or service hot water system.

AU103.7 (RB103.7) Electrical Service Reserved Space. The main electrical service panel shall have a reserved space to allow installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

AU103.8 (RB103.8) Construction Documentation Certificate. A permanent certificate, indicating the solar-ready zone and other requirements of this section, shall be posted near the electrical distribution panel, water heater or other conspicuous location by the builder or registered design professional.

Appendix AA STRETCH ENERGY CODE

AA101 Purpose and Adoption. The purpose of the stretch energy code is to provide a more energy efficient code alternative for new buildings. The stretch energy code may be adopted or rescinded by any municipality in the commonwealth in the manner prescribed by law.

AA102 Applicability. Municipalities that have adopted the stretch energy code shall use the energy efficiency requirements of this appendix as provided in AA103 and AA104. These requirements replace all previous stretch energy code requirements.