CHAPTER 3 - BUILDING PLANNING - 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 an\or their accessory structures not more than three stories in height above grade. See the base code for other building types.*

51.00: continued

NATIVE LUMBER. Native lumber is wood processed in the Commonwealth of Massachusetts by a mill registered in accordance with 780 CMR 110.R4: *Registration of Native Lumber Producers*. Such wood is ungraded but is stamped or certified in accordance with the requirements of 780 CMR 110.R4. For the purpose of this definition, native lumber shall be restricted to the use in one- and two-story dwellings, barns, sheds, agricultural and accessory buildings and other structures when permitted by 780 CMR 110.R4.

OFFICIAL INTERPRETATION. A written interpretation made by the BBRS, under authority of M.G.L. c. 143, § 94(e), or by the Building Code Appeals Board under authority of M.G.L. c. 143, § 100, of any provision of 780 CMR, or its referenced standards, except the specialized codes.

REGISTERED DESIGN PROFESSIONAL. An individual who is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws of the Commonwealth.

SPECIALIZED CODES. Codes, rules or regulations pertaining to building construction, reconstruction, alteration, repair or demolition promulgated by and under the authority of various boards authorized by the general court. *See* M.G.L. c. 143, § 96.

STATE BUILDING INSPECTOR. An "inspector" as described in M.G.L. c. 143, § 3A.

WINDBORNE DEBRIS REGION. Areas within hurricane-prone regions located in accordance with one of the following:

1. Within one mile (1.61 km) of the coastal mean high water line where the nominal design wind speed, V_{asd}, is 130 mph (58 m/s) or greater.
2. In areas where the nominal design wind speed, V_{asd}, is 140 mph (63.6 m/s) or greater.

Note: Values of V_{ult} are found in Table R301.2(4). To convert V_{ult} to V_{asd}, refer to Table R301.2.1.3.

Chapter 3: BUILDING PLANNING

R301.1.1 Add item 4 below item 3 as follows:

4. American Forest and Paper Association ("AF&PA") *Prescriptive Residential Wood Deck Construction Guide* (DCA6).

R301.1.4 Add subsection as follows:

R301.1.4 Townhouse Buildings Greater than 35,000 ft³. Such buildings shall require registered design professional services in accordance with section 107.6 Construction Control.

R301.2 Revise section, and add Table R301.2(1) as follows:

R301.2 Climatic and Geographic Design Criteria. Buildings shall be constructed in accordance with the provisions of 780 CMR 51.00 as limited by the provisions of this section. *See* Table R301.2(1).

51.00: continued

Table R301.2(1) Climatic and Geographic Design Criteria

Ground Snow Load		Table R301.2(4)
Wind Design	Speed	Table R301.2(4)
	Topographic effects	No
	Special Wind Regions	No
	Windborne debris zone	Any area within a windborne debris region, as defined in Chapter 2 of 780 CMR 51.00
Seismic Design Category		No
Subject to Damage From	Weathering	Severe
	Frost line depth	48 inches. For shallow foundations, *see* R403.3(2).
	Termite	*See* Figure R301.2(6).
Winter Design Temperature		Dry bulb
Ice Barrier Underlayment Required		For roofing, *see* R905.2.7.
Flood Hazards		*See* section 322.
Air Freezing Index		For shallow foundations, *see* R403.3(2).
Mean Annual Temperature		*See* https://www.ncdc.noaa.gov/sotc/global/201607

R301.2.1.1 Revise subsection as follows:

R301.2.1.1 Wind Limitations and Wind Design Required. The wind provisions of 780 CMR 51.00 shall not apply to the design of buildings where the ultimate wind speed, V_{ult}, is 140 mph or greater. *See* Table R301.2(4) for wind speeds by city or town.

Exceptions:

1. For concrete construction, the wind provisions of 780 CMR 51.00 shall apply in accordance with the limitations of sections R404 and R608.
2. For structural insulated panels, the wind provisions of 780 CMR 51.00 shall apply in accordance with the limitations of section R610.
3. For cold-formed steel light-frame construction, the wind provisions of 780 CMR 51.00 shall apply in accordance with the limitations of sections R505, R603 and R804.

In regions where wind design is required, the design of buildings for wind loads shall be in accordance with one or more of the following methods:

1. AF&PA *Wood Frame Construction Manual* ("WFCM") or its *Guide to Wood Construction in High Wind Areas for One- and Two-Family Dwellings*, 110 mph Exposure B. A Commonwealth of Massachusetts version of the checklist can be used in place of the checklist at the end of the guide and is found at http://www.mass.gov/ocabr/government/oca-agencies/dpl-lp/opsi/.
2. ICC *Standard for Residential Construction in High-Wind Regions* (ICC 600).
3. ASCE *Minimum Design Loads for Buildings and Other Structures* (ASCE 7).
4. AISI *Standard for Cold-Formed Steel Framing—Prescriptive Method For One- and Two-Family Dwellings* (AISI S230).
5. *International Building Code.*

The elements of design not addressed by the methods in section R301.2.1.1 1. through 5. shall be in accordance with the provisions of 780 CMR.

Where ASCE 7 or the *International Building Code* is used for the design of the building, the wind speed map and exposure category requirements as specified in ASCE 7 and the *International Building Code* shall be used.

51.00: continued

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2. In areas where the nominal design wind speed, V_{asd}, is 140 mph (63.6 m/s) or greater.

Note: Values of V_{ult} are found in Table R301.2(4). To convert V_{ult} to V_{asd}, refer to Table R301.2.1.3.

Chapter 3: BUILDING PLANNING

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R301.2 Revise section, and add Table R301.2(1) as follows:

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51.00: continued

Table R301.2(4) Add table as follows:

TABLE R301.2(4) SNOW LOADS AND WIND SPEEDS

	SNOW LOADS		
City/Town	Ground Snow Load, P_g (psf)	Minimum Flat Roof Snow Load, P_f[1] (psf)	Basic Wind Speed, V_{ult} (mph)
Abington	35	30	132
Acton	50	35	124
Acushnet	30	30	138
Adams[2]	60	40	115
Agawam	35	35	120
Alford[2]	40	40	115
Amesbury	50	30	123
Amherst	40	35	118
Andover	50	30	124
Aquinnah (Gay Head)	25	25	140
Arlington	40	30	127
Ashburnham	60	35	118
Ashby	60	35	119
Ashfield	50	40	115
Ashland	40	35	127
Athol	60	35	117
Attleboro	35	30	132
Auburn	50	35	125
Avon	35	35	131
Ayer	50	35	122
Barnstable	30	25	140
Barre	50	35	120
Becket[2]	60	40	115
Bedford	50	30	125
Belchertown	40	35	119
Bellingham	40	35	129
Belmont	40	30	127
Berkley	30	30	135
Berlin	50	35	124
Bernardston	60	35	115
Beverly	50	30	127
Billerica	50	30	124
Blackstone	40	35	129
Blandford	50	40	116
Bolton	50	35	123
Boston	40	30	128
Bourne	30	25	139
Boxborough	50	35	123
Boxford	50	30	125
Boylston	50	35	123

51.00: continued

TABLE R301.2(4) SNOW LOADS AND WIND SPEEDS - continued

	SNOW LOADS		
City/Town	**Ground Snow Load, P_g (psf)**	**Minimum Flat Roof Snow Load, P_f[1] (psf)**	**Basic Wind Speed, V_{ult} (mph)**
Braintree	35	30	131
Brewster	25	25	140
Bridgewater	30	30	134
Brimfield	40	35	123
Brockton	35	30	132
Brookfield	50	35	122
Brookline	40	30	128
Buckland[2]	60	40	115
Burlington	50	30	125
Cambridge	40	30	128
Canton	40	35	130
Carlisle	50	30	124
Carver	30	30	136
Charlemont[2]	60	40	115
Charlton	50	35	124
Chatham	25	25	140
Chelmsford	50	30	123
Chelsea	40	30	128
Cheshire[2]	60	40	115
Chester	60	40	115
Chesterfield	50	40	115
Chicopee	35	35	119
Chilmark	25	25	140
Clarksburg[2]	60	40	115
Clinton	50	35	123
Cohasset	35	30	131
Colrain[2]	60	40	115
Concord	50	35	125
Conway	50	40	115
Cummington[2]	60	40	115
Dalton[2]	60	40	115
Danvers	50	30	126
Dartmouth	30	30	139
Dedham	40	35	129
Deerfield	50	35	115
Dennis	30	25	140
Dighton	30	30	135
Douglas	40	35	127
Dover	40	35	128
Dracut	50	30	122
Dudley	50	35	126
Dunstable	50	35	121
Duxbury	30	30	135

51.00: continued

TABLE R301.2(4) SNOW LOADS AND WIND SPEEDS - continued

	SNOW LOADS		
City/Town	Ground Snow Load, P_g (psf)	Minimum Flat Roof Snow Load, P_f[1] (psf)	Basic Wind Speed, V_{ult} (mph)
E. Bridgewater	35	30	133
E. Brookfield	50	35	122
E. Longmeadow	35	35	121
Eastham	25	25	140
Easthampton	40	35	117
Easton	35	30	132
Edgartown	25	25	140
Egremont[2]	40	40	115
Erving	50	35	116
Essex	50	30	127
Everett	40	30	128
Fairhaven	30	30	139
Fall River	30	30	137
Falmouth	30	25	140
Fitchburg	60	35	120
Florida[2]	60	40	115
Foxborough	35	35	131
Framingham	40	35	127
Franklin	40	35	129
Freetown	30	30	137
Gardner	60	35	119
Georgetown	50	30	124
Gill	50	35	115
Gloucester	50	30	128
Goshen	50	40	115
Gosnold	30	25	140
Grafton	50	35	126
Granby	35	35	119
Granville	50	40	117
Great Barrington[2]	50	40	115
Greenfield	50	35	115
Groton	60	35	121
Groveland	50	30	123
Hadley	40	35	117
Halifax	30	30	134
Hamilton	50	30	126
Hampden	35	35	122
Hancock[2]	50	40	115
Hanover	35	30	133
Hanson	35	30	133
Hardwick	50	35	120
Harvard	50	35	123

51.00: continued

TABLE R301.2(4) SNOW LOADS AND WIND SPEEDS - continued

	SNOW LOADS		
City/Town	Ground Snow Load, P_g (psf)	Minimum Flat Roof Snow Load, P_f[1] (psf)	Basic Wind Speed, V_{ult} (mph)
Harwich	25	25	140
Hatfield	40	35	117
Haverhill	50	30	123
Hawley[2]	60	40	115
Heath[2]	60	40	115
Hingham	35	30	131
Hinsdale[2]	60	40	115
Holbrook	35	30	131
Holden	50	35	122
Holland	40	35	124
Holliston	40	35	128
Holyoke	35	35	118
Hopedale	40	35	128
Hopkinton	40	35	127
Hubbardston	50	35	120
Hudson	50	35	124
Hull	35	30	130
Huntington	50	40	116
Ipswich	50	30	126
Kingston	30	30	135
Lakeville	30	30	136
Lancaster	50	35	122
Lanesborough[2]	50	40	115
Lawrence	50	30	123
Lee[2]	50	40	115
Leicester	50	35	123
Lenox[2]	50	40	115
Leominster	60	35	121
Leverett	40	35	117
Lexington	40	30	126
Leyden[2]	60	40	115
Lincoln	40	35	126
Littleton	50	35	123
Longmeadow	35	35	120
Lowell	50	30	123
Ludlow	35	35	120
Lunenburg	60	35	120
Lynn	40	30	128
Lynnfield	50	30	126
Malden	40	30	127
Manchester	50	30	128
Mansfield	35	30	131

51.00: continued

TABLE R301.2(4) SNOW LOADS AND WIND SPEEDS - continued

	SNOW LOADS		
City/Town	Ground Snow Load, P_g (psf)	Minimum Flat Roof Snow Load, P_f[1] (psf)	Basic Wind Speed, V_{ult} (mph)
Marblehead	40	30	128
Marion	30	30	139
Marlborough	50	35	125
Marshfield	35	30	134
Mashpee	30	25	140
Mattapoisett	30	30	139
Maynard	50	35	124
Medfield	40	35	129
Medford	40	30	127
Medway	40	35	129
Melrose	40	30	127
Mendon	40	35	128
Merrimac	50	30	123
Methuen	50	30	122
Middleborough	30	30	135
Middlefield	60	40	115
Middleton	50	30	125
Milford	40	35	128
Millbury	50	35	125
Millis	40	35	129
Millville	40	35	129
Milton	40	30	130
Monroe[2]	60	40	115
Monson	40	35	122
Montague	50	35	116
Monterey	50	40	116
Montgomery	40	40	117
Mount Washington[2]	40	40	115
Nahant	40	30	128
Nantucket	25	25	140
Natick	40	35	127
Needham	40	35	128
New Ashford[2]	50	40	115
New Bedford	30	30	139
New Braintree	50	35	121
New Marlborough	50	40	115
New Salem	50	35	117
Newbury	50	30	125
Newburyport	50	30	124
Newton	40	30	127
Norfolk	40	35	129
North Adams[2]	60	40	115

51.00: continued

TABLE R301.2(4) SNOW LOADS AND WIND SPEEDS - continued

	SNOW LOADS		
City/Town	Ground Snow Load, P_g (psf)	Minimum Flat Roof Snow Load, P_f[1] (psf)	Basic Wind Speed, V_{ult} (mph)
North Andover	50	30	123
North Attleborough	35	30	131
North Brookfield	50	35	122
North Reading	50	30	125
Northampton	40	35	117
Northborough	50	35	124
Northbridge	40	35	127
Northfield	60	35	115
Norton	35	30	133
Norwell	35	30	133
Norwood	40	35	129
Oak Bluffs	25	25	140
Oakham	50	35	121
Orange	60	35	117
Orleans	25	25	140
Otis	50	40	115
Oxford	50	35	125
Palmer	40	35	121
Paxton	50	35	122
Peabody	50	30	127
Pelham	40	35	118
Pembroke	30	30	134
Pepperell	60	35	120
Peru[2]	60	40	115
Petersham	50	35	118
Phillipston	60	35	118
Pittsfield[2]	50	40	115
Plainfield[2]	60	40	115
Plainville	40	35	131
Plymouth	30	30	136
Plympton	30	30	135
Princeton	50	35	121
Provincetown	25	25	138
Quincy	40	30	130
Randolph	35	30	131
Raynham	35	30	134
Reading	50	30	126
Rehoboth	35	30	134
Revere	40	30	128
Richmond[2]	50	40	115
Rochester	30	30	138
Rockland	35	30	132

51.00: continued

TABLE R301.2(4) SNOW LOADS AND WIND SPEEDS - continued

	SNOW LOADS		
City/Town	**Ground Snow Load, P_g (psf)**	**Minimum Flat Roof Snow Load, P_f[1] (psf)**	**Basic Wind Speed, V_{ult} (mph)**
Rockport	50	30	128
Rowe[2]	60	40	115
Rowley	50	30	125
Royalston	60	35	116
Russell	40	40	116
Rutland	50	35	121
Salem	50	30	127
Salisbury	50	30	124
Sandisfield	50	40	115
Sandwich	30	25	139
Saugus	40	30	127
Savoy[2]	60	40	115
Scituate	35	30	133
Seekonk	35	30	134
Sharon	35	35	130
Sheffield[2]	40	40	115
Shelburne	50	40	115
Sherborn	40	35	127
Shirley	60	35	121
Shrewsbury	50	35	124
Shutesbury	40	35	117
Somerset	30	30	136
Somerville	40	30	127
South Hadley	35	35	118
Southampton	40	35	117
Southborough	40	35	125
Southbridge	40	35	125
Southwick	40	35	118
Spencer	50	35	123
Springfield	35	35	120
Sterling	50	35	122
Stockbridge[2]	50	40	115
Stoneham	40	30	126
Stoughton	35	35	131
Stow	50	35	124
Sturbridge	40	35	124
Sudbury	40	35	125
Sunderland	40	35	116
Sutton	50	35	126
Swampscott	40	30	128
Swansea	30	30	136
Taunton	35	30	134

51.00: continued

TABLE R301.2(4) SNOW LOADS AND WIND SPEEDS - continued

	SNOW LOADS		
City/Town	**Ground Snow Load, P_g (psf)**	**Minimum Flat Roof Snow Load, P_f[1] (psf)**	**Basic Wind Speed, V_{ult} (mph)**
Templeton	60	35	118
Tewksbury	50	30	124
Tisbury	25	25	140
Tolland	50	40	115
Topsfield	50	30	125
Townsend	60	35	119
Truro	25	25	139
Tyngsborough	50	30	121
Tyringham[2]	50	40	115
Upton	40	35	127
Uxbridge	40	35	128
Wakefield	50	30	126
Wales	40	35	123
Walpole	40	35	130
Waltham	40	30	127
Ware	40	35	120
Wareham	30	30	138
Warren	40	35	121
Warwick	60	35	115
Washington[2]	60	40	115
Watertown	40	30	127
Wayland	40	35	126
Webster	50	35	126
Wellesley	40	35	127
Wellfleet	25	25	140
Wendell	50	35	117
Wenham	50	30	126
W. Boylston	50	35	123
W. Bridgewater	35	30	133
W. Brookfield	40	35	122
W. Newbury	50	30	123
W. Springfield	35	35	119
W. Stockbridge[2]	40	40	115
W. Tisbury	25	25	140
Westborough	50	35	125
Westfield	40	35	118
Westford	50	35	123
Westhampton	50	40	116
Westminster	60	35	120
Weston	40	35	126
Westport	30	30	139
Westwood	40	35	129

51.00: continued

TABLE R301.2(4) SNOW LOADS AND WIND SPEEDS - continued

	SNOW LOADS		
City/Town	Ground Snow Load, P_g (psf)	Minimum Flat Roof Snow Load, P_f^1 (psf)	Basic Wind Speed, V_{ult} (mph)
Weymouth	35	30	131
Whately	50	35	116
Whitman	35	30	133
Wilbraham	35	35	121
Williamsburg	50	40	116
Williamstown[2]	50	40	115
Wilmington	50	30	125
Winchendon	60	35	117
Winchester	40	30	126
Windsor[2]	60	40	115
Winthrop	40	30	129
Woburn	50	30	126
Worcester	50	35	124
Worthington	60	40	115
Wrentham	40	35	130
Yarmouth	30	25	140

Note 1: The design flat roof snow load shall be the larger of the calculated flat roof snow load using P_g or the value of P_f^1 listed in this table.

Note 2: Special Wind Region. Local conditions may cause higher wind speeds than the tabulated values. *See* ASCE/SEI 7.

R301.2.2 Reserved

R301.2.4 Revise subsection as follows:

> **R301.2.4 Floodplain Construction.** Buildings and structures constructed in whole or in part in flood hazard areas (including AO or V Zones) or coastal dunes as established in section R322.1.1, and substantial improvement and restoration of substantial damage of buildings and structures in flood hazard areas or coastal dunes, shall be designed and constructed in accordance with section R322. Buildings and structures that are located in more than one flood hazard area or coastal dune shall comply with the most restrictive provisions of all those flood hazard areas and coastal dunes. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

R301.2.4.1 Reserved

SECTION R302 FIRE-RESISTANT CONSTRUCTION

R302.1 Revise the section as follows, while retaining all exceptions:

> **R302.1 Exterior Walls.** Construction, projections, openings and penetrations of exterior walls of dwellings and accessory buildings shall comply with Table R302.1(1); or dwellings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13D shall comply with Table R302.1(2).

51.00: continued

Table R302.1(2) Revise footnote a. as follows:

a. For residential subdivisions where all dwellings are equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13D, the fire separation distance for nonrated exterior walls and rated projections shall be permitted to be reduced to zero feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining lot provides an open setback yard that is six feet or more in width on the opposite side of the property line.

R302.2 Revise items 1 and 2 as follows:

1. Where a fire sprinkler system in accordance with NFPA 13, 13R, or 13D is provided, the common wall shall be not less than a one-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263.
2. Where a fire sprinkler system in accordance with NFPA 13, 13R, or 13D is not provided, the common wall shall be not less than a two-hour fire-resistance-rated fire wall assembly tested in accordance with ASTM E119 or UL 263.

Table R302.6 Revise table as follows:

TABLE R302.6 DWELLING-GARAGE SEPARATION

Separation	MATERIAL	
	Sprinklered	Not-sprinklered
From the residence and attics	Not less than ½-inch gypsum board, or equivalent, applied to the garage side	Not less than ⅝-inch Type X gypsum board, or equivalent, applied to the garage side
From habitable rooms above the garage	Not less than ⅝-inch Type X gypsum board, or equivalent	Not less than ⅝-inch Type X gypsum board, or equivalent
Structure(s) supporting floor/ceiling assemblies used for separation required by this section	Not less than ½-inch gypsum board, or equivalent	Not less than ⅝-inch Type X gypsum board, or equivalent
Garages located less than three feet from a dwelling unit on the same lot	Not less than ½-inch gypsum board, or equivalent, applied to the interior side of exterior walls that are within this area	Not less than ⅝-inch Type X gypsum board, or equivalent, applied to the interior side of exterior walls that are within this area

Note: For SI, one inch = 25.4 mm; one foot = 304.8 mm.

R302.13 Revise exception 1 as follows:

1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with NFPA 13, 13R, or 13D, or other approved equivalent sprinkler system.

R302.14 Revise as follows:

Combustible Insulation Clearance: Combustible insulation shall be separated not less than three inches (76 mm) from recessed luminaires, fan motors, knob and tube wiring, and other heat-producing devices.

R303.3 Replace entire section as follows:

R303.3 Bathrooms. Mechanical ventilation in accordance with section M1507 is required for all bathrooms with a shower or bathtub and rooms with a toilet.

R305.1 Revise section as follows:

R305.1 Minimum Height. Habitable space and hallways shall have a ceiling height of not less than seven feet (2,134 mm). Bathrooms, toilet rooms, laundry rooms and habitable space in basements shall have a ceiling height of not less than six feet, eight inches (2,032 mm).

Note: Exceptions are retained.

R308.1 Add the following language at the end of the section:

See also M.G.L. c. 143, §§ 3T, 3U, and 3V.

51.00: continued

R309.3 Revise section as follows:

R309.3 Flood Hazard Areas and Coastal Dunes. For buildings located in flood hazard areas or coastal dunes, as established by section R322.1.1., garage floors shall be:

1. Elevated to or above the design flood elevation as determined in accordance with section R322.2; or
2. Located below the design flood elevation provided that the floors are at or above grade on not less than one side, are used solely for parking, building access or storage, meet the requirements of section R322.2 and are otherwise constructed in accordance with 780 CMR 51.00.

R309.5 Revise section as follows:

R309.5 Fire Sprinklers. Private garages shall be protected by fire sprinklers where the garage wall has been designed based on Table R302.1(2), footnote a. Sprinklers in garages shall be connected to an automatic sprinkler system that complies with NFPA 13, 13R, or 13D. Garage sprinklers shall be residential sprinklers or quick-response sprinklers, designed to provide a density of 0.05 gpm/ft^2. Garage doors shall not be considered obstructions with respect to sprinkler placement.

R310.2.1 Revise subsection as follows:

R310.2.1 Minimum Opening Area. Emergency and escape rescue openings shall have a net clear opening of not less than 5.7 ft^2 (0.530 m^2). The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. The net clear height opening shall be not less than 24 inches (610 mm) and the net clear width shall be not less than 20 inches (508 mm).

Exceptions:

1. Grade floor or below grade openings shall have a net clear opening of not less than five ft^2 (0.465 m^2).
2. Single-hung and/or double-hung windows shall have a minimum net clear opening of 3.3 ft^2 (0.31m^2). In such cases, the minimum net clear opening dimensions shall be 20 inches (508 mm) by 24 inches (610 mm) in either direction.

R311.1 through R311.2.1 Revise sections and subsection as follows:

R311.1 Means of Egress. Dwelling units shall be provided with a primary and secondary means of egress in accordance with this section. Each means of egress shall provide a continuous and unobstructed path of vertical and horizontal egress travel from all portions of the dwelling to the egress doors. The primary means of egress shall not require travel through a garage but the secondary means of egress may. The required egress doors shall open directly into a public way or to a yard or court that opens to a public way.

Notes:

1. In multi-level dwellings including, but not limited to townhouses, split-level and raised ranch style layouts, the two separate egress doors may be located on different levels.
2. Where site topography prevents direct access at two remote locations to grade from the normal level of entry, the two separate egress doors may be located on different levels.

R311.2 Egress Door. A primary and secondary egress door shall be provided for each dwelling unit and shall be as remote as possible from each other. The primary egress door shall be side-hinged, and shall provide a clear width of not less than 32 inches (813 mm) where measured between the face of the door and the stop, with the door open 90° (1.57 rad). The secondary egress door shall be side-hinged or sliding, and shall provide a clear width of not less than 28 inches (711 mm) where measured between the face of the door and the stop, with the door open 90° (1.57 rad). The clear height of side-hinged door openings shall be not less than 78 inches (1,981 mm) in height measured from the top of the threshold to the bottom of the stop. Sliding door clear width may be slightly less than 28 inches (711 mm) to conform to industry fabrication standards. Other doors shall not be required to comply with these minimum dimensions. Egress doors shall be capable of being readily opened from inside the dwelling without the use of a key or special knowledge or effort.