

Building Code - CHAPTER 21 – MASONRY

Section BC-2101. General. This section governs the materials, design, construction and quality of masonry. The proposed code references the ASCE/ACI Masonry Design standard for design procedures. The current code covers the equivalent scope, but references earlier versions of the same national standards. The updated reference standard includes the design of masonry for strength design, and prestressed masonry, which is a new construction practice not covered in the current code. New requirements for masonry fireplace drawings are also included.

27-157, 27-586, 27-600, 27-601, 27-602, RS 10-1A, RS 10-1B, RS 10-2, RS 14-18, RS 14-19

Section BC-2102. Definitions and Notations. This section provides the meanings for additional terms specific to masonry to be used throughout this code. The current code has definitions of masonry terms in the Reference Standard but does not explicitly define all of the terms that are introduced in this section. The classification of low-heat chimneys has been modified to include chimneys serving appliances that exhaust at temperatures up to 1000° F; under the current code this limit is 600° F. The classification of medium-heat chimneys has been modified to include chimneys serving appliances greater than 1000° F up to 2000° F. The current code classification for medium-heat chimneys is for appliances between 600° F and 1000° F. The classification of high-heat chimneys has been modified to include chimneys serving appliances greater than 2000° F.

27-232, 27-801, 27-848.03, 27-857, RS 10-1A, RS 10-1B, RS 10-2, RS 14-18, RS 14-19

Section BC-2103. Masonry Construction Materials. This section establishes by reference the national standards for the materials and accessories used in masonry construction. The current code covers the equivalent scope but references earlier versions of similar standards. The nationally recognized material standards covering mortars for ceramic wall and floor tiles are not referenced in the current code. The national reference standards for prestressed masonry construction materials are also covered in this section, which are not referred to in the current code.

27-586, 27-588, 27-600, 27-601, 27-602, RS 10-1A, RS 10-1B, RS 10-2, RS 10-23, RS 10-30, RS 10-31, RS 10-32, RS 10-33, RS 10-34, RS 10-35, RS 10-36, RS 10-37, RS 10-38, RS 10-39, RS 10-40, RS 10-41, RS 10-42, RS 10-43, RS 10-46, RS 10-47, RS 10-48

Section BC-2104. Construction. This section establishes the construction requirements for construction using masonry based on referenced national standards and current industry practice. The current code covers the equivalent scope, but references earlier versions of the national standards.

RS 10-1A, RS 10-1B, RS 10-2

Section BC-2105. Quality Assurance. This section establishes the quality and inspection requirements for masonry construction in conjunction with chapter 17 and the reference standards. The current code covers the equivalent scope, but references earlier versions of the same national standards for masonry materials and testing.

27-132, 27-586, 27-601, 27-602, RS 10-1A, RS 10-1B, RS 10-2, RS 10-17, RS 10-30

Section BC-2106. Seismic Design. This section establishes by reference the national standards for the design and construction of masonry structures to resist earthquakes. The current code references an earlier version of the same national standard. The proposed code text and reference standard include provisions for strength design of masonry, and prestressed masonry systems, which are not covered under the current code. The provisions for seismic design are based on the structural Seismic Design Category, which is also based on the updated reference standard. This reference standard is in use in current industry practice.

27-600, RS 9-6, RS 10-1B, RS 10-2

Section BC-2107. Working Stress Design. This section establishes the requirements for working stress design of masonry structures by the referenced national standard. The current code references an earlier version of the same national standard.

27-600, RS 10-1A, RS 10-1B, RS 10-2

Section BC-2108. Strength Design of Masonry. This section establishes the requirement for the design of masonry structures using strength design by the referenced national standard. The current code references an earlier version of the same national standard, but does not include any provisions for the strength design of masonry. This addition of this provision will allow design professionals to use strength design in lieu of either working stress design or empirical design methods.

RS 10-1B, RS 10-2

Section BC-2109. Empirical Design of Masonry. This section permits the empirical design of masonry structures by either the requirements of this section or the referenced national standard. The current code references an earlier version of the same national standard and covers the equivalent scope.

27-600, RS 10-1A, RS 10-1B, RS 10-2

Section BC-2110. Glass Unit Masonry. This section covers the requirements for the design and construction of non-load-bearing glass unit masonry. The current code covers the equivalent scope but references an earlier version of the same national standard.

27-600, RS 10-1A, RS 10-1B, RS 10-2

Section BC-2111. Masonry Fireplaces. This section establishes the requirements for the design and construction of masonry fireplaces. The requirements for footings, fireboxes, dampers, heaths, hearth extensions, smoke chambers as well as dimensional requirements and clearances are all established. These requirements are based on current practice and are substantially equivalent to the current code.

27-600, 27-848.01, 27-848.02, 27-848.03, 27-848.04, 27-848.05, 27-848.06, 27-848.07, RS 10-1A, RS 10-1B, RS 10-2, RS 14-18, RS 14-19, RS 14-20

Section BC-2112. Masonry heaters. This section establishes the design and construction requirements for masonry heaters. The proposed code references the ASTM national standard for the construction of masonry heaters. The current code does not specifically address masonry heaters. This is a new appliance type not commonly used in the city of New York, and the NYC Air Pollution Control Code would govern the operation of a masonry heater. The proposed code requirements are based on the national reference standard for masonry heaters.

Section BC-2113. Masonry Chimneys. This section establishes the requirements for the design and construction of masonry chimneys. The current code covers the equivalent scope. The classification of low-heat chimneys has been modified to include chimneys serving appliances that exhaust at temperatures up to 1000° F; under the current code this limit is 600° F. The classification of medium-heat chimneys has been modified to include chimneys serving appliances greater than 1000° F up to 2000° F. The current code classification for medium-heat chimneys is for appliances between 600° F and 1000° F. The classification of high-heat chimneys has been modified to include chimneys serving appliances greater than 2000° F.

27-600, 27-849, 27-850 - 27-854, 27-856, 27-857, 27-859, 27-862, 27-863, 27-864, 27-865, 27-866, 27-867, RS 10-1A, RS 10-1B, RS 10-2, RS 15-3

Section BC-2114. Structural Integrity Requirements. This section establishes the structural integrity, continuity and ties requirements for masonry load-bearing elements and their connections. There are no similar provisions for masonry in current industry practice.

RCNY 18-01