

GG173-14

408.3.2.1 (New), 408.3.2.2 (New), Chapter 12

Proponent: Wanda Edwards, RCI, Inc., representing RCI, Inc. (wedwards@rci-online.org)

Add new text as follows:

408.3.2.1 Membrane testing. After installation, membranes shall be tested to locate deficiencies in the roof system to ensure a leak-free roof. Tests shall be performed using one of the methods specified in Section 408.3.2.2. Breaches shall be corrected prior to covering the membrane with growing media, trays or containers used to contain growing media, large stone, paver systems or lightweight interlocking pavers. The roof shall be repaired and retested as required until no breaches remain.

408.3.2.2 Test methods. Testing as required in Section 408.3.2.1 shall comply with one of the following methods. The test shall cover all areas of the roof. The test report shall indicate all anomalies found by the testing, the corrective action methods and the results. Copies of the survey and associated documents shall be given to the building owner and made available to the code official upon request. Continuous visual inspection in accordance with ASTM 7186 shall be performed on EPDM, foil-faced and other conductive membranes where insulation is present under the membrane instead of such testing.

1. Standing water flood test shall be performed in accordance with ASTM D5957. The test shall be conducted by continuously applying water over the membrane for a minimum of 24 hours. This test shall not be performed on assemblies where there is insulation under the roof membrane. The structural load capacity of the roof deck shall be verified by a registered design professional prior to flood testing.
2. An electronic leak detection survey such as, but not limited to, low or high voltage electronic integrity testing of roof areas performed in accordance with ASTM D 7877. This test shall not be performed on EPDM, foil-faced roofs or other membranes that conduct electricity.

Add new standard(s) as follows:

ASTM

ASTM D 5957-98(2013) Standard Guide for Flood Testing Horizontal Waterproofing Installations

ASTM D 7186-12 Standard Practice for Quality Assurance Observation of Roof Construction and Repair

ASTM D 7877-14 Electronic Methods for Detecting and Locating Leaks in Waterproof Membranes

Reason: New and existing roof membranes should be tested for leaks prior to installing the vegetative roof. Leaks in the roof membrane threaten the safety of the building occupants through moisture damage, growth of harmful mold and rot and can result in costly repairs. Testing and repair of the roofing system is necessary to eliminate moisture damage within the building, and assure good air quality within the building in addition to eliminating the expense of repairs requiring removal of the vegetative roof overburden.

Cost Impact: Will increase the cost of construction. The code change proposal will increase the cost of construction. However, this testing is a necessary part of the construction that will eliminate costly roof leaks or premature roof failures after the plantings are added.

Analysis: A review of the standard proposed for inclusion in the code, ASTM D 5957-98(2013), D7186-12, ASTM D 7077-14 with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 1, 2014.

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