

CRCA's Questions & Answers Technical Bulletin Series - April, 2016
Residential Buildings – Ice Barrier Membranes - Roof Maintenance, Roof Decks and Roof Loads

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QUESTION:

Is Ice Barrier required in the City of Chicago? It does not say it is in the Chicago Energy Conservation Code or the Chicago Municipal Code?

ANSWER:

From the City of Chicago's Department of Buildings – Ice and water shield (Ice Barrier) requirements: The Chicago building code is a performance based code, not prescriptive. The code states that the building must be kept dry; it does not say how to do that. Therefore, the city of Chicago uses the contractor warranty to enforce the requirement. If the contractor will not warranty the roof, we do not consider it to have complied with the code of keeping the building dry. Therefore, if the contractor requires Ice and Water shield to warranty the roof, then it is required.

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CRCA's Expanded Explanation about ice barrier membranes

The (c) section in 13-196-530 Residential buildings – Foundations, exterior walls and roofs – Maintenance, states that the roof has to be watertight. If a roof is leaking, it is not watertight, especially when recovered without an ice barrier at the eave edges of the roof assembly.

Therefore, it could be argued it needs to be replaced (meaning 'tear off'). This is not likely. However, the Authority Having Jurisdiction may decide that replacement is needed based on this passage.

In summary, the City of Chicago's Code does not say 'no ice barrier required'. The City of Chicago says, no leaks. Roofs that have water backup under shingles due to ice dams forming, are leaking. Therefore, they are not Chicago Code Compliant.

Questions?

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Code Sections below obtained from the City of Chicago's Department of Buildings.

13-196-530 Residential buildings – Foundations, exterior walls and roofs – Maintenance.

The foundation, exterior walls, and exterior roof shall be substantially watertight and protected against rodents, and shall be kept in sound condition and repair:

(a) The foundation elements shall adequately support the building at all points.

(b) Every exterior wall shall be free of holes, breaks, loose or rotting boards or timbers, and any other conditions which might admit rain, or dampness to the interior portions of the walls or to the exterior spaces of the dwelling.

(c) The roof shall be tight and have no defects which admits rain and roof drainage shall be adequate to prevent rain water from causing dampness in the walls. (CRCA bold emphasis added)

(d) The dwelling shall be in a rat-stopped condition, in accordance with Sections [7-28-660](#) through [7-28-730](#) of this Code, and shall be adequately protected against the entry of other rodents.

(e) All cornices, rustications, quoins, moldings, belt courses, lintels, sills, oriel windows, pediments and similar projections shall be kept in good repair and free from cracks and defects which make them hazardous and dangerous.

13-52-010 Generally.

Buildings or other structures hereafter erected shall be designed and constructed to support safely the minimum design loads, including dead loads as required in this section, without exceeding the allowable stresses (or specified strengths when appropriate load factors are applied) required in this Code for the materials of construction in the structural members and connections.

13-52-220 Roof loads.

Wind load, snow load and rain load are environmental loads. Live loads on a roof are those produced (1) during maintenance by workers, equipment and materials. **Reductions in roof live loads and/or environmental roof loads shall not be permitted. Design roof loads shall be determined by the provisions of Sections [13-52-230](#) to [13-52-290](#) inclusive, [13-52-350](#) and [13-52-380](#). (CRCA bold emphasis added)**

13-52-230 Minimum roof live loads.

Roofs shall be designed for a live load of 15 pounds per square foot on the horizontal projection or for other controlling combination of environmental load