



OKLAHOMA

Uniform Building Code Commission Staff Comment Form - [BEBF 39](#)

BEBF Technical Committee

Review of the 2021 Editions of the International Building Code® (IBC®), International Existing Building Code® (IEBC®), International Fire Code®

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Code Change Information

Originating Committee: BEBF 2015

Code Modified: 2018 IBC

Original Comment Form Number: BEBF 67

Rule Number: 748:20-2-21 (6)

Which area of the code (Section, Table, Figure) was revised?

IBC Ch 16, Section 1611.1

Page Number: 2021 IBC 16-33 thru 16-34

Previous change:

1611.1 Design rain loads. Each portion of a roof shall be designed to sustain the load of rainwater that will accumulate on it if the primary drainage system for that portion is blocked plus the uniform load caused by water that rises above the inlet of the secondary drainage system at its design flow. The design rainfall shall be based on ~~the 100-year hourly rainfall rate indicated in Figure 1611.1 or on other rainfall rates as determined from approved local weather data~~ a rainfall rate of 10.2 inches per hour.

(A) Equation 16-35

(B) R equals 5.2 (d with a subscript "s" plus d with a subscript "h").

(C) For SI: R equals 0.0098 (d with a subscript "s" plus d with a subscript "h") where:

(i) d with a subscript "h" equals Additional depth of water on the undeflected roof above the inlet of secondary drainage system at its design flow (in other words, the hydraulic head) in inches (mm).

(ii) D with a subscript "s" equals Depth of water on the undeflected roof up to the inlet of secondary drainage system when the primary drainage system is blocked (in other words, the static head) in inches (mm).

(iii) R equals Rain load on the undeflected roof, in psf (kN divided by square meters). Where the phrase "undeflected roof" is used, deflections from loads (including dead loads) shall not be considered when determining the amount of rain on the roof.

Supporting information:

This change was initially made as part of the 2009 adoption, based on the recommendation of an Oklahoma engineer who specialized in roof collapse. The section was updated in the 2015 adoption through a comment form from the same engineer. The engineer was concerned with storms in Oklahoma that could drop large amounts of water in a short period of time and could overwhelm a roof drainage system not designed for those types of storms.

The 2021 language in the code is slightly different. It requires the roof to be designed to sustain the load of rainwater as per the requirements of Chapter 8 of ASCE 7. The committee should determine if the change should be kept and possibly modified or if it should be removed from the agency's rules and allow the code to revert to the published language.