

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
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Window Sill Height Measurement to Porch Roof

Code: 2018 Residential Code

Date: May 2, 2019

Section: R312.2.1

Question:

Is a porch roof that is less than 6 feet below a second story window considered a “surface below” for purposes of applying Section R312.2.1 – Window Sills?

Answer:

Yes, if the porch roof has a slope of 1:48 slope or less and the porch roof is 3 feet wide. If the porch roof either has a slope greater than 1:48 or has a width less than 3 feet, then it is not considered a “surface below”.

Explanation:

Section R312.2.1 is intended to prevent small children from falling vertically from a window more than 6 feet to a surface below. Apparently, a distance more than 6 feet is considered by the code to be an unsafe distance for children to fall.

A porch roof with a slope of 1:48 or less (1/4” fall in a 12” run) could be considered such a surface. Since the roof surface is almost horizontal except for the 1:48 drainage slope it is unlikely that a child that fell from the window would continue to roll; so, the fall should terminate at the porch roof if the roof surface is sufficiently wide.

Section R312.1.1 will require a guard where there is a drop of 30 inches or more measured to a horizontal point within 3 feet of the upper walking surface. Since the opening requirements of Section R312.2.1 are intended to act as a guard, it appears reasonable to apply the 3-foot horizontal distance to the porch roof (see Figure A). The porch roof should, therefore, be a minimum of 3 feet wide to be considered a “surface below” the window.

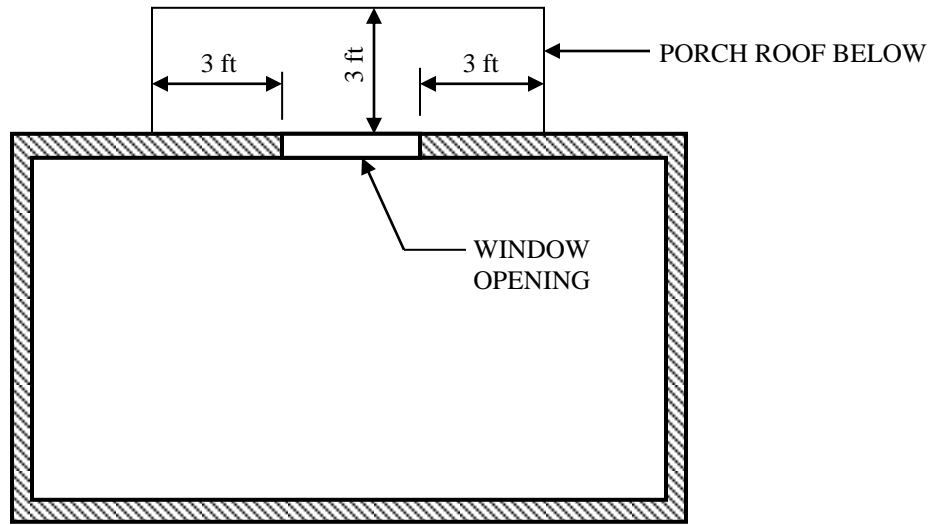


Figure A
Floor Plan

Keywords:

Fall protection, emergency escape and rescue opening, opening protection