Insert pages for September 1, 2011, Wisconsin Commercial Building Code, Comm 61-66, into the International Building Code, 2009 edition

Safety and Buildings Division - Wisconsin Department of Safety and Professional Services


Insert between pages 314 and 315

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**Comm 62.1608 Snow loads. (1)** UNBALANCED SNOW LOADS. This is a department alternative to the requirements in IBC section 1608.1: Unbalanced snow loads on a hip or gable roof may be calculated in accordance with the following equation: S = Ss(Is)(CbCwCsCa)

Where:
S = Alternate unbalanced roof snow load
Ss = Ground snow load from IBC Figure 1608.2
Is = Importance factor from IBC section 1608.1 [ASCE 7, Table 7−4]
Cb = Basic roof snow load factor of 0.8
Cw = Wind exposure factor of 1.0
Cs = Slope factor; see Tables 62.1608–1 and 62.1608–2
Ca = Accumulation factor; see Table 62.1608–3

**Table 62.1608–1**
**Non−Slippery Roof[a]**

| **Roof Slope, $\alpha$** | **Factor, $C_s$** |
|---|---|
| $\alpha < 30°$ | 1.0 |
| $30° < \alpha < 70°$ | $(70° - \alpha) / 40°$ |
| $70° < \alpha$ | 0 |

[a] Such as with shingles.

**Table 62.1608−2**
**Unobstructed Slippery Roof[a]**

| **Roof Slope, $\alpha$** | **Factor, $C_s$** |
|---|---|
| $\alpha < 15°$ | 1.0 |
| $15° < \alpha < 60°$ | $(60° - \alpha) / 45°$ |
| $60° < \alpha$ | 0 |

[a] Where snow and ice can slide completely off, such as with steel.

**Table 62.1608–3**
**Accumulation Factor**

| **Roof Slope, $\alpha$** | **Factor, $C_a$** |
|---|---|
| $\alpha < 15°$ | N/A. Analysis for balanced loading only. |
| $15° < \alpha < 20°$ | $0.25 + \alpha / 20°$ |
| $20° < \alpha < 90°$ | 1.25 |

**(2)** EXISTING ROOFS. These are department rules in addition to the requirements in IBC section 1608.1:

(a) *Buildings on the same property.* 1. Where an existing roof, regardless of the date of its construction, is horizontally within 15 feet of a proposed, taller structure on the same property, IBC section 1608.1or an alternate recognized engineering method shall be applied to the existing roof, to address any drifting or sliding of snow onto the existing roof, as caused by the taller structure.

2. Where an analysis under subd. 1. shows that an existing roof or corresponding supporting elements will not be adequate to support the additional snow load caused by the taller structure, the existing roof or supporting elements shall be strengthened to support those loads, in accordance with this code.

(b) *Buildings on adjoining properties.* Where an existing roof, regardless of the date of its construction, is horizontally within 15 feet of a proposed, taller structure on an adjoining property, the owner of the proposed structure shall notify the adjoining owner of the potential for increased structural loads on the existing roof, due to sliding or drifting of snow, as caused by the taller structure.