## **Sliding Snow Calculator**

In cold climates, sliding snow and falling ice should be anticipated from roofs that drain to cold eaves. Steep slopes and slippery surfaces compound these problems.

Falling ice and snow can damage lower roofs. Property has been damaged and people have been injured and killed by snow and ice falling from roofs that slope to cold eaves.



Snow and ice sliding off pitched metal roofs can damage property and injure people as far as 20 to 30 feet away from two-story facilities. Snow sliding off these roofs can block vehicle access to and from critical facilities.

The best way to avoid snow and ice sliding off pitched metal roofs is to provide access only at the gabled ends of a facility. Snow guards may alleviate these problems but that is a poor solution for problems that could be completely avoided by properly designed entrances or by using internally-drained low-slope roofing systems.

CRREL has developed a sliding snow calculator to predict the potential impact zone of snow and ice sliding off slippery roofs. It can be used to properly locate entrances, walkways, driveways, and equipment in order to avoid these hazards. The calculator can also be used to design entrances under the eaves.



For more information contact: James Buska, Research Civil Engineer, Engineer Research and Development Center (ERDC), Cold Regions Research and Engineering Laboratory (CRREL), 72 Lyme Road, Hanover, NH 03755-1290, Tel: 603-646-4588, Fax: -4640, E-mail: james.s.buska@usace.army.mil