



## City of Idaho Falls Building Department Geographic Design Criteria

### Snow Loads

Based on the ASCE 7 and the University of Idaho Ground and Roof Snow Load Manual, the ground and roof snow load for Idaho Falls is:

**Idaho Falls:** Elevation 4710 feet

**Ground Snow Load:**  $P_g = 0.10 (4710) = 47.1 \text{ PSF}$

**Flat Roof Snow Load:** Where:  $C_e = .8$  (Windy area with roof exposed on all sides with no shelter afforded by terrain, higher structures or trees).

$C_t = 1.10$  (Roof are above freezing)

$I = 1.0$  (Importance Factor)

$P_g = 47.1 \text{ PSF}$  (Ground Snow Load)

$P_f = .7(C_e)(C_t)(I)(P_g) = .7(.8)(1.10)(1.00)(47.1) = 29 \text{ PSF}^*$

*\*This is based on a thermal coefficient as a function of roof R value. Roofs that are not 'cold roofs' and are just above freezing and those buildings in occupancy category III & IV will achieve a higher snow load. Historically, the city has mandated a minimum 30 PSF roof snow load. If there are factors such as drifting, exposure factors due to site conditions or roof slope that determine a higher load by the structural engineer, that is the load the jurisdiction will go by.*

### Frost Depth

Measured from top of finished grade to the bottom of the footing = **30-inches**

### Wind Speed

Ultimate wind speed ( $V_{ult}$ ) = **115 MPH**

Nominal wind speed ( $V_{asd}$ ) = **90 MPH**

Exposure **C**

### Seismic Design Category

**SDC = D\***

*\*Where soil properties are not known in*

*Sufficient detail to determine site class, Site Class*

*D shall be used unless geotechnical data determines otherwise.*

