



SPANISH FORK CITY STRUCTURAL DESIGN CRITERIA

Seismic Design

Per IBC 2012

Earthquake Loads - Site Ground Motion

MCE Ground Motion - Conterminous 48 States

Zip Code - 84660 Central Latitude = 40.119113

Central Longitude = -111.695302

2012 IBC Requires that a State Certified Engineer figure the seismic class using the information in a site specific soil report.

Per IRC 2012

Seismic Design Category D2 - Site Class D

	Downtown	Bench	Top of Bench	Oaks	Golf Course
Elevation:	4,590	4,710	4,780	5,040	4,710
Roof Snow Load:	30	31	33	38	31
Ground Snow Load:	43	45	46	55	45

Wind Speed: 75 mph with 3 sec. gusts to 90 mph

Frost Depth: 30 inches

Average January Temp: 30° F

Codes in effect: 2012 IBC, IRC, IPC, IMC, IFGC, IECC, IFC, and 2011 NEC

State amendment 1608.1.2 Utah Snow Loads. The ground snow load, P_g , to be used in the determination of design snow load for buildings and other structures shall be determined by using the following formula: $P_g = (P_0^2 + S^2 (A - A_0)^2)^{0.5}$ for a greater than A_0 and $P_g = P_0$ for A less than or equal to A_0 .

WHERE

P_g = Ground snow load at a given elevation (psf)

P_0 = Base ground snow load (psf) from Table no. 1608.1.1(a)

S = Change in ground snow load with elevation (psf/100 ft.) From Table No. 1608.1.1(a)

A = Elevation above sea level at the site (ft./1000)

A_0 = Base ground snow elevation from Table 1608.1.1(a) (ft./1000)

Utah County

Table 1608.1.1(a)

$P_0 = 43$ $S = 63$ $A_0 = 4.5$

Table 1608.1.1(b)

Roof Snow Load Spanish Fork 4720 ft. (PSF) = 30

Ground Snow Load Spanish Fork 4720 ft. (PSF) = 43

For complete list of amendments go to, <http://beehiveicc.org/State-Amendments-2013.pdf>