SPANISH FORK CITY
STRUCTURAL DESIGN CRITERION

Seismic Design

Per IBC 2006

Earthquake Loads - Site Ground Motion
MCE Ground Motion- Conterminous 48 States
Zip Code - 84660 Central Latitude = 40.119113
Central Longitude = -111.695302
2006 IBC Requires that a State Certified Engineer figure the seismic class using the information in a site specific soil report.

Per IRC 2006

Seismic Design Category D2 - Site Class D

Elevation:	Downtown	Bench	Top of Bench	Oaks	Golf Course
	4590	4710	4780	5040	4710
Roof Snow Load:	Downtown	Bench	Top of Bench	Oaks	Golf Course
	30	31	33	38	31
Ground Snow Load:	Downtown	Bench	Top of Bench	Oaks	Golf Course
	43	45	46	55	45

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

Frost Depth: 30 inches

Average Temp. in Jan.: 30° F

Codes in effect 2006 IBC, IRC, IPC, IMC, IFGC, IECC, IFC,AND 2008 NEC

State amendment 1608.1.1 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)

Table 1608.1.1(a)
Utah County $P_0 = 43$ 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 www.rules.utah.gov/publicat/code/r156/r156-56.htm then R156-56-704. State Amendments to IBC