



Commercial and Non-Prescriptive Residential Structural Design Information

The information in this handout only applies to structures not conforming to the prescriptive criteria set forth in the 2018 International Building Code.

All commercial occupancies will be required to be designed by a Washington State Professional Engineer.

Loading Requirements:

Ridgefield/ Wind Speed per 2018 IBC Criteria:

1. $V_{asd} = 105$ mph (3 second gust); applicable only to methods in exceptions 1 through 5, section 1609.1.1.
2. $V_{ult} = 135$ mph (3 second gust) for Risk Cat. II; use 125 mph for Risk Cat. I; use 140 mph for Risk Cat. III & IV.
3. Exposure B, or as required per 1609.4.

Soil: Type ML – 1500 psf Bearing or geo-tech required

Frost Depth: 12”

Minimum roof snow load: 25 psf

Minimum roof load: non reducible

Ground snow: 30 psf (drift calculations as required)

All other loading per the 2018 International Building Code and as adopted by Washington State and City of Ridgefield Codes.

Seismic Design:

Spectral response data can be found on this web site: earthquake.usgs.gov/hazards/designmaps

Use values of two percent probability of exceedance. Otherwise, use the following design information based on specific zip codes within the county:

MCE Ground Motion – Conterminous 48 States

Zip Code – 98642

Central Latitude = 45.802723

Central Longitude = -122.709722

Period, MCE S_a

(sec) (%g)

0.2, 0.882 MCE Value of S_s , Site Class B

1.0, 0.320 MCE Value of S_1 , Site Class B

Spectral Parameters for Site Class D:

0.2, 1.01, $S_a = F_a S_s$, $F_a = 1.147$

1.0, 0.564, $S_a = F_v S_1$, $F_v = 1.761$



City of Ridgefield Building Codes

Effective February 1, 2021

2018 International Building Code with Washington Amendments

2018 International Fire Code with Washington Amendments

2018 International Mechanical Code with Washington Amendments

2018 International Fuel Gas Code with Washington Amendments

2018 Uniform Plumbing Code with Washington Amendments

2018 Washington State Energy Code