Certificate of Design Application

From Designer: Tracie J Reed & Al Hodson

Date: 06.23.15

Job Name: Emerson Street

Address of Construction: 23 Emerson Street, Portland

2009 International Building Code

Construction project was designed to the building code criteria listed below:

Building Code & Year 1999 IBC/ASCE 7-05 Use Group Classification (s) R-2

Type of Construction VB

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IRC Yes

Is the Structure mixed use? No If yes, separated or non separated or non separated (section 302.3) na

Supervisory alarm System? Yes Geotechnical/Soils report required? (See Section 1802.2) N/A

Structural Design Calculations

yes (separate) Submitted for all structural members (106.1 – 106.11)

Design Loads on Construction Documents (1603)

Uniformly distributed floor live loads (7603.11, 1807)

Floor Area Use	Loads Shown
Individual Unit Floors	40 psf
Decks and Stairs	100 psf

Wind loads (1603.1.4, 1609)

Method 2 - Analytical Design option utilized (1609.1.1, 1609.6)

100 mph Basic wind speed (1809.3)

II, 1.0 Building category and wind importance Factor, I_w table 1604.5, 1609.5)

C Wind exposure category (1609.4)

+/- 0.18 Internal pressure coefficient (ASCE 7)

+22.7, -35.8 Component and cladding pressures (1609.1.1, 1609.6.2.2)

+20 psf Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

Bearing Wall Design option utilized (1614.1)

II Seismic use group ("Category")

.324g, .123g Spectral response coefficients, SDs & SD1 (1615.1)

D Site class (1615.1.5)

n/a Live load reduction

Roof *live* loads (1603.1.2, 1607.11)

46.2 psf Roof snow loads (1603.7.3, 1608)

60 psf Ground snow load, P_g (1608.2)

46.2 psf If P_g > 10 psf, flat-roof snow load P_f

1.0 If P_g > 10 psf, snow exposure factor, C_e

1.0 If P_g > 10 psf, snow load importance factor, I_s

1.1, 1.2 Roof thermal factor, C_t (1608.4)

46.2 (Cs = 0.95) Sloped roof snowload, P_s (1608.4)

B Seismic design category (1616.3)

Shear Walls Basic seismic force resisting system (1617.6.2)

2, 2 Response modification coefficient, R_I and deflection amplification factor C_d (1617.6.2)

Equivalent Lateral Force Analysis procedure (1616.6, 1617.5)

29.5kips Design base shear (1617.4, 16175.5.1)

Flood loads (1803.1.6, 1612)

n/a Flood Hazard area (1612.3)

n/a Elevation of structure

Other loads

Concentrated loads (1607.4)

Partition loads (1607.5)

Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404