Certificate of Design Application

Inspections Division
Date: 12/11/13

From Designer: L & L Structural Engineering Services, Inc.

Date: 11/6/13

Job Name: 52 Monument St. Portland, ME

Address of Construction: 52 Monument St. Portland, ME

2009 International Building Code

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

Building Code & Year IBC 2009 Use Group Classification (s) Apartment House, More than 2 dw

Type of Construction Type V(B) Floor, walls, and roof framing are of

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) _____

Supervisory alarm System? No Geotechnical/Soils report required? (See Section 1802.2) No

Structural Design Calculations

Yes 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
Residential	40 PSF

Wind loads (1603.1.4, 1609)

1609.6 Design option utilized (1609.1.1, 1609.6)

100 MPH Basic wind speed (1809.3)

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)

+24.4/ -32.0 Component and cladding pressures (1609.1.1, 1609.6.2.2)

20.2 / 25.3 Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

1617.5 Design option utilized (1614.1)

I Seismic use group ("Category")

0.355/0.16 Spectral response coefficients, S_{Ds} & S_{D1} (1615.1)

C Site class (1615.1.5)

NA Live load reduction

45 psf Roof *live* loads (1603.1.2, 1607.11)

45 psf Roof snow loads (1603.7.3, 1608)

50 psf Ground snow load, P_g (1608.2)

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

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

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

1.0 Roof thermal factor, C_t (1608.4)

41 psf Sloped roof snowload, P_s (1608.4)

C Seismic design category (1616.3)

1.K. Basic seismic force resisting system (1617.6.2)

6.5 /4.0 Response modification coefficient, R_f and deflection amplification factor C_d (1617.6.2)

1617.5 Analysis procedure (1616.6, 1617.5)

0.066 W Design base shear (1617.4, 16175.5.1)

Flood loads (1803.1.6, 1612)

NA Flood Hazard area (1612.3)

NA Elevation of structure

Other loads

NA Concentrated loads (1607.4)

NA Partition loads (1607.5)

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