



Certificate of Design Application

From Designer: Ryan Senatore Architecture

Date: 01/16/18

Job Name: RESIDENCES

Address of Construction: 155 SHERIDAN STREET

2009 International Building Code

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

Building Code & Year 2009 Use Group Classification (s) R-2, S-2

Type of Construction 1A, 5B

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IBC YES

Is the Structure mixed use? yes If yes, separated or non separated or non separated (section 302.3) SEPARATED

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

Structural Design Calculations

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 |
|---------------------------|-------------|
| Office | 50 psf |
| Partitions in Offices | 20 psf |
| Residential | 40 psf |
| Corridors & Public Spaces | 100 psf |

Wind loads (1603.1.4, 1609)

Analytic Method Design option utilized (1609.1.1, 1609.6)

100 mph Basic wind speed (1809.3)

Occupancy II, Importance = 1.0 Building category and wind importance Factor, I_w , table 1604.5, 1609.5

Exposure B Wind exposure category (1609.4)

GCpi = 0.18 Internal pressure coefficient (ASCE 7)

DP 45 Component and cladding pressures (1609.1.1, 1609.6.2.2)

25 psf Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

Equivalent Lateral Force Design option utilized (1614.1)

1 Seismic use group ("Category")

SDs=.306, SD1=.121 Spectral response coefficients, SDs & SD1 (1615.1)

D Site class (1615.1.5)

N/A Live load reduction

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

42 psf Roof snow loads (1603.7.3, 1608)

60 psf Ground snow load, P_g (1608.2)

42 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

1.0 Roof thermal factor, C_t (1608.4)

Sloped roof snowload, P_s (1608.4)

B Seismic design category (1616.3)

Shear Walls Basic seismic force resisting system (1617.6.2)

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

Equivalent Lateral Force Analysis procedure (1616.6, 1617.5)

Design base shear (1617.4, 1617.5.1)

Flood loads (1803.1.6, 1612)

Flood Hazard area (1612.3)

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)