



Certificate of Design Application

From Designer: n/a - project total under \$50,000
 Date: 8 May 2015
 Job Name: Find retail space expansion
 Address of Construction: 16 Free Street Portland ME 04101

2009 International Building Code

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

Building Code & Year IBC 2009 Use Group Classification (s) M-mercantile

Type of Construction IIIB

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? 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) no

Structural Design Calculations

n/a 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
<u>Mercantile</u>	<u>matches original building design load</u>

Wind loads (1603.1.4, 1609)

N/A Design option utilized (1609.1.1, 1609.6)
 Basic wind speed (1809.3)
 Building category and wind importance Factor, w_b (table 1604.5, 1609.5)
 Wind exposure category (1609.4)
 Internal pressure coefficient (ASCE 7)
 Component and cladding pressures (1609.1.1, 1609.6.2.2)
 Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

N/A Design option utilized (1614.1)
 Seismic use group ("Category")
 Spectral response coefficients, S_D s & S_{D1} (1615.1)
 Site class (1615.1.5)

No Live load reduction
N/A Roof live loads (1603.1.2, 1607.11)
 Roof snow loads (1603.7.3, 1608)
 Ground snow load, P_g (1608.2)
 If $P_g > 10$ psf, flat-roof snow load P_f
 If $P_g > 10$ psf, snow exposure factor, C_e
 If $P_g > 10$ psf, snow load importance factor, I_s
 Roof thermal factor, C_t (1608.4)
 Sloped roof snowload, P_s (1608.4)
 Seismic design category (1616.3)
 Basic seismic force resisting system (1617.6.2)
N/A Response modification coefficient, R_f and deflection amplification factor, C_d (1617.6.2)
N/A Analysis procedure (1616.6, 1617.5)
N/A Design base shear (1617.4, 1617.5.1)

Flood loads (1803.1.6, 1612)

N/A Flood Hazard area (1612.3)
N/A Elevation of structure

Other loads

N/A 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)