



# Certificate of Design Application

From Designer: Michael R. Charek  
 Date: August 31, 2016  
 Job Name: 6 City Center Exterior Renovations  
 Address of Construction: 6 City Center, Portland, ME 04101

To the best of my knowledge **2009 International Building Code**  
 and belief, this Construction project was designed to the building code criteria listed below:

Building Code & Year IBC 2009 Use Group Classification (s) A Assembly, B Business

Type of Construction III-B

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) N/A

## 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
<u>Restaurant</u>	<u>100</u>
<u>Office</u>	<u>50 + 20</u>
<u>                    </u>	<u>                    </u>
<u>                    </u>	<u>                    </u>

## Wind loads (1603.1.4, 1609)

Simplified Design option utilized (1609.1.1, 1609.6)

100 Basic wind speed (1809.3)

II 1.1 Building category and wind importance Factor,  $w$   
table 1604.5, 1609.5)

B Wind exposure category (1609.4)

0.25 Internal pressure coefficient (ASCE 7)

40 Component and cladding pressures (1609.1.1, 1609.6.2.2)

20 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)

Not used Live load reduction

20 Roof *live* loads (1603.1.2, 1607.11)

42 Roof snow loads (1603.7.3, 1608)

60 Ground snow load,  $P_g$  (1608.2)

42 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)

N/A Sloped roof snowload,  $P_R$  (1608.4)

N/A Seismic design category (1616.3)

N/A 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, 16175.5.1)

## Flood loads (1803.1.6, 1612)

N/A Flood Hazard area (1612.3)

N/A Elevation of structure

## Other loads

None Concentrated loads (1607.4)

20 Partition loads (1607.5)

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