



Certificate of Design Application

From Designer: MICHAEL F. HAYS, GRANT HAYS ASSOCIATES
 Date: AUGUST 28, 2014
 Job Name: 2ND FLOOR TOILET ROOMS UPDATES @ MEMIC - DEMOLITION
 Address of Construction: 19 CROSS STREET, PORTLAND, MAINE 04101

2009 International Building Code

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

Building Code & Year 2009 Use Group Classification (s) B - BUSINESS
 Type of Construction IB
 Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IRC YES (EXISTING)
 Is the Structure mixed use? NO If yes, separated or non separated or non separated (section 302.3) N/A
 Supervisory alarm System? YES (E) Geotechnical/Soils report required? (See Section 1802.2) N/A

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>N/A</u>	<u>N/A</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 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_{D1} (1615.1)
 Site class (1615.1.5)

N/A Live load reduction
 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)
 Response modification coefficient, R_d and deflection amplification factor, C_d (1617.6.2)
 Analysis procedure (1616.6, 1617.5)
 Design base shear (1617.4, 1617.5.1)

Flood loads (1803.1.6, 1612)

N/A Flood Hazard area (1612.3)
 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)