



Certificate of Design Application

From Designer: WBRC Architects Engineers
 Date: 6/8/2016
 Job Name: Asylum
 Address of Construction: 121 Center 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) Assembly A-1 and A-2
 Type of Construction Type VB
 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? No If yes, separated or non separated or non separated (section 302.3) _____
 Supervisory alarm System? Yes Geotechnical/Soils report required? (See Section 1802.2) Yes

Structural Design Calculations

See Drawing Submitted for all structural members (106.1 – 106.11)

Design Loads on Construction Documents (1603)

Floor Area Use	Loads Shown
Stage	150 PSF
Lobbies & Stairs	100 PSF
Assembly Areas	100 PSF
Event Areas	100 PSF
Balcony	100 PSF

Wind loads (1603.1.4, 1609)

Simplified Design option utilized (1609.1.1, 1609.6)
100 MPH Basic wind speed (1809.3)
III, 1.15 Building category and wind importance Factor, I_w table 1604.5, 1609.5)
B Wind exposure category (1609.4)
+/- 0.18 Internal pressure coefficient (ASCE 7)
up to 57 PSF Component and cladding pressures (1609.1.1, 1609.6.2.2)
22 PSF Max Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

Equiv. Lat. Design option utilized (1614.1)
B Seismic use group ("Category")
0.324, 0.123 Spectral response coefficients, S_D & S_{DI} (1615.1)
D Site class (1615.1.5)

not used Live load reduction
snow governs Roof live loads (1603.1.2, 1607.11)
39 PSF+drift Roof snow loads (1603.7.3, 1608)
50 PSF Ground snow load, P_g (1608.2)
39 PSF If $P_g > 10$ psf, flat-roof snow load P_f
1.0 If $P_g > 10$ psf, snow exposure factor, C_e
1.1 If $P_g > 10$ psf, snow load importance factor, I_s
1.0 Roof thermal factor, C_t (1608.4)
none Sloped roof snowload, P_B (1608.4)
B Seismic design category (1616.3)
* see below Basic seismic force resisting system (1617.6.2)
3, 3 Response modification coefficient, R_f and deflection amplification factor C_d (1617.6.2)
Equiv. Lat. Analysis procedure (1616.6, 1617.5)
140 Kips Design base shear (1617.4, 16175.5.1)
Flood loads (1803.1.6, 1612)
n/a Flood Hazard area (1612.3)
FFE 64'-5" Elevation of structure
Other loads
up to 2000 #s Concentrated loads (1607.4)
15 PSF Partition loads (1607.5)
Equip. Wts. Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)

* Steel Systems Not Specifically Detailed for Seismic Resistance