



# Certificate of Design Application

From Designer:

Mark Sengelmann dba ALPHA architects

Date:

8-5-2016

Job Name:

TRAVIS MMJ

Address of Construction:

803 Forest Ave Unit C Rear Portland ME 04103

## 2009 International Building Code

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

Building Code & Year 2009 Use Group Classification (s) F-FACTORY

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) SEPERATED

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

### Structural Design Calculations

NR Submitted for all structural members (106.1 – 106.11)

### Design Loads on Construction Documents (1603)

Floor Area Use	Loads Shown
<u>RETAIL - FIRST FLOOR</u>	<u>100 PSF</u>

<u>NONE</u>	Live load reduction
	Roof live loads (1603.1.2, 1607.11)
<u>42 PSF</u>	Roof snow loads (1603.7.3, 1608)
<u>60 PSF</u>	Ground snow load, $P_g$ (1608.2)
<u>42 PSF</u>	If $P_g > 10$ psf, flat-roof snow load $P_f$
<u>1.0</u>	If $P_g > 10$ psf, snow exposure factor, $C_e$
<u>1.0</u>	If $P_g > 10$ psf, snow load importance factor, $I_s$
<u>1.0</u>	Roof thermal factor, $C_t$ (1608.4)
<u>42 PSF</u>	Sloped roof snowload, $P_s$ (1608.4)

### Wind loads (1603.1.4, 1609)

ANALYTICAL Design option utilized (1609.1.1, 1609.6)  
100 MPH Basic wind speed (1809.3)  
CAT II 1.0 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)  
15.9, 16.1 PSF Component and cladding pressures (1609.1.1, 1609.6.2.2)  
15.9 PSF Main force wind pressures (7603.1.1, 1609.6.2.1)

B Seismic design category (1616.3)  
MASONRY SHEAR WALLS Basic seismic force resisting system (1617.6.2)  
2 Response modification coefficient,  $R_f$  and deflection amplification factor  $C_d$  (1617.6.2)  
EQUIVALENT LATERAL FORCE Analysis procedure (1616.6, 1617.5)  
88K Design base shear (1617.4, 1617.5.1)

### Earth design data (1603.1.5, 1614-1623)

EQ LATERAL FORCE Design option utilized (1614.1)  
I Seismic use group ("Category")  
0.327, 0.124 Spectral response coefficients,  $S_D$ s &  $S_{D1}$  (1615.1)  
I Site class (1615.1.5)

### 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)