# Certificate of Design Application

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/15/15

From Designer: ASSOCIATED DESIGN PARTNERS, INC

Date: 8/3/15

Job Name: 81 INDUSTRIAL WAY 9900 SF BUILDING

Address of Construction: 81 INDUSTRIAL WAY, PORTLAND MAINE

## 2009 International Building Code

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

Building Code & Year 2009 IBC Use Group Classification (s) A2, S3

Type of Construction IIB

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IBC N

Is the Structure mixed use? Y If yes, separated or non separated or non separated (section 302.3) Separated

Supervisory alarm System? N Geotechnical/Soils report required? (See Section 1802.2) Y

### 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 |
|---|---|
| LIGHT WAREHOUSE | 125 PSF |
| | |
| | |
| | |
| | |

### Wind loads (1603.1.4, 1609)

ANALYTICAL Design option utilized (1609.1.1, 1609.6)

98 Basic wind speed (1809.3)

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)

PER ASCE BASED ON EWA Component and cladding pressures (1609.1.1, 1609.6.2.2)

+14.5 -19.3F Main force wind pressures (7603.1.1, 1609.6.2.1)

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

ASCE 12.8.1 Design option utilized (1614.1)

I Seismic use group ("Category")

0.32/.128 Spectral response coefficients, $S_{DS}$ & $S_{D1}$ (1615.1)

D Site class (1615.1.5)

NO Live load reduction

20 Roof *live* loads (1603.1.2, 1607.11)

42+drift 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 If $P_g$ > 10 psf, snow exposure factor, $C_e$

1 If $P_g$ > 10 psf, snow load importance factor, $I_s$

1.0 Roof thermal factor, $C_t$ (1608.4)

NA Sloped roof snowload, $P_s$ (1608.4)

B Seismic design category (1616.3)

OSBF Basic seismic force resisting system (1617.6.2)

(3) Response modification coefficient, $R_l$ and deflection amplification factor $C_d$ (1617.6.2)

ASCE 12.8.1 Analysis procedure (1616.6, 1617.5)

19K Design base shear (1617.4, 16175.5.1)

### Flood loads (1803.1.6, 1612)

NA Flood Hazard area (1612.3)

NA Elevation of structure

### Other loads

NA Concentrated loads (1607.4)

NA Partition loads (1607.5)

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