



# Certificate of Design Application

From Designer: Dana C. Sturtevant c/o The Sheridan Corporation  
 Date: 9/2/16  
 Job Name: Suburban Propane Relocation  
 Address of Construction: 656 Riverside Street, Portland, ME 04103

## 2009 International Building Code

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

Building Code & Year Mubec 2010 Use Group Classification (s) Business / Storage  
 Type of Construction Type II (000)  
 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) Non-separated  
 Supervisory alarm System? Yes Geotechnical/Soils report required? (See Section 1802.2) See attached

### Structural Design Calculations

Yes 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>Business Office</u>	<u>50# / SF</u>
<u>Garage / Storage</u>	<u>125# / SF</u>
<u>Bulk Storage / Dock</u>	<u>250 # / SF</u>

### Wind loads (1603.1.4, 1609)

Envelope Design option utilized (1609.1.1, 1609.6)  
100 MPH Basic wind speed (1809.3)  
CAT II - 1.00 Building category and wind importance Factor,  $I_w$ , table 1604.5, 1609.5)  
B Wind exposure category (1609.4)  
0.701 Internal pressure coefficient (ASCE 7)  
15.24 Component and cladding pressures (1609.1.1, 1609.6.2.2)  
25.6 Main force wind pressures (7603.1.1, 1609.6.2.1)

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

ASD Design option utilized (1614.1)  
II Seismic use group ("Category")  
0.2624 Spectral response coefficients, SDs & SDI (1615.1)  
0.1264 Site class (1615.1.5)

Live load reduction  
20 PSF Roof *live* loads (1603.1.2, 1607.11)  
42 PSF Roof snow loads (1603.7.3, 1608)  
60 PSF Ground snow load,  $P_g$  (1608.2)  
42 PSF If  $P_g > 10$  psf, flat-roof snow load  $P_f$   
1.00 If  $P_g > 10$  psf, snow exposure factor,  $C_e$   
1.00 If  $P_g > 10$  psf, snow load importance factor,  $I_s$   
1.00 Roof thermal factor,  $C_t$  (1608.4)  
N.A. Sloped roof snowload,  $P_B$  (1608.4)  
B Seismic design category (1616.3)  
Lateral Force Basic seismic force resisting system (1617.6.2)  
3.00 Response modification coefficient,  $R$ , and deflection amplification factor  $C_d$  (1617.6.2)  
Equiv. Force Analysis procedure (1616.6, 1617.5)  
0.2099 x W Design base shear (1617.4, 1617.5.1)

### Flood loads (1803.1.6, 1612)

N/A Flood Hazard area (1612.3)  
67 to 74 Elevation of structure

### Other loads

N/A Concentrated loads (1607.4)  
15 PSF Partition loads (1607.5)  
N/A Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)