



# Certificate of Design Application

From Designer: Chappell Engineering Associates, LLC

Date: August 10, 2015

Job Name: USM Law Building - T-Mobile Site Number 4PB1204

Address of Construction: 232 Deering Avenue, Portland, ME 04102

## 2009 International Building Code

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

Building Code & Year IBC2009 Use Group Classification (s) Existing Building - E

Type of Construction Proposed Construction - Rooftop Equipment Frame for Radio Cabinets

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IRC No

Is the Structure mixed use? No If yes, separated or non separated or non separated (section 302.3) \_\_\_\_\_

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

### 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

### Wind loads (1603.1.4, 1609)

Analytical Procedure Design option utilized (1609.1.1, 1609.6)

100 mph Basic wind speed (1809.3)

III Building category and wind importance Factor,  $I_w$ , table 1604.5, 1609.5

B Wind exposure category (1609.4)

N/A Internal pressure coefficient (ASCE 7)

N/A Component and cladding pressures (1609.1.1, 1609.6.2.2)

N/A 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)

N/A Seismic use group ("Category")

N/A Spectral response coefficients,  $S_s$  &  $S_1$  (1615.1)

N/A Site class (1615.1.5)

<u>None</u>	Live load reduction
<u>31.5 psf</u>	Roof live loads (1603.1.2, 1607.11)
<u>31.5 psf</u>	Roof snow loads (1603.7.3, 1608)
<u>50 psf</u>	Ground snow load, $P_g$ (1608.2)
<u>31.5 psf</u>	If $P_g > 10$ psf, flat-roof snow load $P_f$
<u>0.9</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>N/A</u>	Sloped roof snowload, $P_s$ (1608.4)
<u>N/A</u>	Seismic design category (1616.3)
<u>N/A</u>	Basic seismic force resisting system (1617.6.2)
<u>N/A</u>	Response modification coefficient, $R$ , and deflection amplification factor $C_d$ (1617.6.2)
<u>N/A</u>	Analysis procedure (1616.6, 1617.5)
<u>N/A</u>	Design base shear (1617.4, 1617.5.1)

### Flood loads (1803.1.6, 1612)

N/A Flood hazard area (1612.3)

97ft AGL Elevation of structure

### Other loads

N/A Concentrated loads (1607.4)

N/A Partition loads (1607.5)

N/A Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)