Certificate of Design Application

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 08/03/16

From Designer: Kevin M. Finn, P.E., Inc.

Date: June 30, 2016

Job Name: Job #9262 Unitil Regulator Building and DAC Building Pre-fabricated

Address of Construction: 74 West Commercial Street, Portland, ME

2015 **International Building Code** (Code Ref. are from 2009 IBC - OK)

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

Building Code & Year 2015 IBC Use Group Classification (s) U

Type of Construction IIB

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

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

Supervisory alarm System? No Geotechnical/Soils report required? (See Section 1802.2) _____

Structural Design Calculations

In process 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
Live loads	150 psf

Wind loads (1603.1.4, 1609)

_____ Design option utilized (1609.1.1, 1609.6)

150 mph Basic wind speed (1809.3)

1.00 Building category and wind importance Factor, I_w table 1604.5, 1609.5)

C Wind exposure category (1609.4)

_____ Internal pressure coefficient (ASCE 7)

_____ Component and cladding pressures (1609.1.1, 1609.6.2.2)

_____ Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

_____ Design option utilized (1614.1)

III Seismic use group ("Category")

0.257. 0.125 Spectral response coefficients, S_{DS} & S_{D1} (1615.1)

_____ Site class (1615.1.5)

_____ Live load reduction

20 psf Roof *live* loads (1603.1.2, 1607.11)

80 psf Roof snow loads (1603.7.3, 1608)

35 psf Ground snow load, P_g (1608.2)

_____ If P_g > 10 psf, flat-roof snow load P_f

_____ If P_g > 10 psf, snow exposure factor, C_e

_____ If P_g > 10 psf, snow load importance factor, I_s

_____ Roof thermal factor, C_t (1608.4)

_____ Sloped roof snowload, P_s (1608.4)

_____ Seismic design category (1616.3)

_____ Basic seismic force resisting system (1617.6.2)

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

_____ Analysis procedure (1616.6, 1617.5)

_____ Design base shear (1617.4, 16175.5.1)

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