Certificate of Design Application

From Designer: Becker Structural Engineers, Inc.

Date: 9/8/11

Job Name: International Marine terminal Improvements Project

Address of Construction: 468 Commercial Street

2009

~~2003~~ **International Building Code**

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

Building Code & Year 2009 IBC Use Group Classification (s) Business Use

Type of Construction Type 5 - wood framed

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IRC YES

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

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

Structural Design Calculations

Completed — 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
All Int. Spaces	100 psf

Wind loads (1603.1.4, 1609)

Mthd 2 — Design option utilized (1609.1.1, 1609.6)

100 mph — Basic wind speed (1809.3)

II / 1.0 — Building category and wind importance Factor, I_w table 1604.5, 1609.5)

C — Wind exposure category (1609.4)

+/- 0.18 — Internal pressure coefficient (ASCE 7)

31 psf — Component and cladding pressures (1609.1.1, 1609.6.2.2)

23 psf — Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

Equiv. Lat. Force — Design option utilized (1614.1)

Occ. Cat II — Seismic use group ("Category")

0.314,0.077 — Spectral response coefficients, SDs & SD1 (1615.1)

D — Site class (1615.1.5)

N/A — Live load reduction

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

46.2 psf — Roof snow loads (1603.7.3, 1608)

60 psf — Ground snow load, P_g (1608.2)

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

1.0 — If P_g > 10 psf, snow exposure factor, C_e

1.0 — If P_g > 10 psf, snow load importance factor, I_s

1.1 — Roof thermal factor, C_t (1608.4)

46.2 psf — Sloped roof snowload, P_s (1608.4)

B — Seismic design category (1616.3)

Wood SW — Basic seismic force resisting system (1617.6.2)

6.5, 4 — Response modification coefficient, R_I and deflection amplification factor C_d (1617.6.2)

Per ASCE 7-05 — Analysis procedure (1616.6, 1617.5)

7k — Design base shear (1617.4, 16175.5.1)

Flood loads (1803.1.6, 1612)

N/A — Flood Hazard area (1612.3)

N/A — Elevation of structure

Other loads

2000 # — Concentrated loads (1607.4)

Included — Partition loads (1607.5)

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