

FROM DESIGNER: Simon Design Engineering, LLC

DATE: 12-21-06

Job Name: Ocean Gateway Parking Structure

Address of Construction: \_\_\_\_\_

2003 International Building Code

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

Building Code and Year IBC 2003 Use Group Classification(s) S-2  
Type of Construction IFB

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IBC? Yes - not required.  
Is the Structure mixed use? No If yes, separated or non separated (see Section 302.3) separated  
Supervisory alarm system? \_\_\_\_\_ Geotechnical/Soils report required? (See Section 1802.2) yes

STRUCTURAL DESIGN CALCULATIONS

No. submitted for all structural members (102.1, 105.1.1)

20% Live load reduction (1603.1.1, 1607.5, 1607.10)  
SNOW GOV. Roof live loads (1603.1.2, 1607.11)

DESIGN LOADS ON CONSTRUCTION DOCUMENTS (1603)

Roof snow loads (702.7.3, 1608)

Uniformly distributed floor live loads (702.11, 1607)

50 psf Ground snow load,  $P_g$  (1603.2)

Floor Area Use Loads Shown

42 psf If  $P_g > 10$  psf, flat-roof snow load,  $P_f$  (1603.4)

PARKING DECK 40 psf

1.0 If  $P_g > 10$  psf, snow exposure factor,  $C_e$  (Table 1603.5.1)

STAIRS 100 psf / 500<sup>2</sup>/14<sup>2</sup>

1.0 If  $P_g > 10$  psf, snow load importance factor,  $I_s$  (Table 1604.6)

STORAGE 125 psf

1.2 Roof thermal factor,  $C_r$  (Table 1603.3.2)

EQUIPMENT RM 150 psf

N/A Sloped roof snowload,  $P_s$  (1603.4)

LOBBIES 100 psf

B Seismic design category (1612.3)

Wind loads (1603.1.4, 1603)  
ASCE 7 Design option utilized (1603.1.1, 1603.5)

OSMF Basic seismic force-resisting system (Table 1617.5.2)

100 mph Basic wind speed (1603.3)

3/3 Response modification coefficient,  $R$ , and deflection amplification factor,  $C_d$  (Table 1617.5.2)

1.00 Building category and Wind Importance factor,  $I_w$  (Table 1604.6, 1603.5)

ELFP Analysis procedure (1612.5, 1617.5)

D Wind exposure category (1603.4)

805.9K Design base shear (1617.4, 1617.5.1)

0 Internal pressure coefficient (ASCE 7)

240 Flood loads (1603.1.5, 1612)

37.2 - 40.26 Component and cladding pressures (1603.1.1, 1603.5.2.2)

69 Floodhazard area (1612.3)  
Elevation of structure

31.57 - 37.8 Main force wind pressures (1603.1.1, 1603.5.2.1)

3000 lb / 4.5<sup>2</sup> AREA Other loads  
Concentrated loads (1607A)

Earthquake design data (1603.1.2, 1614-1623)

50 psf Partition loads (1607.5)

I Design option utilized (1614.1)

6" BARRIER Impact loads (1607.8)

0.31 / 0.160 Seismic Use group ("Category") (Table 1604.6, 1612.2)

Min. loads (Table 1607.6, 1607.21, 1607.7, 1607.12, 1607.19, 1610, 1611, 2404)

C Spectral response coefficients,  $S_{DS}$  &  $S_{D1}$  (1615.1)

C Site class (1612.1.5)

PER 500 sq EFFECTIVE WIND AREA