

November 17, 2015

Ms. Jeanie Bourke
Code Enforcement Office/Plan Reviewer
Inspection Division
City of Portland
389 Congress St
Room 315
Portland, ME 04101

**CASCO BAY PARKING GARAGE – STAIR/ELEVATOR TOWER RESTORATION
PORTLAND, MAINE**

Dear Ms. Bourke,

Becker Structural Engineers, Inc. (BSE) performed a condition assessment report dated June 1, 2015 for the main stair/elevator tower at the Casco Bay parking garage adjacent to the Casco Bay Ferry Terminal. The owners of the garage had observed some damage (cracking) of the CMU wall assembly which was the impetus to our services being retained to perform the assessment. During our investigation it became apparent that what is in-place did not match the intent of the original drawings from 1986. Through our investigation it was determined that the vertical and horizontal reinforcing within the CMU wall assembly was omitted, not continuous and/or not grouted solid. The result of the missing reinforcement is significant cracking in the upper portions of the stair/elevator tower.

The owners of the garage have decided to proceed with restoration of both stair towers (Stair/Elevator Tower #2 is the base bid and Stair Tower #1 is an add alternate in our construction documents). The scope of stair/elevator tower restoration work (base bid) includes removing the existing masonry façade, installing grouted vertical steel reinforcement, installing steel horizontal reinforcing banding, replacement of the windows/curtain wall, and installing a new metal wall panel façade.

On July 16, 2015, Nathan Merrill and Josh Martin-McNaughton of BSE met with you to discuss the implications of this scope of work to verify conformance to the 2009 International Existing Building Code (IEBC). It has been determined that the vertical elements of the lateral-force-resisting system did not suffer damage such that the lateral load resisting system capacity of the structure has not been reduced by more than 20 percent. It was also determined that the capacity of the vertical gravity-load carrying elements has not been reduced by more than 20 percent from its predamaged condition. Therefore we concluded that the scope of work would fall under the “Repairs – Less than Substantial Structural Damage” section under the Prescriptive Compliance Method as outlined in Section 304 of the IEBC. Under this method the structure is allowed to be repaired to its pre-damaged state using materials and strengths that existed prior to the damage. New structural members and connections used in the repair will comply with

the detailing provisions of the International Building Code (IBC) per section 304.4 of the IEBC. It is our understanding that this is an acceptable compliance method per our workshop with you.

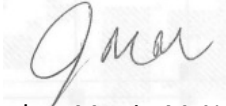
The following IEBC criteria were reviewed in determining the compliance method:

- Lateral and gravity forces imparted onto the existing structure will not have increased after completion of this work.
- The existing structural capacities will not decrease after completion of this work.
- There is no change of occupancy, space reconfiguration or repurposing of the structure.
- The repairs to the structure will not reduce the level of safety, health or public welfare.

Please contact us with any questions you might have concerning this project.

Sincerely,

BECKER STRUCTURAL ENGINEERS, Inc.



Joshua Martin-McNaughton, P.E.

