



Geotechnical
Environmental
Water Resources
Ecological

July 24, 2015
Project 1506730

VIA EMAIL: egermani@gmh-law.com

Elizabeth A. Germani, Esq.
Germani Martemucci & Hill
43 Deering Street
Portland, Maine 04101

Dear Attorney Germani:

**Re: Evaluation of Settlement and Lateral Movement
Seaport Lofts - 113 Newbury Street
Portland, Maine**

GEI Consultants, Inc. (GEI) was engaged on behalf of Landry/French Construction Company (the general contractor for the Seaport Lofts project) to evaluate the settlement and lateral movements affecting properties abutting the north boundary of the Seaport Lofts construction site. These movements occurred during construction of a new site retaining wall along the site boundary. We were asked to evaluate the observed movements and whether additional stabilizing measures were required to allow project construction to resume.

Haley & Aldrich, Inc. (H&A) was engaged on behalf of 113 Newbury Street, LLC (the developer for the Seaport Lofts project) to perform a similar evaluation, working during the same time frame as GEI. H&A prepared a report dated June 24, 2015 that presented their evaluation of the observed movements and their recommendations for resuming project construction. We were asked to review the H&A report and comment on whether we were in general agreement with their conclusions and recommendations, based on the results of our own independent evaluation.

The purpose of this letter is to confirm that, based on our own independent evaluation, we are in general agreement with the conclusions and recommendations in the H&A report regarding the resumption of project construction. We agree that additional stabilizing measures are not required and that project construction should be allowed to proceed, with suitable precautions. Additional details of our evaluation relevant to the resumption of project construction are provided below.

Information Evaluated

Our evaluation included review of the same documents and survey monitoring data listed on pages 3 and 4 of the H&A report, with the following exceptions:

- We did not review architectural plans for the Seaport Lofts.
- We did not review the individual weekly field reports prepared by Landry/French (although they did provide us information on the dates of pertinent construction activities for use in developing a construction timeline).

- We did not review the movement evaluation reports prepared by S. W. Cole Engineering Inc. (dated April 30, 2015) and by Geotechnical Services Inc. (dated April 12, 2015). GEI did review the data that S.W. Cole and Geotechnical Services Inc. relied on for their evaluations.

Our evaluation also included:

- Four site visits to observe conditions at the site and abutting properties (including discussions with the abutting property owners).
- Additional miscellaneous information that we requested from members of the project team.
- Global stability analyses performed by GEI.

Conclusions Relevant to Resumption of Construction

From review of the survey monitoring data and construction timeline we conclude that the settlement and lateral movement affecting the adjacent properties occurred in response to the following construction events:

- Excavation performed for construction of the new Seaport Lofts site retaining wall section that is located immediately adjacent to the north site boundary.
- Partial removal of the sheet piles that were installed to support the excavation for construction of the new site retaining wall.

The survey monitoring data indicate that the movements precipitated by these events stabilized shortly after each event, with little or no movement since. Construction of the retaining wall section immediately adjacent to the north site boundary has been completed and the excavation has been backfilled. We understand that the remaining sheet piles will be left in place and cutoff below the finished grade. H&A concluded that the observed movements were not due to global slope instability. We agree with their conclusion, based on the results of our own global stability analyses, the close proximity of the zone of observed surface movements to the sheet piles and the new site retaining wall, and the absence of any deep-seated movement in the inclinometer measurements.

The new parking area south of the new site retaining wall is currently about 5 feet above final grade. The excavation to final grade in this area reduces the factor of safety for global stability. Based on our independent global stability analyses we agree with H&A's conclusion that there is an adequate factor of safety for global stability in the final excavated condition. However, given the previous movement events, this excavation should be performed in a cautious manner with frequent survey monitoring as recommended by H&A.

Precautions During Remaining Construction

The H&A report provides recommendations for precautions that should be taken during the remaining construction. We are in general agreement with these recommendations, with the following exceptions:

1. In our opinion, the prohibition on use of vibratory compaction equipment is unnecessarily restrictive. We suggest that this prohibition be relaxed to allow use of small vibratory plate compactors.

2. In our opinion, the limiting movement value of ¼ inch is unnecessarily restrictive for the 48 Hancock Street building, considering the type of structure and the limited impact of additional settlement on the repairs that are already anticipated to be required.

Closure / Limitations

Our evaluation is based in part on subsurface data from explorations performed by others and on instrumentation data collected by others. We have assumed that the subsurface data and instrumentation data accurately reflect the conditions at the site. We recommend that GEI review the instrumentation data that is proposed to be collected during the final excavation of the site to its proposed finished grades and installation of the foundations for the maintenance/storage building.

If you have any questions, please feel free to contact me at 781-721-4043.

Sincerely,

GEI CONSULTANTS, INC.



Michael A. Yako, P.E.
Vice President / Principal

DRS/MAY:mrb

