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Mr. Paul Ledman  
62 Cumberland Ave.  
Portland, ME 04563

January 6, 2011

Special Inspections Report  
Soils, Foundation Bearing and Controlled Fill  
Proposed Condominium  
62 Cumberland Ave.  
Portland, Maine

Dear Mr. Ledman,

As requested, I attended an initial project meeting on-site with Mike White, David Price, Jeff Munn and Tom (Mid-Maine Foundations) on November 19, 2010. I performed special inspections on Nov. 27 & 29 and Dec. 6 & 14, 2010. Several other brief site visits were made to observe project progress and conditions. I previously conducted a soil and subsurface investigation at the subject site, report dated October 28, 2010.

The partial depth lower level excavation observed Nov. 19<sup>th</sup> and the perimeter continuous spread footing excavation observed Nov. 27<sup>th</sup> (after The Cumberland Ave. utility connection work) exposed sandy to gravelly stiff to very stiff silty clay with scattered cobbles and occasional boulders. Some isolated areas of dense granular soils similar to those described in the Oct. 28<sup>th</sup> soils report were also exposed. Each of these in-situ materials should be adequate for support of foundations designed using the recommended 3,000 psf maximum allowable bearing pressure. The four interior isolated spread footings and the five perimeter pier footings bear on the firm silty clay soil. The perimeter continuous spread footings bear predominately on the firm silty clay with several isolated short sections bearing on the dense silty to clayey granular soils, suitable for foundation support.

No structural fill was required below foundations and less than 4 inch depth of vibration-settled minus 3/4 inch crushed stone was used below foundations. The contractor's source of structural fill is suitably graded, has less than 5% fines (minus #200 sieve material) and is acceptable for use adjacent foundation walls, adjacent piers and below concrete slabs. The contractor's minus 3/4 inch crushed stone is acceptable for underdrain use and below foundations as approved and with placement observed.

As we discussed and you requested after the concrete piers were constructed, monitoring of the contractor's structural fill placement and compaction around the isolated footings and piers would not be performed as the contractor had established acceptable structural fill placement and compaction methods on the project.

Variations in the soil conditions below those exposed in the foundation excavations may exist, drilling or other exploration methods would be required to determine the nature and extent of possible variations. The data obtained by this further investigation could change the recommendations in this report.

**Site visit observations to date for special inspections are presented below:**

**Sat. 11-27-10            Excavation for perimeter footings**

The building perimeter continuous spread footing excavation, integral with the four southwest-side pier footing excavations, were completed exposing the undisturbed very stiff silty clay soil.

Near the north corner of the building (plan S2.0 location A-3) a leveling course of 3/4 inch crushed stone, zero to 4 inch depth, was placed and vibrated to footing grade.

A section of the continuous footing excavation adjacent the sidewalk was deepened to provide for buried service entrance to the building, above footing grade, from the street. Blankets were placed for frost protection.

**Mon. 11-29-10            Concrete placement for perimeter footings**

Surveyors set foundation references. Footings that were excavated for on Saturday were formed, reinforcing steel set and concrete placed on suitable in-situ bearing soils. Blankets were placed for frost protection.

**Mon. 12-6-10            Perimeter foundation backfill & Underdrains**

The contractor reported backfilling the exterior of the building perimeter footings on Saturday 12-4-10 with 3/4 inch crushed stone, beginning at footing grade and in some areas extending partially up the foundation wall. Four-inch PVC underdrain pipe had been placed within the stone along the NE and SE sides of the building. Filter fabric covered the stone along the SE side of the building. A 6 inch PVC roof downspout outlet pipe had also been placed within the stone along part of the NE side of the building.

Structural sand fill was being placed above the stone in approximate 6-inch lifts and adequately compacted with a walk-behind vibratory compactor on both sides of the foundation (frost) wall along the SW and NW sides of the building. Along the exterior of these frost walls the contractor plans to install the perimeter underdrain pipe above the top of footing elevation and below the level of the interior floor slab granular support material to provide for a positive gravity outlet into existing manhole DMH-1.

**Tu. 12-14-10                      Excavation & concrete placement for pier foundation footings**

The four interior isolated spread footing excavations and the exterior column footing at the north corner of the building were completed, exposing the undisturbed very stiff silty clay soil. Less than 4 inch depth of 3/4 inch crushed stone was placed and vibrated to footing grade with a walk-behind vibratory compactor at the building corner footing and at the two interior footings closest to the street.

The footings were formed, reinforcing steel set and concrete placed. Blankets were placed for frost protection.

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I am available to observe the exterior backfill placement and compaction for the lower level of the building upon request.

It is important that surface runoff and drainage be directed away from the building perimeter and backfill area to help maintain a dry condition within the lower level of the building and reduce the risk of building distress.

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I appreciate the opportunity to work with you on this project. If you have any questions or when I can be of further service, please feel welcome to contact me.

Sincerely,



Stephen A. Down, PE