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

October 28, 2010

Soil and Subsurface Investigation
Proposed condominium
62 Cumberland Ave.
Portland, Maine

Dear Mr. Ledman,

As requested by Jeff Munn of Coastal Construction Services, Inc. of Durham, Maine, I performed site and subsurface observations at the subject property on October 28, 2010 to determine the suitability of the lot to support a wood frame condominium structure with lower level parking.

The lot is vacant and sparsely vegetated with grass, weeds, shrubs and several trees. Most of the site appeared to be covered with a surficial depth of fill and disturbed soil. The ground surface is generally level to gently sloping down to the southwest. The lot is located between a gravel parking lot upslope that borders this lot with a low granite slab "retaining wall" extending about 30 inches above ground. A two-story duplex on Sheridan Street borders the downslope side of the lot and appears in good condition from a subsoil viewpoint. A red brick sidewalk borders the northwest side of the lot.

Subsoil conditions were investigated with two test borings. TB-1 is located 25 feet along the Cumberland Avenue boundary from the north corner of the lot and 8 feet perpendicularly onto the lot, beyond the sidewalk. TB-2 is located 16 feet from the southwest property line (downslope side) and 90 feet perpendicularly onto the lot, beyond the sidewalk.

The test borings encountered about 1-1/2 to 2-1/2 foot depth of fill consisting of silty sand and gravel with cobbles to sandy silty clay with scattered gravel and cobbles, overlying medium dense silty to slightly silty gravelly sand with scattered to frequent cobbles extending to the maximum depth explored, 5 feet. These underlying granular soils are relatively free draining, >10 in/hr permeability and by the Unified Soil System, classify as SM/SP to GM/GP. Moisture content was slightly moist to moist and no free water was encountered in the test holes. Graphic soil logs are available upon request.

The nature and extent of variations from the conditions encountered at the test hole locations may not become evident until excavation is performed. If, during construction ground and water conditions appear different than those described, re-evaluation should be performed.

Foundation loadings from the wood structure are expected to be light. Spread footings should be placed on the natural dense coarse granular soils below all topsoil, disturbed soil and existing fill. Maximum allowable bearing pressure of 2,000 to 3,000 psf is anticipated with acceptable total and differential settlements occurring essentially during construction. Ground floor concrete slabs should be separated from bearing members with a positive expansion joint and adequately reinforced.

The subsoils encountered consist of coarse granular materials which have relatively good drainage characteristics. Good surface drainage should be maintained to help prevent development of a free water level.

I recommend on-site observation of excavations and foundation bearing strata by a soil Engineer.

I appreciate the opportunity to perform this geotechnical site and subsoil investigation. If you have any questions, please do not hesitate to contact me.

Sincerely,

Stephen A. Down, PE