



Cal-Tech Testing, Inc.

- Engineering
- Geotechnical
- Environmental

LABORATORIES

P.O. Box 1625 • Lake City, FL 32056

4784 Rosselle Street • Jacksonville, FL 32254

2230 Greensboro Highway • Quincy, FL 32351

Tel. (386) 755-3633 • Fax (386) 752-5456 Tel. (904) 381-8901 • Fax (904) 381-8902 Tel. (850) 442-3495 • Fax (850) 442-4008

W.L. Harper Construction, Inc. 119 SW Hobby Place Lake City, Florida 32024

Attention:

Mr. Bill Harper

Subject:

Site Observation

Residential Structure at 2302 SW Carpenter Road

Lake City, Florida

CTI Project No. 07-00312

Dear Mr. Harper:

On June 18, 2007 Cal-Tech Testing, Inc. (CTI) representatives visited the subject site to evaluate the presence of clayey soils encountered during the footing excavations for the support of the proposed residential structure. At time of arrival, all footings had been excavated and reinforcing steel had been placed in the excavations. On June 26, 2007 CTI representatives performed 4 hand auger borings in the bottom of the footing excavations at the approximate locations indicated on the attached Report of Soil Borings. In general, the soil profile as disclosed by auger borings A-1 through A-4 consisted of reddish tan and light gray, mottled with trace of fine sand (CL-CH) to a termination depth of about 5 feet below the existing bottom of footing elevation.

A groundwater level was not encountered at the auger boring locations. Typically, groundwater is not readily apparent in auger borings due to the clayey nature of the site soils. It should be anticipated that groundwater level will fluctuate due to seasonal climatic variations, surface water runoff patterns, construction operations, and other interrelated factors.

As discussed above, our site observation and results of the auger borings indicated the presence of clayey soils within the upper 5 feet of the proposed finished subgrade elevation. These clayey soils have a moderate to high potential for volume change (shrink/swell). This change in volume can be the result of fluctuation in the water content of these soils. Typically, clayey soils shrink with the decrease in water content and swell with increase in the water content. This change in volume of the supporting soils beneath the foundation may result in structural deformation.

To alleviate adverse effects of volume changes of the supporting soils, we recommend all shallow foundation, footings, slabs-on-grade be supported on a minimum of 3 feet of non-expansive soils. This will require the over excavation of the existing soils from within the building "footprint" and replacement with well-compacted suitable fill. The over excavation and replacement should extend a minimum horizontal margin of 5 feet beyond all building perimeters. Well compacted fill should be placed in thin loose lifts not exceeding 12 inches in thickness and compacted to a minimum of 95 percent of the modified Proctor maximum dry density (ASTM D 1557).

SEE NEW LETTER DATED 7-2-07 THAT AMENDED THIS. We appreciate this opportunity of working with you on this project and look forward to serving as your geotechnical and construction materials testing consultant on the remainder of this and future projects. Should you have any questions and or comments concerning this report, please contact our office at 386-755-3633.

Sincerely,

CAL-TECH TESTING, INC.

Linda M. Creamer President/CEO Nabil O. Hmeidi, P.E.

Senior Geotechnical Engineer

Licensed, Florida No. 57842