

November 11, 2014

**SCS&T No. 140568N**  
**Report No. 1**

**Mr. Craig Brown**  
**Vice President of Construction Management**  
**Capstone Development Partners**  
**162 Rancho Santa Fe Road, Suite B-80**  
**Encinitas, California 92024**

Subject: GEOTECHNICAL UPDATE  
STUDENT HOUSING COMPLEX  
5030 COLLEGE AVENUE  
SAN DIEGO, CALIFORNIA

References: Southern California Soil & Testing, Inc. (2008), *Geotechnical Investigation, 5030 College Avenue, San Diego, California*, SCS&T No. 0811164-1, September 19.

Dear Mr. Brown:

In accordance with your authorization, Southern California Soil and Testing, Inc. (SCS&T) prepared this geotechnical update for the subject project.

### **SCOPE OF WORK**

Our scope of work consisted of visiting the site, reviewing the prior geotechnical reports referenced above, and providing conclusions and updated geotechnical recommendations.

### **SITE DESCRIPTION**

The site is located at 5030 College Avenue, San Diego, California. The site is bounded by residential property on the north, south and west and College Avenue on the east. Vegetation on-site consists of grasses, shrubs and trees. Topographically, the ground surface descends to the west with slopes along the northern and southern property lines that descend towards the middle of the site. Site elevations range from about 450 feet on the east to about 420 feet on the west. The total elevation difference from east to west is about 30 feet. A storm drain is located in the middle of the site that extends from the eastern property line to the western property line.

### **PROJECT DESCRIPTION**

We understand that the project will consist of the design and construction of a 4-story apartment complex over 1 or 2 levels of underground parking. Shallow spread footings and a conventional concrete slab-on-grade floor or deep foundations consisting of drilled piers are anticipated. Final plans are not yet available. Cuts and fills up to about 10 to 15 feet deep will be required to create a level building pad.

### **CONCLUSIONS**

An SCS&T engineering geologist visited the site on November 4, 2014. Our observations indicate that the site is in the same general condition as when originally investigated. Accordingly, the recommendations contained in our referenced geotechnical report (SCS&T, 2008) remain applicable except as updated below. The grading and foundation recommendations presented in the above

referenced report may need to be updated once final plans are developed. Global slope stability will need to be evaluated once project plans are developed.

## UPDATED RECOMMENDATIONS

### CBC Seismic Design Parameters

Our previous investigation was conducted prior to the 2013 California Building Code (CBC). Updated 2013 CBC seismic design parameters are presented below.

Site Coordinates: Latitude 32.7692°  
Longitude -117.0696°

Site Class: B  
Site Coefficients,  $F_a = 1.128$   
 $F_v = 1.687$


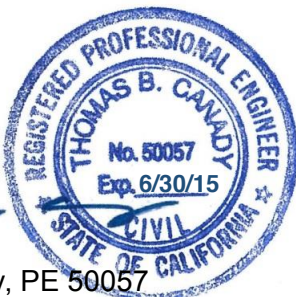
Mapped Spectral Response Acceleration at Short Periods,  $S_s = 0.930g$   
Mapped Spectral Response Acceleration at 1-Second Period,  $S_1 = 0.356g$   
 $S_{DS} = 0.699g$   
 $S_{D1} = 0.401g$   
 $PGA_M = 0.419g$


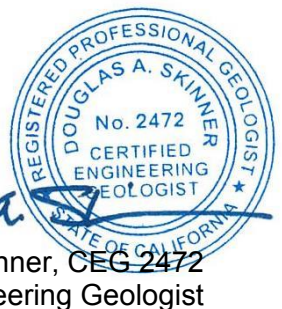
### Seismic Earth Pressure for Retaining Walls

If required, the seismic earth pressures for the design of earth retaining structures can be taken as equivalent to the pressure of a fluid weighing 16 pounds per cubic foot (pcf) for flexible walls and 31 pcf for stiff walls. These values are for level backfill conditions and do not include a factor of safety. Appropriate factors of safety should be incorporated into the design. This pressure is in addition to the un-factored static active pressures. The allowable passive pressure and bearing capacity can be increased by  $\frac{1}{3}$  in determining the stability of the wall.

If you have questions, please call us at (619) 280-4321.

Respectfully Submitted,  
**SOUTHERN CALIFORNIA SOIL & TESTING, INC.**

  
  
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