

# Earth Investigations Consultants

December 11, 2005  
Job 1663.01.01

CirclePoint  
135 Main Street, Suite 1600  
San Francisco, California 94105

Attention: Mr. Ted Heyd, Project Manager

**RE: SUPPLEMENTAL GEOTECHNICAL PEER REVIEW**  
Proposed Forest Green Estates, Tract 8268  
Richmond, California

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Ladies and Gentlemen:

## INTRODUCTION

Pursuant to your request and authorization, we have completed geotechnical review of the following documents submitted for review by Terrasearch, Inc. (TI) in response to our supplemental peer review letter dated October 5, 2005:

- Response to review and supplemental recommendations (dated November 15, 2005);
- Supplemental stability analysis (faxed December 5, 2005).

## DISCUSSION & CONCLUSIONS

The information provided indicates the potentially deep landslide conditions can be successfully mitigated by deep ground water withdrawal to stabilize the critical slide beneath the site; by constructing of deep, earthen buttresses to stabilize landslide(s) in the southern part of the site, and by installing a deep, tie-back pier retention system to mitigate offsite encroachment of perceived, deep-seated, landslide creep into the western property line.

**Geologists & Engineers**

P.O. Box 795 ● Pacifica, CA 94044 ● (650) 557-0262 ● Fax (650) 557-0264

## **RECOMMENDED ACTION**

Terrasearch, Inc. in their submittals has provided reasonable reply to our geotechnical review comments for the proposed 120-lot, residential subdivision. As such, we recommend geotechnical approval of the tentative map with the following conditions:

### Design-Level Geotechnical Investigation

The applicant's geotechnical consultant should perform the necessary supplemental geotechnical exploration, testing and analyses to confirm the preliminary conclusions and recommendations relative to site stability. In addition, data from piezometer and inclinometer monitoring should be taken into consideration for justification of the ultimate type, distribution and geometry of the recommended slope hazard mitigation. It will be important for TI to carefully analyze stability of the proposed deep, temporary cut slopes associated with buttress fill construction, and the stability of temporary mass grading and soil stockpiles. Quantity and quality of water produced by the proposed deep-shaft dewatering should be assessed. Illustrations of the specific geometry of the mitigations should be keyed to a site map and cross section(s).

Design-level recommendations should be provided in an illustrated, "stand-alone" report. The design-level report should include detailed cross sections used to depict the geologic profile and to analyze stability in critical areas of the site, and, but not necessarily be limited to, remedial and mass grading, site surface and subsurface drainage improvements, roadways and hardscapes, retaining walls, and structure foundations. It will be important for the applicant's design team to carefully coordinate design considerations with the geotechnical consultants. The geotechnical report and proposed project plans should be submitted to the City for review and approval by the geotechnical peer review consultant.

### Geotechnical Plan Review

The project geotechnical consultant should review and approve all geotechnical aspects of the proposed development plans relative to design-level report recommendations. The geotechnical consultant should provide a letter of unequivocal approval to the City Engineer prior to issuance of a building permit.

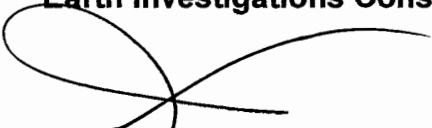
Geotechnical Field Observation

The project geotechnical consultant should observe, test, as needed, and approve all geotechnical aspects of the proposed development. The results of the field observations and testing, as well as all supplemental geotechnical recommendations should be compiled in an as-built, geotechnical report submitted to the City Engineer for approval prior to issuance of final approval.

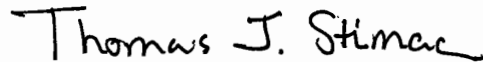
We trust that this provides you with the information you require at this time. If you require any additional information, please call.

Very truly yours,

**Earth Investigations Consultants**



Joel E. Baldwin, II  
Engineering Geologist 1132



Thomas J. Stimac

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