

GEOENGINEERING, INC.
Geotechnical Engineering Consultants

124 Paul Drive, Suite #105
San Rafael, CA 94903

Phone & Fax (415) 492-1747
Robert H. Settgest P.E. G.E.
rhsettgest@hotmail.com

Mr. David Boesel
35 Deer Park Lane
Fairfax, CA 94930

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File No. 4-134-db

**GEOTECHNICAL FEASIBILITY
AND NEGATIVE DECLARATION
PROPOSED DOWNSLOPE
REPLACEMENT DWELLING
OVER 2006 EARTH SLIDE
136 ALLYN AVENUE
SAN ANSELMO, CALIFORNIA**

Our firm has been retained by the addressee to perform the entitled services. We had provided geotechnical criteria and monitored its installation for the retention bulkhead that sustains the Allyn Avenue shoulder in front of this site--which we summarized in a 12/28/06 report to the City (our file 3-066-sa). In 2006, we had also performed geotechnical engineering services for remedial measures to the foundations below the dwelling on the adjoining parcel to the south(130 Allyn Avenue), which had also resulted from earth slippage.

We had also evaluated the potential relationship between movement of the original roadway shoulder bulkhead movement above this parcel and the earth slide which had severely damaged the original structure on this site. We submitted our findings in a 9/26/09 report to Raghianti/Freitas LLP who are the consul for the City. A copy is attached.

On 3/19/13, we re-evaluated the project with the addressee, and the earthwork & drilling contractor (Redwood Engineering of Tiburon). We had initially judged that weathered bedrock lies ~ 4 ft deep below the flanks of this parcel and possibly ~10 ft deep below its midsection. And that still appears to be the case. A geotechnical evaluation will be performed before the design leaves its preliminary stages.

All indications are that drilled piers penetrating into the weathered bedrock will suffice as foundation support, although tiebacks may be required to develop the necessary lateral restraint against soil creep--this will depend on the bedrock depths and the structural design. The tiebacks can be secured to the downslope grade beams, which would preclude their encroachment below the roadway.

The toe of the slide extends downslope from the building site, but appears unchanged since the 1976 earth movement. The downslope dwelling has been protected with a concrete barrier wall which was built on or near the property line after this slide. The need for further protection measures to that dwelling would be evaluated during our study.

In view of the above points, all relevant factors show that the planned construction is feasible from a geotechnical standpoint.

We trust that this report provides the required information. You may contact us for clarification.

Respectfully submitted,
GEOENGINEERING, INC.

Robert H. Settgast

Robert H. Settgast
Professional Geotechnical

RHS:lw

Attachment: 9/26/09 Report

