

February 2, 1996

Mr. Michael Bedker  
Land Based Research and Development  
111 Deerwood Road, Suite #200  
San Ramon, CA 94583

RE: SUBDIVISION 7462, Black Oak Estates  
Proposal for Supplemental Geotechnical Investigation  
Diablo, California

Dear Mr. Bedker:

At your request, Rogers/Pacific has prepared this proposal to provide supplemental subsurface investigations and engineering analyses. Based upon our January 29, 1996 meeting with the project grading contractor, Top Grade Construction, it is our understanding that you would like us to provide additional subsurface explorations in the proposed areas for fill keyways in order to provide additional information as to the amount of subexcavation required. In addition, you have also requested that further subsurface explorations be performed in the areas of the two proposed geogrid-reinforced slope fills which are located above Lots 33 to 35 and Lots 6 to 9. The purpose of this work will be to provide additional geologic and engineering data to further refine the preliminary design of the slopes which were previously performed by Rogers/Pacific and provided as cross sections A-A dated February 2, 1995 and B-B dated January 24, 1995.

### **SCOPE OF WORK**

The scope of our work will include the following tasks:

- Drilling of 6 borings and excavation of 6 test pits.
- Collection of soil samples for laboratory testing.
- Perform engineering analyses of the acquired field and laboratory data to review the design of the geogrid reinforced fill slopes.

- Prepare letter report summarizing our findings and providing design recommendations regarding the geogrid reinforcement. It is our understanding that, depending upon the type of retaining wall chosen, the project Structural Engineer or the manufacturer of concrete segmental blocks will prepare the design plans for the walls.

### **ESTIMATED COSTS**

#### **Field Work:**

Project Geologist	28 hrs @ \$90/hr	= \$	2,520
Drill Rig	12 hrs @ \$160/hr	= \$	1,920
Backhoe	12 hrs @ \$165/hr	= \$	1,980
Field Supplies		= \$	300

#### **Laboratory Testing:**

Direct Shear Tests	4 tests @ \$220 ea.	= \$	880
Maximum Density/Optimum Moisture	2 tests @ \$ 150 ea.	= \$	300
Moisture/Density Tests	30 tests @ \$20 ea.	= \$	600

#### **Evaluation and Report:**

Principal Engineer	8 hrs @ \$125/hr	= \$	1,000
Senior Engineer	24 hrs @ \$105/hr	= \$	2,520
Project Geologist	4 hrs @ \$90/hr	= \$	360
Drafting	8 hrs @ \$60/hr	= \$	480
Word Processing	4 hrs @ \$55/hr	= \$	220
Misc. (copy, mail, phone, etc.)		= \$	80

**TOTAL NOT-TO-EXCEED = \$13,160**

Rogers/Pacific, Inc. will perform the aforementioned scope of work in accordance with the attached standard terms and conditions on a Time-and-Materials/Not-to-Exceed basis for **\$13,160**. If the cost to complete this project is less than this amount, you will only be billed for the actual costs incurred. If, for any reason, the cost of work to be performed appears as if it will exceed this cost, you will be notified immediately. Please be advised that this contract does not cover requested meetings with the Project Engineers, County engineering or planning personnel, etc. These types of services will be billed on a Time-and-Materials basis according to the attached fee schedule. To cover our out-of-pocket costs for subcontract drilling expenses we would request that a retainer of \$ 4,200 be forwarded to our office prior to performance of the work.

### **SCHEDULE**

SITE ASSESSMENT   c   LABORATORY TESTING   c   DESIGN SERVICES   c   COST ESTIMATING   c   CONSTRUCTION MANAGEMENT   c   EXPERT TESTIMONY

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It is our understanding that you would like this work completed as soon as possible. We are available to commence with this work as soon as we can schedule a date for the field testing and after receipt of your written permission to proceed. We have assumed that the field work will take no more than three days and we anticipate that we will require two weeks to complete the laboratory testing, evaluation and written report. Winter rains and the resulting difficulties with moving equipment onto and around the site may delay this schedule.

**CLOSURE**

Rogers/Pacific, Inc. will employ accepted geotechnical engineering procedures, and professional opinions and conclusions will be made in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties, either expressed or implied.

If you would like us to proceed with the above outlined scope of work, please return a signed copy of this contract with the requested retainer for the indicated amount. If you have any questions, please give us a call at (510) 682-7601.

Sincerely,

**ROGERS/PACIFIC, INC.**

R. John Caulfield, P.E., G.E.  
Principal Geotechnical Engineer

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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Copies: Addressee (2)