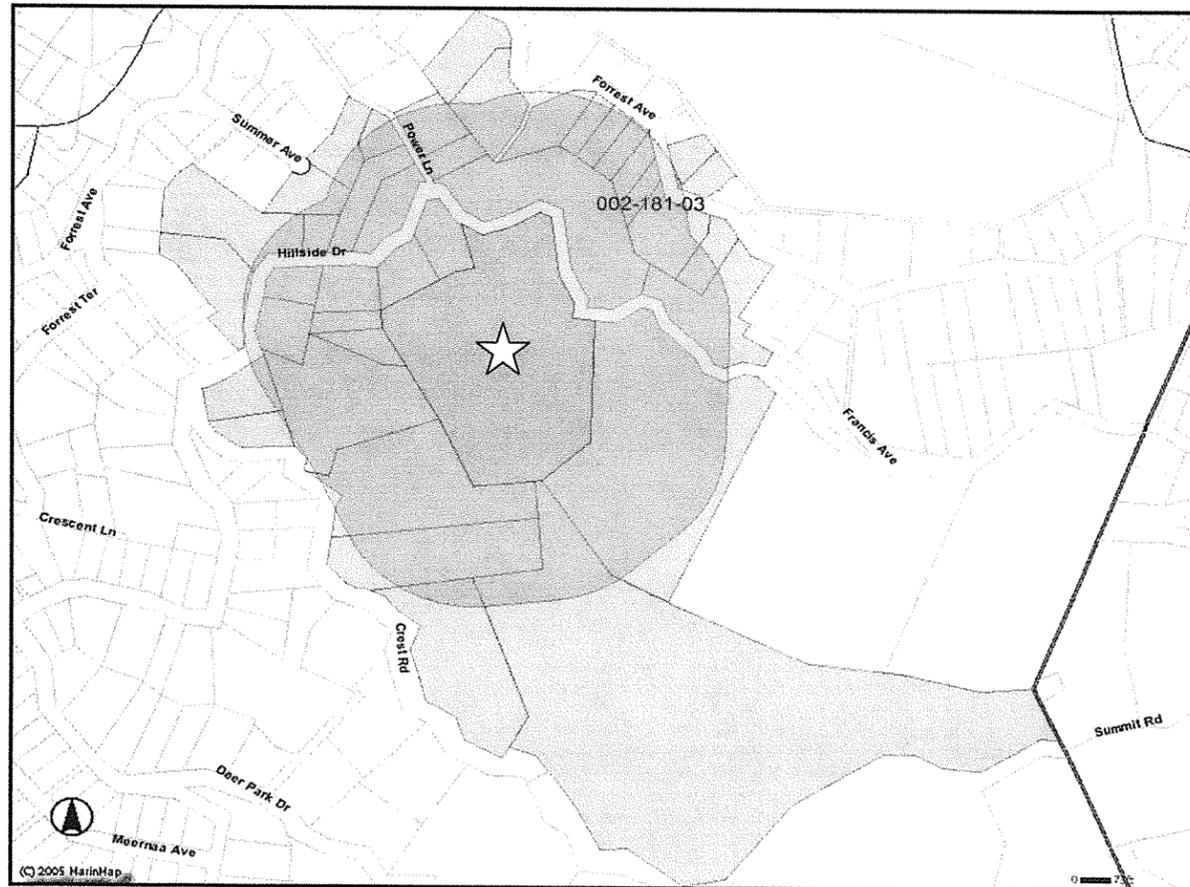


**TOWN OF FAIRFAX
STAFF REPORT
Department of Planning and Building Services**

TO: Fairfax Planning Commission
DATE: May 15, 2014
FROM: Jim Moore, Director of Planning and Building Services
Linda Neal, Senior Planner
LOCATION: 232 Hillside Drive; Assessor's Parcel No. 002-181-03
PROJECT: Pool, Pool Cabana and living quarters for employee
ACTION: Hill Area Residential Development permit, Excavation permit and Use Permit; Application # 14-19
APPLICANT: Rich Rushton, Rushton Chartock Architects
OWNER: Kelly and Deborah London
CEQA STATUS: Categorically exempt, § 15301(a) and 15303(e)



232 HILLSIDE DRIVE

BACKGROUND

The 208,181 square foot site slopes up from the terminus of Hillside Drive and is accessed by a long private driveway. The Hill Area Residential Development Permit and Residential Second Unit Use Permit for the 3,268 square foot residence and garage and 576 square foot second unit were approved by the Planning Commission in 1995 and the structures were completed in 1997.

DISCUSSION

The applicants are proposing construction of a 924 square foot pool surrounded by patio with the total impervious surface for both totaling 2,832 square feet: and southeast of the pool the applicant is proposing a 1,372 square foot cabana/storage structure. The application is also for a use permit to legalize an unpermitted 506 square foot living quarters (3rd unit) for the au-pair in the basement.

The location of the proposed and existing structures far exceed all of the required setbacks and will maintain a Floor Area Ratio and Lot Coverage well below the permitted .40 FAR and .35 lot coverage limits.

The proposal requires the approval of the following discretionary permits:

A Hill Area Residential Development Permit: Town Code § 17.072.050(b) only exempts accessory structures under 200 square feet from the permit process, §17.072.020(A)(4) requires a permit for properties with a 31% or greater slope when 50 cubic yards or more of material will be moved and § 17;072.020(B) requires an HRD permit if the property is located in a landslide hazard zone as shown on the General Plan Open Space Element map.

The cabana is 1,372 square feet in size, the site has a 36% slope and the project requires the excavation/fill of 480 cubic yards of material and the property is shown in a landslide hazard zone on the General Plan Open Space Map. The Hill Area Residential Development permit is required for all these reasons. .

An Excavation Permit: Town Code §12.20.080 requires that the Planning Commission approve an excavation permit for any project requiring the excavation or fill of more than 100 cubic yards of material.

A Use Permit: The property is located in the Upland Residential UR Zone District which requires that an applicant obtain a Use Permit for any living quarters of persons regularly employed on the premises. The applicants are requesting a Use Permit for an unpermitted 506 square foot living unit for their au pair in the basement area behind the garage. If approved, the use permit will result in there being three living units on the property – the main house and the Accessory Second Unit approved in 1995 and the au pair living quarters.

The Town Engineer has reviewed the following engineering plans and reports and has determined that the proposed project, including the pool excavation, can proceed

without creating any negative impacts on the site, surrounding properties or the adjacent public right-of-way:

- The geotechnical report dated March 22, 1995 by Geoengineering, Inc.
- The geotechnical addendum for the pool, cabana and equipment shed, dated November 2, 2013 by Geoengineering, Inc.
- Letter from J.L. Engineering regarding revised engineering sheets and lot closure calculations dated March 31, 2013.
- Civil Engineering sheets C1 through C4 revised March 2014 by J.L. Engineering, Inc.

There are no specific requirements contained in the Town Code for living quarters of someone employed on a residential site. The large size of this site and long distance from any neighbors and property lines means that the additional living quarters will not impact neighborhood parking or create noise impacts that might bother anyone.

The pool and cabana have been located on a portion of the site where construction will not require the removal of any trees. The excavation and fill are limited to the pool area and the immediate area around the pool. The emergency access drive will follow the existing access path with minor modifications and will require minimal excavation. Therefore, the design of the project minimizes impacts on the site.

Other Agency/Department Comments/Conditions

Ross Valley Fire Department

The existing fire apparatus access road will need to be extended to reach the new structure.

Marin Municipal Water District

The above referenced parcel is currently being served. The purpose and intent of this service are to provide water for a single family dwelling. It has come to the District's attention that there are a total of three living units in two residential structures on the property. In order to be in compliance with current MMWD Code, the applicant will be required to install a separate meter for each detached residential structure and purchase water entitlement for the additional two living units. The applicant will also be required to meet any applicable conditions of the Water Conservation Code and Backflow Prevention Department.

Ross Valley Sanitary District

1. If not already installed, the District requires that the sided sewer be equipped with an appropriate backwater prevention device.
2. If the project is approved the applicant shall contact the District to arrange for a

District Inspector to approve the existing installation or to approve plans for the proposed installation.

RECOMMENDATION

1. Open the public hearing and take testimony.
2. Close the public hearing.
3. Move to approve application # 14-19 based on the following findings and subject to the following conditions:

Recommended Findings

Hill Area Residential Development

1. The proposed development is consistent with the General Plan and the Upland Residential UR 10, regulations which allows the Commission to approve accessory structures such as cabanas and pools and the creation of living quarters for persons regularly employed on the property. Therefore, the project is consistent with the purpose and intent of this ordinance.
2. The site planning preserves identified natural features.
3. Based on the soils report finding, the site can be developed without geologic, hydrologic or seismic hazards.
4. Vehicular access and parking are adequate.
5. The proposed development harmonizes with the surrounding residential development, meets the design review criteria and does not result in the deterioration of significant view corridors.

Excavation Findings

The health safety and welfare of the public will not be adversely affected;

Adjacent properties are adequately protected by project investigation and design from geologic hazards as a result of the work;

Adjacent properties are adequately protected by project design from drainage and erosion problems as a result of the work;

The amount of the excavation or fill proposed is not more than is required to allow the property owner substantial use of his or her property;

The visual and scenic enjoyment of the area by others will not be adversely affected by the project more than is necessary;

Natural landscaping will not be removed by the project more than is necessary;

The time of year during which construction will take place is such that work will not result in excessive siltation from storm runoff nor prolonged exposure of unstable excavated slopes.

Use Permit Findings

The approval of the use permit shall not constitute a grant of special privilege and shall not contravene the doctrines of equity and equal treatment.

The development and use of property as approved under the use permit shall not cause excessive or unreasonable detriment to adjoining properties or premises, or cause adverse physical or economic effects thereto, or create undue or excessive burdens in the use and enjoyment thereof, or any or all of which effects are substantially beyond that which might occur without approval or issuance of the use permit.

Approval of the use permit is not contrary to those objectives, goals or standards pertinent to the particular case and contained or set forth in any Master Plan, or other plan or policy, officially adopted by the City.

Approval of the use permit will result in equal or better development of the premises than would otherwise be the case, and that said approval is in the public interest and for the protection or enhancement of the general health, safety or welfare of the community.

Recommended Conditions

1. This approval is limited to the development illustrated on the plans prepared by Rich Rushton, pages A1.1, A2.5, A2.6, A2.7, A7.2, dated 10/26/13 and the engineering drawings by J.L. Engineering, dated March 2014, by J.L. Engineer, pages C1 through C4.

2. Prior to issuance of any of the residence building permits the applicant or his assigns shall:

a. Submit a construction plan to the Public Works Department which may include but is not limited to the following:

- Construction delivery routes approved by the Department of Public Works.
- Construction schedule (deliveries, worker hours, etc.)
- Notification to area residents
- Emergency access routes

b. The applicant shall prepare, and file with the Public Works Director, a video tape of the roadway conditions on the public construction delivery routes (routes must be approved by Public Works Director).

c. Submit a cash deposit, bond or letter of credit to the Town in an amount that will cover the cost of grading, weatherization and repair of possible damage to public roadways. The applicant shall submit contractor's estimates for any grading, site weatherization and improvement plans for approval by the Town Engineer. Upon approval of the contract costs, the applicant shall submit a cash deposit, bond or letter of credit equaling 100% of the estimated construction costs.

d. The applicant or property owner shall submit a cash deposit, bond or letter of credit to the Town in an amount that will cover the cost of landscaping and irrigation materials and installation prior to issuance of the building permit. The amount shall be retained for 18 months after issuance of the Certificate of Occupancy to ensure the landscaping becomes established.

e. The foundation and retaining elements shall be designed by a structural engineer certified as such in the state of California. Plans and calculations of the foundation and retaining elements shall be stamped and signed by the structural engineer and submitted to the satisfaction of the Plan Checker.

f. The grading, foundation, retaining, and drainage elements shall also be stamped and signed by the site geotechnical engineer as conforming to the recommendations made by the project engineer.

g. Prior to submittal of the building permit plans the applicant shall secure written approval from the Ross Valley Fire Authority, Marin Municipal Water District and the Ross Valley Sanitary District noting the development conformance with their recommendations.

h. Submit a record of survey with the building permit plans.

3. During the construction process the following shall be required:

a. The geotechnical engineer shall be on-site during the grading process (if there is any grading remaining to be done) and shall submit written certification to the Town Staff that the grading has been completed as recommended prior to installation of foundation and/or retaining forms and piers.

b. Prior to the concrete form inspection by the building official, the geotechnical and structural engineers shall field check the forms of the foundations and retaining elements and provide written certification to the Town staff that the work to this point has been completed in

conformance with their recommendations and the approved building plans. The Building Official shall field check the concrete forms prior to the pour.

c. Prior to pouring the foundation the surveyor shall submit a letter certifying that the house had been located within the building envelope approved by the Settlement Agreement.

d. All construction related vehicles including equipment delivery, cement trucks and construction materials shall be situated off the travel lane of the adjacent public right(s)-of-way at all times. This condition may be waived by the Building Official on a case-by-case basis with prior notification from the project sponsor.

e. Any proposed temporary closure of a public right-of-way shall require prior approval by the Fairfax Police Department and any necessary traffic control, signage or public notification shall be the responsibility of the applicant or his/her assigns. Any violation of this provision will result in a stop work order being placed on the property and issuance of a citation.

4. Prior to issuance of an occupancy permit the following shall be completed:

a. The geotechnical engineer shall field check the completed project and submit written certification to the Town Staff that the foundation, retaining, grading and drainage elements have been installed in conformance with the approved building plans and the recommendations of the soils report.

b. The Planning Department shall field check the completed project to verify that all and planning commission conditions have been complied with including installation of landscaping and irrigation prior to issuance of the certificate of occupancy.

5. Excavation shall not occur between October 1st and April 1st. The Town Engineer has the authority to waive this condition depending upon the weather.

6. The roadways shall be kept free of dust, gravel and other construction materials by sweeping them, daily, if necessary.

7. During construction the developer and all employees, contractor's and subcontractor's must comply with all requirements set forth in Ordinance # 637 (Chapter 8.26 of the Town Code), "Storm Water Management and Discharge Control Program."

8. Notwithstanding section # 17.38.050(A) of the Fairfax Zoning Ordinance, any changes, modifications, additions or alterations made to the approved set of plans will require a modification of Application # 14-19. Any construction based on job plans that have been altered without the benefit of an approved modification of Application 14-19 will result in the job being immediately stopped and red tagged.

9. Any damages to the public portions of Hillside Drive or other public roadway used to access the sites resulting from construction activities shall be the responsibility of the property owner.

10. The applicant and its heirs, successors, and assigns shall, at its sole cost and expense, defend with counsel selected by the Town, indemnify, protect, release, and hold harmless the Town of Fairfax and any agency or instrumentality thereof, including its agents, officers, commissions, and employees (the "Indemnitees") from any and all claims, actions, or proceedings arising out of or in any way relating to the processing and/or approval of the project as described herein, the purpose of which is to attack, set aside, void, or annul the approval of the project, and/or any environmental determination that accompanies it, by the Planning Commission, Town Council, Planning Director, Design Review Board or any other department or agency of the Town. This indemnification shall include, but not be limited to, suits, damages, judgments, costs, expenses, liens, levies, attorney fees or expert witness fees that may be asserted or incurred by any person or entity, including the applicant, third parties and the Indemnitees, arising out of or in connection with the approval of this project, whether or not there is concurrent, passive, or active negligence on the part of the Indemnitees. Nothing herein shall prohibit the Town from participating in the defense of any claim, action, or proceeding. The parties shall use best efforts, acting in good faith, to select mutually agreeable defense counsel. If the parties cannot reach agreement, the Town may select its own legal counsel and the applicant agrees to pay directly, or timely reimburse on a monthly basis, the Town for all such court costs, attorney fees, and time referenced herein, provided, however, that the applicant's duty in this regard shall be subject to the Town's promptly notifying the applicant of any said claim, action, or proceeding.

11. The applicant shall comply with all applicable local, county, state and federal laws and regulations. Local ordinances which must be complied with include, but are not limited to: the Noise Ordinance, Chapter 8.20, Polystyrene Foam, Degradable and Recyclable Food Packaging, Chapter 8.16, Garbage and Rubbish Disposal, Chapter 8.08, Urban Runoff Pollution Prevention, Chapter 8.32 and the Americans with Disabilities Act.

12. The plans for the fire access road extension will need to be approved by the Ross Valley Fire Department and the Fairfax Building Official prior to issuance of the building permit for the cabana or pool and the extension will need to be constructed as the first part of the project.

13. A fire break must be maintained around all the structures on the site in compliance with Ross Valley Fire Department Fire Protection Standard 220.

14. The project must comply with Section 610 of the Sanitary Code with respect to swimming pools and the owners must obtain the required pool permit and any permits required for the third living unit from the Ross Valley Sanitary District prior to issuance of the building permit.

15. The above referenced parcel is currently being served. The purpose and intent of this service are to provide water for a single family dwelling. It has come to the District's attention that there are a total of three living units in two residential structures on the property. In order to be in compliance with current MMWD Code, the applicant will be required to install a separate meter for each detached residential structure and

purchase water entitlement for the additional two living units. The applicant will also be required to meet any applicable conditions of the Water Conservation Code and Backflow Prevention Department.

16. Conditions placed upon the project by outside agencies may be eliminated or amended with that agencies written notification to the Planning Department prior to issuance of the building permit.

ATTACHMENTS

Exhibit A – applicant’s supplemental information

Exhibit B – Au pair unit lease-rental agreement and apartment exchange details

Exhibit C – Town Engineer’s 4/30/14 and 3/3/14 memorandums

Exhibit D - 3/22/95 geotechnical report by Geoengineering, Inc., geotechnical addendum for the pool, cabana and equipment shed, dated 11/2/13 by Geoengineering, Inc., letter from J.L. Engineering regarding revised engineering sheets and lot closure calculations dated March 31, 2013

Exhibit E – other agency/department comments/conditions

Use Permit Applications - Additional information required.

- A written description of the proposed use, major activities, hours of operation, number of employees on the premises during the busiest shift and when the busiest shift is expected and other information pertinent to the application.
- Floor plans must include location of any special equipment.
- Designate customer, employee and living areas.
- If different uses are included in this activity, for example storage, retail, living space, etc. Indicate square footage of each proposed use.

In order to approve your project, the Planning Commission must make findings of fact which state that the project will not have a negative impact on the general public welfare, conforms with the policies of the Town, does not create excessive physical or economic impacts on adjacent property and provides for equal treatment with similar properties in Town.

In the space below, please provide any information which you feel is relevant to these issues and which further explains your project.

Lot is large size w/ no impact on neighbors. Building site
cannot be seen by neighbors or probably by anyone in Town.
Use of property remains the same w/ some family members
& no increase in traffic.

The final disposition of each use permit shall be in accordance with the facts of the particular case, and such facts must support the following determinations and findings before a use permit may be approved. Indicate how the findings below can be made:

- The approval of the use permit shall not constitute a grant of special privilege and shall not contravene the doctrines of equity and equal treatment.

Use of property remains single-family w/ typical residential use of swimming pool.

- The development and use of property, as approved under the use permit, shall not create a public nuisance, cause excessive or unreasonable detriment to adjoining properties or premises, or cause adverse physical or economic effects thereto, or create undue or excessive burdens in the use and enjoyment thereof, any or all of which effects are substantially beyond that which might occur without approval or issuance of the use permit.

Distances to neighbors are large, greater than what is typical for separation of residences in Town.

- Approval of the use permit is not contrary to those objectives, goals or standards pertinent to the particular case and contained or set forth in any master plan, development plan or other plan or policy, officially adopted by the town.

Meets goals for residential use in terms of intensity of use & minimal visual impact.

RESIDENTIAL LEASE-RENTAL AGREEMENT AND DEPOSIT RECEIPT

AGENCY RELATIONSHIP CONFIRMATION. The following agency relationship is hereby confirmed for this transaction and supersedes any prior agency election (If no agency relationship insert "NONE"):

TOWN OF FAIRFAX

FEB 03 2014

RECEIVED

LISTING AGENT: N/A is the agent of (check one):
(Print Firm Name)

the Owner exclusively; or both the Tenant and the Owner.

LEASING AGENT: N/A (if not the same as the Listing Agent) is the agent of (check one):
(Print Firm Name)

the Tenant exclusively; or the Owner exclusively; or both the Tenant and the Owner.

Note: This confirmation DOES NOT take the place of the AGENCY DISCLOSURE form (such as P.P. Form 110.42 CAL) required by law if the term exceeds one year.

RECEIVED FROM Michaela Biaggi hereinafter referred to as Tenant,
 the sum of \$ 2850.00 (Two thousand eight hundred fifty 00/100
 dollars), evidenced by Cashier's check 000552104 a deposit. Upon acceptance of this Agreement, the Owner of the premises, will apply the deposit as follows:

	TOTAL	RECEIVED	BALANCE DUE PRIOR TO OCCUPANCY
Rent for the period from <u>Dec 1 2012 to Dec 30 2012</u>	\$ <u>1425.00</u>	\$ <u>1425.00</u>	\$ <u>0</u>
Security deposit (not applicable toward last month's rent)	\$ <u>1425.00</u>	\$ <u>1425.00</u>	\$ <u>0</u>
Other	\$	\$	\$
TOTAL	\$ <u>2850</u>	\$ <u>2850.00</u>	\$ <u>0</u>

In the event this Agreement is not accepted by the Owner, within 30 days, the total deposit received will be refunded.

Tenant offers to rent from the Owner the premises situated in the City of Fairfax,
 County of Marin, State of California, commonly known as 222 Hillside Drive
Apt under main house, Fairfax CA 94930

, upon the following terms and conditions:

1. TERM. The term will commence on December 1, 2012, and continue (check one of the two following alternatives):
 LEASE until _____, for a total rent of \$ _____ (_____ dollars).

RENTAL on a month-to-month basis, until either party terminates this Agreement by giving the other party written notice as required by law.

2. RENT. Rent will be \$ 1425.00, per month, payable in advance, on the 1 day of each calendar month to Owner or his or her authorized agent, by mail or personal delivery to the following address: 222 Hillside Drive, Fairfax, CA 94930

or at such other place as may be designated by Owner in writing from time to time. Payment by personal delivery may be made (check one): Monday through Friday, 9:00 a.m. to 5:00 p.m., or at the following times: 9:00 am - 5:00 pm

In the event rent is not received by Owner in full within 0 days after due date, Tenant agrees that it would be impracticable or extremely difficult to fix the actual damages to Owner caused by that failure, and Tenant agrees to pay a late charge of 10%. Tenant further agrees to pay \$50 for each dishonored bank check. All late fees and returned check fees will be considered additional rent. The late charge period is not a grace period, and Owner is entitled to make written demand for any rent if not paid when due and to collect interest thereon. Any unpaid balance including late charges, will bear interest at 10% per annum, or the maximum rate allowed by law, whichever is less.

3. MULTIPLE OCCUPANCY. It is expressly understood that this Agreement is between the Owner and each signatory jointly and severally. Each signatory will be responsible for timely payment of rent and performance of all other provisions of this Agreement.

4. UTILITIES. Tenant will be responsible for the payment of all utilities and services, except: PG&E, water, and trash
sec addendum, which will be paid by Owner.

5. USE. The premises will be used exclusively as a residence for no more than one persons. Guests staying more than a total of 10 days in a calendar year without written consent of Owner will constitute a violation of this Agreement.

6. ANIMALS. No animals will be brought on the premises without the prior consent of the Owner; except NO exceptions.

7. RULES AND REGULATIONS. In the event that the premises is a portion of a building containing more than one unit, or is located in a common interest development, Tenant agrees to abide by all applicable rules, whether adopted before or after the date of this Agreement, including rules with respect to noise, odors, disposal of refuse, animals, parking, and use of common areas. Tenant will

Tenant MB MB has read this page.

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Page 1 of 4
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EXHIBIT # B

Apartment Exchange Details

This agreement is herein by this mention made a part of and incorporated into that certain original Lease between Michael Biaggi as Tenant and Deborah A. London and Kelly A. London, Owners dated 12/1/2012.

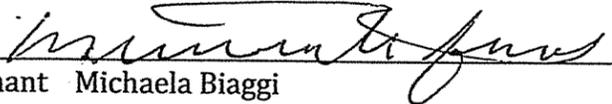
Both Tenant and Owners agree as follows as to Section 25-3 of the Residential Lease-Rental Agreement below:

25-3 Tenant and Owner agree that Tenants occupancy of the Apartment which is the subject of this Agreement is exclusively predicated upon Tenant performing Nanny and Tutor services to Owners two Sons in exchange for the rental amount indicated here-in. Specific details to be discussed and agreed upon and subject to change.

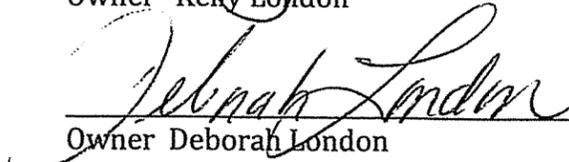
Specific Details of Rent Exchange

Both Tenant and Owners agree as follows:

1. Tenant and Owner agree that the monthly rental amounts due under this Lease will be exchanged for monthly tutoring and child care for Owners two sons.
2. The monthly rental amount for the Apartment is \$1425.00, this amount will be exchanged for 40 hours a month of tutoring and/or child care. The hourly rate depending on required monthly hours to be worked is approximately \$30.00 to \$45.00 a week or an average of \$37.50 per hour.
3. Tenant shall be required to tutor and/or provide child care for approximately 2 to 3 hours, four or five days a week, as needed for school homework, projects or extra studies as required to meet Expected Progress in academic subjects as required by Ross Valley School District. This shall include providing child services during summer months as needed.
4. This agreement shall remain in full force and effect until or unless Tenant or Owners situation changes substantially enough to affect this agreement at which time an Amendment to this Agreement shall be mutually agreed upon by Owner and Tenant.

 Date 12-1-12
Tenant Michaela Biaggi

 Date 12/1/12
Owner Kelly London

 Date 12-1-12
Owner Deborah London



TOWN OF FAIRFAX

142 BOLINAS ROAD, FAIRFAX, CALIFORNIA 94930
PHONE (415) 453-1584 / FAX (415) 453-1618

MEMORANDUM

To: Linda Neal – Senior Planner

Date: April 30, 2014

From: Ray Wrynski
Town Engineer

Page 1 of 1

Subject: Proposed Pool & Cabana/Storage Bldg.
232 Hillside Drive
Fairfax, CA

A.P. 002-181-03

I have reviewed the plans and documents that were enclosed with your 04/02/14 transmittal. The items reviewed included a four sheet plan set from J. L. Engineering, dated March, 2014, a letter from J. L. Engineering, dated 3/31/14, boundary closure calculations, dated March 2014, from J. L. Engineering and a copy of the March 1, 2007 fee title deed.

The submitted information was checked to see if it satisfied the requirements in the 3/3/14 Town Engineer review memorandum.

The required copy of the feet title deed was submitted. The required boundary closure calculations were submitted. There was a problem on the plan sheet C2 regarding the scale shown for the drawing not being the scale that plan sheet was drawn to. That scale problem has been corrected and that sheet now shows the information that was required for topography and building location.

Pool bottom elevations were provided and that allowed a rough check of the grading quantities so that satisfies the requirement for that information. The grading quantities shown on the plan sheet C1 look reasonable.

The boundary shown for the project site on sheet C1 was checked against the deed dimensions and against the closure calculations. The boundary shown follows the engineer's closure calculations and those dimensions will be considered the best available information, at this time, for the boundary.

The 3/31/14 letter from J. L. Engineering provided additional clarifying information on the submitted documents. All of the requirements in the 3/3/14 memorandum have been satisfied. I recommend that the processing of this project proceed.

Ray Wrynski

Ray Wrynski, P. E.
Town Engineer

EXHIBIT #

C



TOWN OF FAIRFAX

142 BOLINAS ROAD, FAIRFAX, CALIFORNIA 94930
PHONE (415) 453-1584 / FAX (415) 453-1618

RECEIVED

MAR 06 2014

TOWN OF FAIRFAX

MEMORANDUM

To: Linda Neal – Senior Planner

Date: March 3, 2014

Page 1 of 2

From: Ray Wrysinski
Town Engineer

Subject: Proposed Pool & Cabana/Storage Bldg.
232 Hillside Drive
Fairfax, CA

A.P. 002-181-03

I have reviewed the documents that were enclosed with your 02/04/14 transmittal. The items reviewed included a plan set from J. L. Engineering, 4 sheets dated January, 2014 and a 12/12/13 floor plan for the Au Pair apartment. The J. L. plans have sheets C1, C3 and C4 to be part of a four sheet set and sheet C2 is shown to be part of a five sheet set so we may be missing a sheet. That must be clarified in the next submittal. You will note that sheet C2, called out as a scale of 1" = 8', has the pool and cabana area to be much larger than they are shown on sheet C3 which is also identified as a scale of 1" = 8' and is also shown larger than the previously received Architect's plans that are called out as 1" = 8'. Sheet C2 is the improvement, drainage and grading plan. It may be at a scale of 1" = 6' or there may be something else wrong. That must be corrected.

A copy of the current fee title deed for this site was required in the previous review. It was not provided and that is still required to be submitted. There were two easements identified in the submitted title report as affecting this property that were required to be shown and they have been reasonably well identified. A copy of the survey that excludes general topography but includes showing the complete boundary with bearing and distance dimensions on all the boundary lines was required to be provided. Sheet C1, at a scale of 1" = 30' now shows that boundary. The required existing buildings and proposed pool and cabana are on that 1" = 30' scale sheet. There was a requirement to provide some resolution to the property boundary problem that the boundary shown does not agree with the boundary description given in the submitted title report. The above deed (not submitted) was to aid in resolving the boundary problem. This disagreement suggests that one or both of those boundaries is/are wrong. A set of closure calculations for the boundary (now shown at 1" = 30') was to be submitted that showed the boundary lines provide a closed figure around the site. These closure calculations were not submitted and are still required. The professional providing this boundary may want to add a note indicating that a recorded record of survey may alter the dimensions shown on the submitted site plan.

A required survey sheet was to show the topography information and show the elevation contours in and near the proposed construction area to an extent sufficient so that it covers all the area where grading, drainage and other improvements will be placed. This was to also include showing the existing house structure to within a radius of 75 feet of the northerly corner of the proposed pool structure. All existing trees and other site features must be shown on this survey. This information is shown on sheet C4.

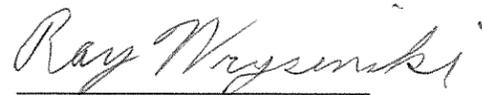
This sheet C4 map information was to be used as the base map information for the grading and drainage plan. This looks more or less like that information was used to develop sheet C2 except that some of the information went off of the bottom of the sheet which is probably related to the dimensional problem, noted above. When sheet C2 is corrected for scale, it looks like it will have the needed information.

Subgrade elevations for the pool, building and related work were required to be shown so that checking of the grading quantities can be done. That was not done however the given estimated quantities of cut = 409 cubic yards, fill = 63 cubic yards and off-haul = 345 cubic yards are provided and those seem to be in the right range and so provide a reasonable indication of the amount of soil material movement for this project. Grading note 2. indicates that unknown soil conditions prevent accurate projected quantities so the Building Inspector will need to be alert to the appearance of a significant change in the estimated grading quantities.

The drainage facilities and drainage discharge improvements are now shown. The location of sanitary sewer and water lines and other utility lines are now shown. No trees are shown to be removed. Drainage discharge improvements must be constructed so that they do not cause erosion problems and the drainage discharge improvements must be approved in writing by the project geotechnical engineer before the project permit is finalized. Grading quantities shown are in excess of 100 cubic yards so Planning Commission approval must be obtained, as required by Code Section 12.20.080, prior to a permit being issued for this work.

Sheet C3 is an Erosion Control and Stormwater Pollution Prevention Plan and provides the information needed for that plan. An additional requirement is that the project Civil Engineer or the project Geotechnical Engineer must visit the project site on a regular basis during the winter months to confirm that the erosion and sediment control improvements are in place and are adequate.

I recommend that the processing of this project be delayed until the above, noted, information is provided.



Ray Wrysinski, P. E.
Town Engineer

March 22, 1995
File No. 1-53-dt

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GEOENGINEERING, INC.

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GEOTECHNICAL EVALUATION
RESIDENTIAL BUILDING SITE
WITH STABLE AND CARETAKER UNIT
232 HILLSIDE AVENUE
FAIRFAX, CALIFORNIA
APN 2 181 03

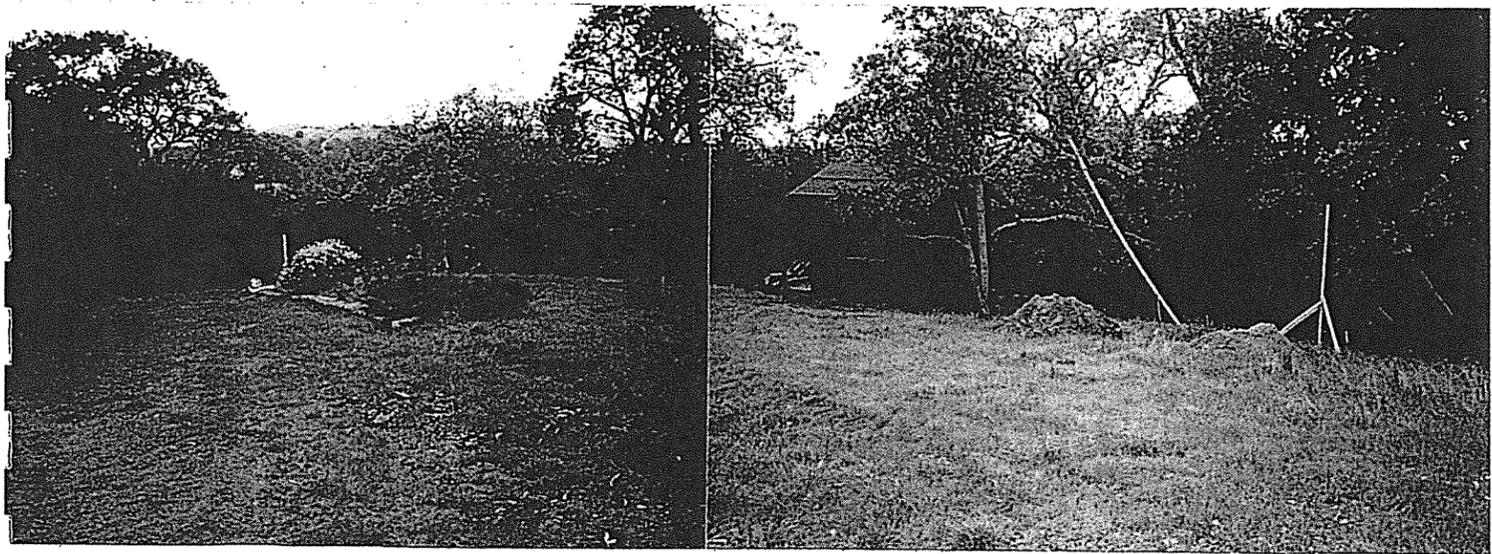
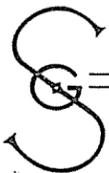


EXHIBIT # D



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—Soils and Foundation Consultants—

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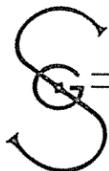
Robert Settgest

Ms. Debra Teixeira
45 Allyn Avenue
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March 22, 1995
File No.1-53-dt

**GEOTECHNICAL EVALUATION
RESIDENTIAL BUILDING SITE
WITH STABLE AND CARETAKER UNIT
232 HILLSIDE AVENUE
FAIRFAX, CALIFORNIA
APN 2 181 03**

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1. SUMMARY AND KEY POINTS

These building sites lie just off the ridgeline of a north-westerly projecting promontory above Fairfax. Below the main residence, existing grades slope at 15% to 25%. Below the caretaker unit and stable they average about 30%.

Weathered Franciscan bedrock lies less than 3 ft deep below the planned residence and up to 4-1/2 ft deep below the caretaker's unit. At the stable site, bedrock depths typically range from 3 to 5 ft deep. In general, the bedrock consists of highly weathered and fractured sandstones/shales that are typical to the local Franciscan formation. In the stable area, however, we found them to be more weathered and less competent than typical although this does not significantly change our design criteria.

These structures can be satisfactorily supported on drilled pier and interconnected grade beam foundation systems designed for creep forces within the soil mantle. Estimated penetrations range from about 8 ft within the main residence to 12 ft below the caretaker unit and stable.

Non-drilled grid foundations penetrating into weathered bedrock and design for hillside conditions, would also suffice. However, except for the main residence, their excavation costs would probably preclude the savings recognized through elimination of drilling. Nonetheless, in order to keep the design options open, we include recommendations for drilled, non-drilled, and combined foundation systems.

The existing unpaved access road traverses steep slopes and shows surficial sliding at its main cut above a sharp reverse curve downslope from the dwelling. Although this condition would not affect the planned structures, it must be mitigated.

As for all comparable projects, we must review the foundation grading plans, and monitor excavation/drilling.

2. INTRODUCTION

Our firm has been retained by the addressee to perform the entitled services. The topics and illustrations contained herein are indexed in the preceding Table of Contents. The project architects are Rushton-Chartock of Fairfax (457-2802). The civil engineers are J.L. Engineering of San Rafael (457-6647).

This investigation was undertaken to provide your designers with the geotechnical information necessary to select and plan the most feasible means of developing the site and providing foundation support. Limitations to our scope and liability are outlined in the final section.

The information and recommendations contained herein are based on: (1) A site reconnaissance performed in February 1995; (2) A review of the Geological and Slope Stability Maps prepared by the State of California during the 1970's; and (3) A subsurface investigation on 3/19/95 that included eight backhoe excavated test pits and two hand dug test pits, and multiple soundings with a portable percussion probe--we also correlated our findings with the surrounding topography and exposed geology.

3. SITE DESCRIPTION

3.1 SETTING AND SURFICIAL FEATURES

These building sites lie just northeast of the ridgeline for a hillside promontory that projects northwesterly toward Fairfax. They are accessed from the terminus of Hillside Avenue by an approximate 400 ft long unpaved driveway that has been cut into the hillside slopes up to 75% and forms two sharp reverse curves (Fig 3, Topographic Vicinity Map).

As the Site Plan, Fig 1 shows, the main residence lies within the upper reverse curve of the access road on gentle slopes that fall northerly and easterly at 15% to 25%. As the photos show, this site vegetated with grass and a few small trees, and is occupied by a small wooden shed.

The caretaker unit site lies opposite the access road from the main structure on slopes that falls northwesterly at about 30%. There are several large oak trees that appear to lie outside the building area.

The stable site, which lies about 300 ft to the southeast and downslope from the access road, falls southerly at about 30%. This site is vegetated by madrone and oak trees with a thin shrubbery under growth.

3.2 GEOLOGY, SUBSOILS, & TEST PIT LOGS

This site of the main residence is mantled by colluvium ranging from 1 to nearly 2 ft thick. It is comprised mainly of sandy and silty clays that grade from soft to medium stiff with depth. In general, this stratum is unsuitable for foundation support. Underlying the colluvium and separating it from the weathered bedrock lies a stratum of residual soils averaging about 1 ft thick. Residual soils can be generalized as bedrock that has been weathered in-place to the consistency of a hard soil. The underlying bedrock below the main structure lies 2-1/2 ft deep. It consists of very highly weathered and fractured sandstones/shales that typically grade less weathered with depth.

The colluvium mantle below the caretaker unit is about 3-1/2 ft thick and is generally comparable to that below the main residence. It is also separated from the underlying bedrock by a firm residual stratum averaging about 1 ft thick. Here the underlying bedrock, lies 3-1/2 to 4-1/2 ft deep and is generally comparable to that encountered below the main residence although slightly more weathered.

The colluvium mantle in the stable area generally ranges from 1-1/2 ft to 3 ft thick. Its upper portion is comparable in composition to the main building area although it grades medium stiff with depth. The underlying residual stratum here shows more lithology than below the main building area and ranges up to 2 ft thick. Here the underlying bedrock consists largely of claystones/ siltstones rather than sandstones/shales. It is very highly weathered and weakly cemented, but generally grades more competent with depth.

The Geologic Map (Fig 4) shows sandstones/shales to be the predominate bedrock type. This is in general agreement with our findings although we judge this formation to be more weathered than typical for this area, especially below the stable site.

Despite the recent heavy rainfall, our test pits encountered only random seepage which were generally within the residual stratum that overlies the relatively impervious bedrock.

Our measured depths to bedrock are indicated on the Site Plan at the respective test pit and sounding locations.

Our test pits are logged below with some field test data. Their approximate locations relative to the building envelope corners and their approximate ground elevations from the Site Plan topography are also included. Depths in feet are to the left:

MAIN DWELLING

TP A (4 ft N of N garage crnr-- Elev + 214)

0-1 COLLUVIUM--Brown sandy clay with roots, soft.

1-2 RESIDUAL/BEDROCK--Tan weakly cemented and highly fractured sandstone/siltstone, firm sounding resistance*

2-5 BEDROCK--Tan very highly weathered and fractured sandstone/siltstone, grades less weathered with depth, highly weathered at 3-1/2 ft, sounds 6 inches from 4 ft.

TP B (20 ft NNW of E house crnr--Elev + 219)

0-1.7 COLLUVIUM--Brown sandy silty clay with numerous roots, soft to medium stiff, PP=0.4 to 0.6**

1.7-2.5 RESIDUAL/BEDROCK--Tan very highly weathered claystone/siltstone with gray sandy clay seams, firm sounding, PP= 1

(Seepage at 2.5 ft)

2.5-5 BEDROCK--Tan very highly weathered and fractured siltstone/sandstone with gray mottling, grades less weathered with depth--highly weathered at 5 ft, sounds 2 inches from 5 ft.

TP C (15 ft W of S house crnr--Elev + 225)

0-1 COLLUVIUM--Brown sandy silty clay, soft to medium stiff.

- 1-2 RESIDUAL/BEDROCK--Tan very highly weathered and fractured sandstone/siltstone, moderate sounding resistance, PP= 3.
- 2-5 BEDROCK--Tan siltstone/sandstone with gray mottling, very highly weathered for top foot, grades to moderately weathered at 4-1/2 ft, sounds 8 inches from 2.5 ft and 2 inches from 5 ft.

CARETAKER UNIT

TP D (NW deck crnr-- Elev + 207)

- 0-2 COLLUVIUM--Brown sandy silty clay with roots, medium stiff, PP= 0.6.
- 2-3.3 COLLUVIUM--Tan mottled sandy clay with some fragments, stiff, PP= 1.5.
- 3.3-4.5 RESIDUAL--Tan mottled silty sand, dense, PP= 3.5 to 4.5.
- 4.5-6.5 BEDROCK--Tan very highly weathered and moderately fractured sandstone/claystone, grades less weathered with depth, PP= 4 to 8 above 6 ft, sounds 8 inches from 6 ft.
- TP E (5 ft N of N deck crnr--Elev + 204)
- 0-2 COLLUVIUM--Sandy clay, soft to medium stiff.
- 2-3.5 COLLUVIUM--Tan mottled very clayey sand, dense, firm sounding in bottom 1/2 ft, PP= 1.2.
- 3.5-4 RESIDUAL--Tan and gray mottled clayey sand, hard sounding resistance, PP= 2.5.
- 4-6.5 BEDROCK--Tan and gray very highly weathered and fractured claystone/sandstone, grades to highly weathered and fractured near 6-1/2 ft, sounds 5 inches from 6 ft, PP= 8.

STABLE

TP F (6 ft NE of N stable crnr--Elev + 259)

- 0-1.7 COLLUVIUM--Brown sandy clay, medium stiff, light sounding resistance, PP= 0.6.

Tan color at 1.5 ft.

- 1.7-2.8 RESIDUAL--Tan clayey sand, dense, hard sounding resistance.
- 2.8-5 BEDROCK--Tan sandstone/siltstone, very highly weathered and fractured, grades less weathered with depth, sounds 3 inches from 4.5 ft.
- TP G (20 ft W of S crnr--Elev + 268)
- 0-2 COLLUVIUM--Brown silty clay, medium stiff, PP= 1.2
- 2-3 COLLUVIUM--Red brown sandy clay, stiff, very hard sounding resistance in lower ft, PP= 1 to 1.5. (Some seepage below 4 ft)
- 3-5 RESIDUAL--Red brown very sandy clay, very hard sounding below 4 ft, some seepage.
- 5-6 BEDROCK--Red brown claystone/siltstone, very highly weathered, grades to highly weathered and tan color at 6 ft, sounds 8 inches from 5.2 ft.
- TP H (2 ft E of N stable crnr--Elev + 256)
- 0-1.8 COLLUVIUM--Brown sandy clay.
- 1.8-2.3 COLLUVIUM--Tan clayey sand.
- 2.3-3.9 RESIDUAL--Tan clayey sand, some seepage, firm sounding resistance.
- 3.9-5.2 BEDROCK--Tan siltstone/sandstone, very highly weathered, grades to highly weathered at 5 ft, sounds 9 inches from 4.2 ft.
- TP I (10 ft NW of E stable crnr--Elev + 260)
(Hand dug)
- 0-3 COLLUVIUM--Brown sandy clay.
- 3-4.5 RESIDUAL--Tan clayey sand, sounds 3 inches from 4.3 ft.
- 4.5 BEDROCK--Red brown claystone/siltstone, very highly weathered.

* The sounding device is a 1/2 inch rod driven with a 7 pound sleeve hammer developing an estimated equivalent fall of 15 feet. It can normally penetrate several inches into highly weathered bedrock.

- ** Penetrometer values approximately correspond to unconfined compressive tests in tons/square ft.
- *** The test pits were excavated with a tire mounted backhoe equipped with the 24 inch bucket. The pits were backfilled and tamped with the bucket and then rolled with the rubber tires. The recommended foundations are designed to span any zones of uneven support resulting from the test pits. With normal subgrade preparation, pavement should not be affected.

The Geologic Map also shows some inferred faults which are considered inactive. In any case, the causative earthquake fault systems are the San Andreas (about 6 miles to the SW), and the Hayward-Rogers Creek (roughly 12 miles to the NE).

3.3 GENERAL HILLSIDE STABILITY

There are surficial irregularities that reflect creep or movement within the soil mantle on the slopes below the caretaker unit and stable area. Such features are common on most Marin County Hillside and we found no indications that they penetrate the soil mantle.

The most pronounced movement is evident in the cut above the sharp reverse curve within the access road about 80 ft downslope from the planned residence. Recent surficial sliding is evident although it appears highly unlikely that this would affect the building areas. Other shallow slippage features are evident on the remaining roadway cuts as well as the shoulder which has been placed over the steep slopes below the roadway. Except for the upslope cut at the steep reverse curve, and some minor spalling in the steep upslope cuts, we found no indication of earth movement along the access road.

The referenced Geological Maps show zones of surficial sliding and soil creep within the nearby downslope areas but none within the building sites. The Slope Stability Maps show the building sites to lie in Zone 2 although the stable area and caretaker unit encroach near areas designated as Zone 3 or 4. Portions of the roadway lie in Zone 4. These classifications are based on scale of 1 to 4 where Zone 4 is least stable. The Zone 2 classification indicates relative stability. The Zone 3 classification indicates that the slope steepness approaches the strength of the soil cover and site should be investigated before development. The Zone 4 classification indicates that earth movement (not

necessarily deep seated) was apparent to the investigators and site classed as such should be investigated. Most hillsides as steep as the lower portion of the caretaker unit and stable area were classed either 3 or 4.

4. PLANNED CONSTRUCTION

The planned residence will be two story wood frame with no special or unusual foundation requirements. The garage will be cut into the slopes and this will involve retaining walls several feet high. The caretaker unit will be constructed above grade on the downslope and will involve minimal earthwork. As currently planned, the stable will have a raised wooden floor over a crawlspace and will not involve extensive grading.

The plans for upgrading the existing access road will depend on the requirements of the Fire Department and have not yet finalized. We understand that the current scheme involves asphalt paving without significant grading. A bulkhead or crib type wall may be required to widening the pavement at the lower existing reverse curve.

5. DISCUSSION & RECOMMENDATIONS (Summarized in Sec 1)

5.1 DESIGN REVIEW AND MONITORING SERVICES

Foundation and grading plans should be approved by us before finalization. If the recommendations contained herein pose any costly design or construction penalties, we should be notified. In this case, we would review our design parameters, and if possible, modify our recommendations to avoid unnecessary costs.

Foundation excavation/drilling and earthwork must be monitored by the geotechnical engineer and this must be stated on the foundation plans. It is the owner's/contractor's responsibility to provide at least three days notice to the geotechnical engineer. If monitoring services are performed by others, that person must be sufficiently qualified to implement any foundation changes that might be deemed necessary by unanticipated soil conditions. Our monitoring services would be billed at our hourly rate (one hour minimum charge including travel time) unless other arrangements are made.

5.2 FOUNDATIONS

5.2.1 GENERAL INTERPRETATION

These criteria may be relaxed for typical ancillary structures such as on grade decks and minor detached retaining walls, pending our approval.

Drilled and non drilled foundation systems may be combined but the minimum spanning requirements must extend into the drilled segments.

5.2.2 DRILLED INTERCONNECTED FOUNDATIONS (Alt 1)

Drilled piers and grade beam foundations may be designed to the following criteria. Guideline recommendations are sketched on Fig 5:

1. Pier penetrations will be finalized by the geotechnical engineer during drilling and will be based on properties of the soils/bedrock encountered. Penetrations of 7 ft into the weathered bedrock, for total penetrations averaging about 11 feet below existing grades, should be planned for stable and caretaker unit. Six foot bedrock penetrations, for total penetrations averaging about 8 ft below existing grades, should be planned for the main unit.
2. Piers should be at least 18 inches wide, laid out on a grid with maximum center to center spacing up to about 16 feet, and tied upslope-downslope with grade beams.
3. Pier reinforcement will be designed by the structural engineer. In any case, it should include at least four #5 bars or six #4 bars.

The pier steel shall extend to the top grade beam steel and be bent upslope-downslope to achieve transfer of moment stresses to the grade beams. In no case shall they be cut below the top grade beam steel.

The grade beams should be at least 8 inches wide and 18 inches deep, and reinforced to at least the same degree as the piers.

4. This system should be designed to resist creep forces within a soil mantle penetrating 5 ft below present grades at the stable and caretaker unit. Below the main dwelling, a 2.5 ft thick creep zone may be used. New fill must be added to the creep zone thickness.

This mantle should be assumed to develop pressures equal to a fluid weighing 40 pounds per cubic foot (pcf) (equivalent fluid pressure)

acting downhill against the grade beam and against projected diameters 2 feet greater than the respective piers.

Our criteria for pier interconnection and minimum steel must always be met. Depending on our observations during pier drilling, it may be necessary to increase the design creep zone, which could mandate an increase in reinforcing steel. This, however, is unlikely.

5. The bedrock below the creep zone may be assumed to resist creep forces with ultimate* equivalent fluid pressures of 600 pcf. These pressures should act with confinement from creep zone bottom and against projected diameters 2 feet greater than the respective piers. *As for all lateral restraint parameters, these are ultimate values and must be applied with the 1.5 code safety factor.
6. The requirements to sustain the indeterminate lateral creep forces, rather than building loads, will govern pier penetrations. Consequently, the piers must still meet the minimum depth criteria outlined above.

The bedrock below the creep zones may be assumed to resist vertical pier loads using *allowable friction values of 1,200 psf for dead and permanent loads such as retaining walls--they may be increased to 1,600 psf to include code live loads and to 2,000 psf to include earthquake and wind forces. Nonetheless, our minimum penetration criteria outlined in note 1 must still be achieved unless approved by the geotechnical engineer.

*As for all vertical loading parameters, these are allowable values and require no further safety factors.

The minimum depth criteria outlined above must be maintained. Friction within the creep zone and end-bearing cannot be used. The weight of the piers may be neglected when computing their capacities.

7. Upslope exterior grade beams should penetrate at least 1 ft deep to act as moisture barriers. Other exterior grade beams should penetrate 1/2

foot below exterior grades (or to bedrock) to prevent development of voids below their bottoms.

8. Water should be available to facilitate drilling and aid in extraction of the cuttings. Plywood covers should also be available to keep the holes free of debris. The piers and grade beams need not be poured monolithically.
9. If water accumulates in the pier holes, it may be displaced by pumping the concrete mix to the hole bottom but this method should be approved by the engineer. Pumping is the preferred method but the holes should be carefully checked for caving -- if caving is observed, the displacement technique must be used.

5.2.3 NON-DRILLED GRID FOUNDATIONS (ALT 2)

1. Foundations must be interconnected and tied at maximum intervals of 16 feet. They should be capable of spanning at least 12 feet across zones of non-support and their corners should be capable of cantilevering at least 6 feet along the intersecting members.

All foundations should be reinforced with at least two #5 or three #4 bars both top and bottom but to the structural engineer's criteria. The bars may be bundled in pairs if acceptable to the structural engineer.

2. Foundation subgrades must be approved by the engineer but they should penetrate at least:
 - (a) One foot into the very highly weathered bedrock
 - (b) At least 1-1/2 ft below lowest adjacent exterior grades.
 - (c) Below imaginary planes projected upward at 2h:1v from the base of detached retaining walls or permanent excavations.
 - (d) Below imaginary horizontal planes intersecting the slopes at least 5 feet from the respective foundation edges.
3. The foundation bottoms should slope no more than 10%.

4. Such foundations may be sized for allowable* soil pressures of 1,600 psf for dead and permanent applied loads such as retaining wall foundations but should be at least 12 in wide. They may be increased to 2,200 psf to include code live loads and to 3,000 psf for all loads including those caused by wind or earthquake forces. The weight of foundation concrete below grade may be excluded in computing soil pressures.

*As for all axial and vertical loading parameters, these values require no further safety factors.

5. Sustained horizontal forces, such as active earth pressures, may be resisted using ultimate* friction factors of 1/2 between the foundation concrete and sub soils.

Additional sliding resistance to sustained loads may be developed by assuming that subsoils resist foundation movement with ultimate* passive equivalent fluid pressures of 500 pcf acting against the foundation edges. A uniform value of 500 psf may be added in bedrock.

Confinement should begin below imaginary horizontal planes intersecting the slopes 5 feet from the foundation edges. If both friction and lateral restraint are used, one should be reduced by 1/3.

For transient horizontal forces, such as those caused by wind or earthquake, the above values may be increased by 1/3.

*As for all lateral restraint parameters, a 1.5 code safety factor must be included in design.

5.2.4 FOUNDATION DRAINAGE & PROTECTION

1. Upslope foundation members that encroach onto slopes rising more than 30% should extend at least 2-1/2 ft above the adjacent exterior grades to protect the framing from possible but

unlikely earth/debris movement. Foundation members that encroach onto slopes rising between 15 at 30% should extend at least 1-1/2 ft above the exterior grades. This criteria could be relaxed through implementation of upslope retaining walls provided with 1 to 2-1/2 ft of freeboard depending on the grading scheme.

2. Upslope exterior foundations members should be provided with backdrains penetrating to their bottoms. They may consist of bottom-perforated pipe placed in drainrock. The trench bottoms should slope at least 1% to the flanks of the structure. In most cases subdrains may discharge onto landscaped areas. Discharge onto pavement might result in a prolonged wet surface.

Unless Class 2 permeable drainrock (or equivalent) is used, the drainrock should be separated from the adjacent soils by non-woven geotextile filter cloth, and backfilled with a low permeability clayey soil to prevent migration of surface water into the drain structure. The on-site soils would be suitable for this backfill.

3. The lower intersection of the foundation members should be provided with 1 inch weepholes, placed just above the ground line for drainage. All subfloor grades should slope downhill, and when possible, should be no lower than the adjacent exterior grades.
4. If dampness develops within the subfloor ground surfaces, they should be covered with 6 mil plastic or non-structural concrete (rat proofing). This measure is recommended to mitigate increased crawlspace humidity from increases in ground moisture that results from the building confinements. This is in addition to a complete venting system.

5.3 RETAINING WALLS AND BULKHEADS

5.3.1 LATERAL PRESSURES AND FOUNDATIONS

Retaining walls may be designed for allowable active lateral earth pressures equal to both of the following:

1. A fluid with a density of 45 pcf (equivalent fluid pressure or efp) for walls that retain cuts with no backfill except drain rock -- for backfilled walls they should be increased to 55 pcf.

Where the ground above the wall rises, it should be increased in proportion to 2/3 of the upslope rise; for example, an upslope rise of 30% (3.3h:1v), corresponds to a pressure increase of 20%. This pressure may be reduced by 15% for walls that support no pavement or structure. In no case need it exceed 65 pcf.

2. A uniform lateral pressure equal to one third of any anticipated surcharge pressure but at least 50 psf for walls supporting streets, driveways, or garage slabs. This is in addition to the equivalent fluid pressure.

Non-drilled foundations for retaining walls may be designed as recommended in Sect 5.2.3 (Non-Drilled Grid Foundations).

Drilled piers that support combined retaining walls and foundation grade beams may be designed as recommended in Sect 5.2.2. For drilled walls that are not part of a structure, the designated creep zone pressures may be eliminated below a 2 foot depths, but the passive earth pressures must be assumed to develop confinement at the creep zone bottom, pending our approval.

5.3.2 BACKFILL AND BACKDRAINAGE

Retaining walls, that support (or are integrated with) other structures, must be backfilled and compacted before framing or subsequent construction to avoid effects of initial wall deflections from backfill placement.

Retaining walls shall be backdrained and provided with separate surface drainage. Lined V-ditches along the tops would minimize backdrain infiltration and related overcharging. When acting as building or garage walls, they must also be waterproofed.

Backdrains may consist of conventional bottom-perforated pipe in drainrock blankets. The pipe should be placed just above the bottom of the drainrock and sloped toward the flanks at about 2%. In most cases subdrain drainage may be discharged on normal landscaping. Discharge onto pavements should be avoided unless prolonged surface wetness is acceptable.

The drainrock blanket should be at least 6 inches wide. If class 2 permeable drainrock (or equivalent) is not used, it should be separated from the adjacent soil with a non-woven geotextile filter cloth. It should extend from the wall bottom upward to within 1-1/2 to 3 feet from the top depending on the wall height. The remainder of the backfill should be a clayey soil with a low permeability to prevent migration of surface water into the backdrain.

Weepholes may be used in lieu of (or with) perforated pipe, where wall seepage is acceptable. They are more reliable but still require drainrock. They should be about 1 inch wide and spaced at about 2 feet intervals along the base of the wall.

Structured backdrain material (such as Miradrain) may be used in lieu of drainrock behind retaining walls. It can be placed against relatively smooth cuts. This eliminates the need for back forms and the related over-excavation. Since form ties cannot be used, the forward forms must be braced externally. The fabric side of the structured backdrain panels must be against the earth. Paneled waterproofing such as "Paraseal" may be placed between the structured backdrain and the concrete.

Structured backdrain still requires weepholes and/or perforated pipe in drainrock conduits. Weepholes must penetrate through the backdrain and be provided with localized drainrock pockets (or equivalent drainage medium) to allow passage from the structured medium to the openings. If used with perforated pipe in drain-rock, the structural backdrain must penetrate to the drainrock -- its geotextile liner should then be extended to the bottom of the drainrock, and wrapped around over the pipe to allow transfer of seepage water. Drainrock around the perforated pipe can be completely eliminated for detached walls by application of a special technique -- plans for this scheme can be supplied on request.

5.3.3 POST AND WOOD LAGGING WALLS

Post and wood lagging walls up to 4 feet high may be built to the standard county design where supporting grades slope less than 10% (10h:1v). Walls up to 5 feet high may be designed to the criteria used by other municipalities (ie, the City of Novato). However, we recommend that the selection of post sizing be based on wall heights 1 ft greater than actual. Walls not meeting these criteria may be designed using the lateral earth pressures outlined in Section 5.3.1.

Lagging shall be spaced at approximate 1/2 inch intervals to allow drainage and retard deterioration, and provided with drainrock as recommended above. All wood shall be approved for earth contact.

5.4 SITE PREPARATION, GRADING, & DRAINAGE

Site grading should be limited as much as feasible. The ground surface should be sloped for rapid drainage away from building areas. Upslope drainage should be channeled around the structure or into a separate system. Site grading should be limited as much as feasible.

Roof drainage should be collected in downspouts and channeled away from the structure. If this is not feasible, erosion protection could be achieved by discharging through multiple outlets over 6 to 12 inch rip rap rock. Horizontal drainage spreaders or flumes that allow uniform spillage such as lined swales or perforated pipe (sketched on Fig 6) would also suffice. Drainage to multiple discharge points is preferable to concentrated discharge (which should be avoided when feasible). Downslope downspouts can normally empty onto splash blocks unless they carry large quantities of water.

Discharge into dry wells (gravel filled unlined excavations) is not acceptable. Surface water should never be introduced into backdrains or other subterranean drainage system that utilizes perforated pipe or drainrock. Such systems are intended only for removal of relatively small quantities of groundwater and are likely to become blocked and/or overcharged if used for surface drainage.

Drainage onto adjacent or downslope properties should be avoided. If this is not possible, it should be evenly dispersed as discussed above.

Even with the above outlined drainage measures, erosion can be expected. Considering this, all exposed unpaved areas should be provided with a vegetative cover. Courts have ruled that property owners are responsible for slide and erosion damage to downslope or adjacent properties, even when natural and without artificial influences.

5.5 EXCAVATION AND ENGINEERED FILL PLACEMENT

Areas to receive engineered fill must be cleared of vegetation and debris, and stripped of topsoil. The stripping depths should be determined during earthwork but we expect it will range up to 4 inches.

After stripping, a key should be cut at the base of the fill slope and the fill areas should be benched sufficiently flat to allow operation of compaction equipment. Subdrain or drainrock blankets are normally, required in the keys.

Exposed subgrades should be scarified, moisture conditioned and compacted to at least 90% of the maximum dry density as determined by the Modified AASHTO test. Depending on the conditions exposed by benching, it may be necessary to install a subdrain or drainrock.

Engineered fill (that placed below buildings and pavements) should be approved by the geotechnical engineer, spread in approximate 8 inch lifts, and moisturized and compacted as recommended for the subgrade. The on-site soils can be used as engineered fill, pending our approval.

As a general criteria, permanent fill slopes in soil, should not exceed 50% (2h:1v). These requirements may be relaxed in bedrock, small slopes, or slopes provided with a rip-rap cover.

Temporary cuts deeper than 5 ft should be sloped appropriately to avoid danger to workmen. In general, the soil mantle should be trimmed to about 1.5h:1v and the bedrock to 0.5h:1v depending on its localized properties. In no case can workman enter the space between retaining walls and unbraced cuts over 5 ft high.

The degree of grading for the access road will depend on its final positioning relative to the shoulder edges and upslope cuts, as well as localized bank stabilities.

Indications are that only minor widening will be required at some points. This would be best achieved by steepening and/or cutting back the upslope cuts which typically include 2 to 3 ft of colluvium and competent residual soils over bedrock. One or two foot catchment walls or berms could be placed to contain loose sloughage where necessary.

5.6 SLABS AND PAVEMENTS

The subgrades below slabs and pavements should be prepared as recommended above, and approved by the geotechnical engineer.

Prior to placement of baserock or concrete, the subgrade for interior slabs cut into the hillside should be sloped at 1% (1 inch in 8 feet) for drainage, compacted as recommended above, and rolled to smooth surface.

At least 4 inches of free draining baserock should be placed and compacted over the subgrade to act as a capillary break, and to provide subslab drainage for potential groundwater at the low corners of the base rock blanket. Drain outlets through the low foundation intersections should be provided within the baserock.

An impervious barrier should be placed over the drainrock to prevent moisture permeation unless slab wetness is acceptable. It should be covered with 2 inches of clean sand for protection from puncturing and to aid in concrete curing.

Floor slabs within living areas will require extra precautions with respect to drainage and waterproofing, especially if they abut retaining walls. In view of the seepage problems inherent with such slabs, we recommend that they be provided with pressure treated plywood covering bearing on pressure treated fir 2 by 4 "sleepers". This is in addition to the other recommended waterproofing and drainage measures. Hardwood floors should not be used over concrete unless special measures are taken to eliminate moisture related distortions to the flooring.

5.7 EARTHQUAKE DESIGN CRITERIA

This structure should be designed to the seismic criteria outlined for Zone 4 of the Uniform Building Code. This is the most severe earthquake designation in the code and includes most of the San Francisco Bay Region. No special earthquake or fault studies were performed for this investigation.

5.8 EROSION MITIGATION FOR WINTER CONSTRUCTION

If construction is performed during the winter months, the downslope areas should be protected from siltation.

This can be achieved by placing a silt barrier below the construction area. Either straw bales anchored to grade with rebar or silt fencing, which is commercially available, may be used. Guideline details are illustrated of Fig 7.

Where the silt barrier must be opened and closed for access, straw bales should be used. This system should be approved by the engineer or municipal inspector.

6. CLOSURE AND LIMITATIONS

By accepting this report the client and other recipients acknowledge their understanding and acceptance of the following terms and conditions. It is also acknowledged that no verbal or written guarantees were made by the undersigned.

Even though we see no reason to suspect that the soil or foundation behavior will differ from our predictions, one must recognize that factors contributing to hillside and foundation instability, surface and ground water seepage, and other geotechnical related problems cannot always be detected.

Slipouts on slopes and crawlspace wetness are sometimes unavoidable, especially during rainfall. Cracks in wall-board and tile as well as some distortions in hardwood floors develop in most structures from normal wood shrinkage and relaxations. They cannot be avoided, and we are not responsible for these effects. Further, we cannot observe every aspect of the various contractor's work, even with our best monitoring efforts.

This report represents our best judgment based on the available information and complies with current standards of practice for comparable projects. No forms of warranty or insurance coverage are expressed or implied in our reports or other communications.

It is also understood that certain risks must be assumed for all types of foundation and earth systems. These risks can always be lessened by upgrading these systems even though the margin of additional safety may be small

compared to the additional costs involved. Although the engineer may assist in selection of the optimum balance between safety and economy, the client and all recipients understand that the risk is their own.

We may cite minimum steel and sizing criteria, but structural design is the responsibility of the structural engineer and/or designer. Identification of toxic materials is specially excluded from our services and responsibility.

If a claim is made against GeoEngineering, Inc. for any act relating to our professional services, the initiator(s) of the claim shall pay for all costs and lost time associated with our defense. This includes (but is not limited to) attorney fees and our time which would be charged at the then prevailing rate. In order to discourage frivolous lawsuits against our profession, we would pursue charges for such action against the attorneys and plaintiffs when a basis exists. In any case, our liability cannot exceed our fee for this project. We carry no errors and omission insurance. Further, initiators must agree to mediation before filing any lawsuit.

We trust that this report provides the information required at this time. You may contact the undersigned as questions and the need for design clarification arise.

Respectfully submitted,

GEOENGINEERING, INC.

Robert H. Settgast

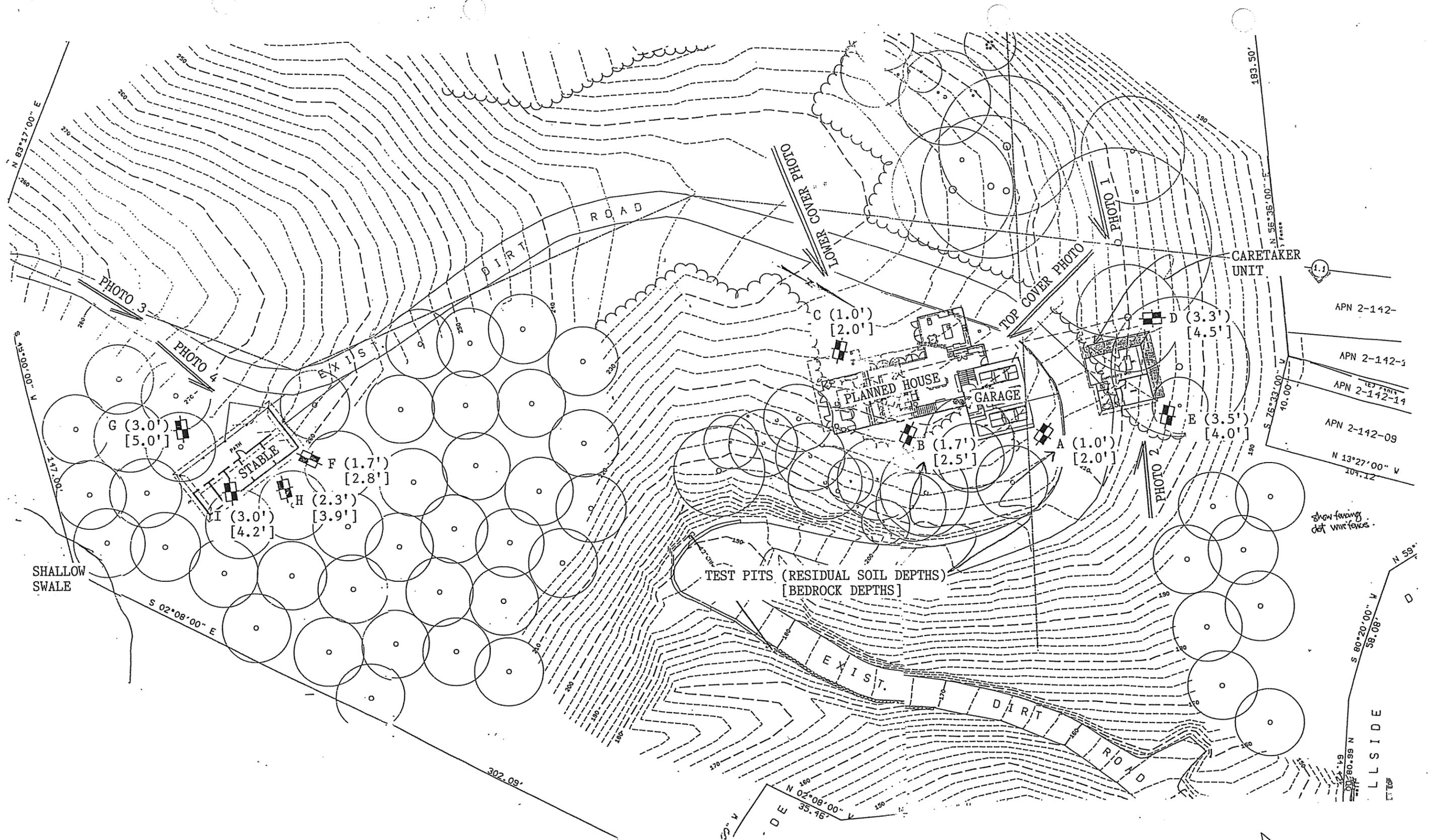
Robert H. Settgast
Professional Geotechnical Engineer

RHS:lws

CC: Rushton-Chartock
P. O. Box 173
Fairfax, CA 94930
(2 copies)



GEOENGINEERING, INC.



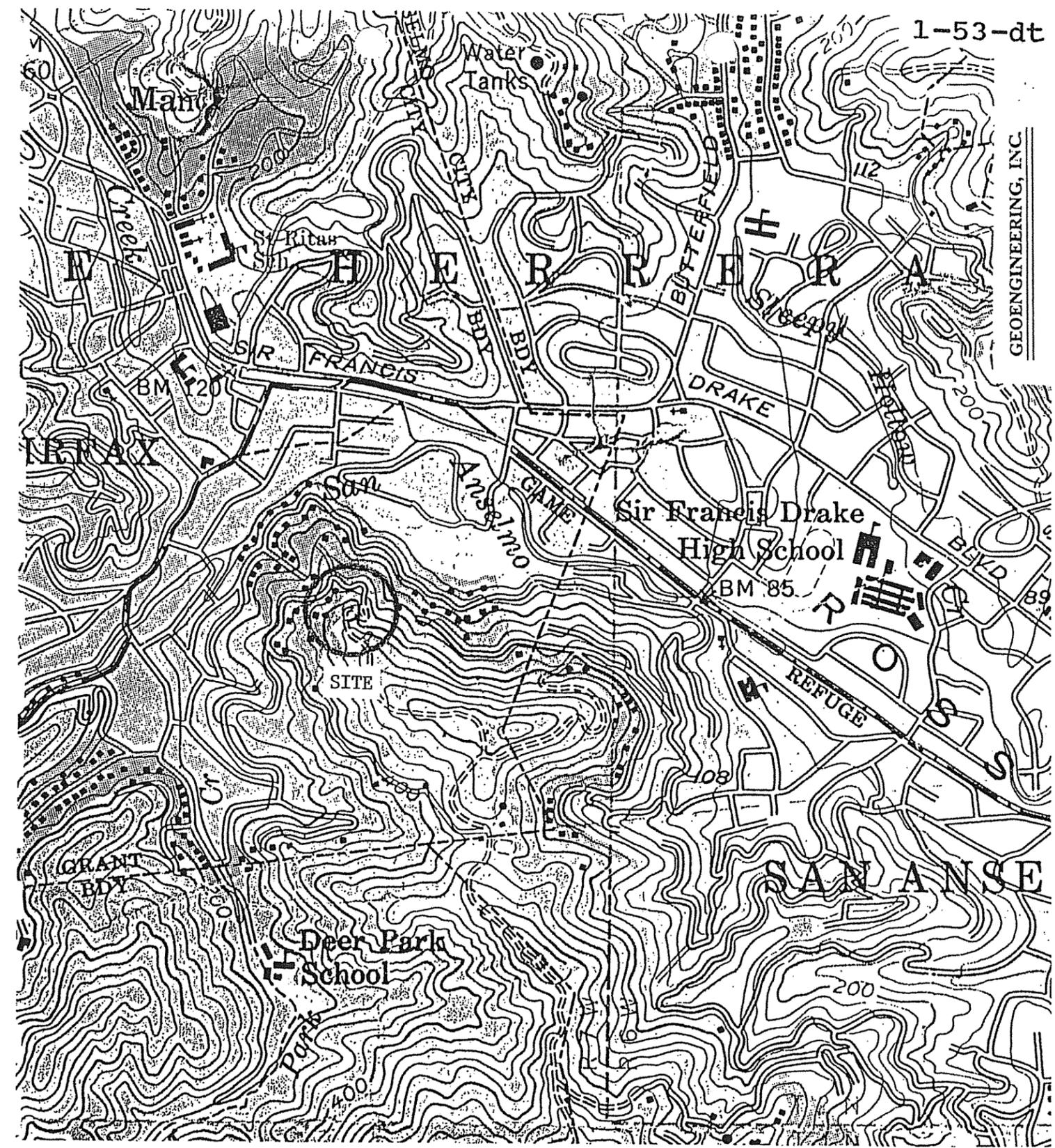
Site Plan

SCALE 1 IN. = 40 FT.

FIG 1

1-53-dt

GEOENGINEERING, INC.



1 in. = 1000 ft.
40 ft. contours

Topographic Vicinity Map

FIG 3

GEOENGINEERING, INC.



LEGEND

- +++ GULLY
- SURFICIAL SLIDE
- ▄▄▄ SLIDE ESCARPMENT
- ▽ LANDSLIDE SCAR
- ▲ SOIL CREEP

- f_m-FRANCISCAN MELANGE
- S_{Sh}-SANDSTONE & SHALE EX-
POSURES WITHIN MELANGE
- K_s-FRANCISCAN SANDSTONE,
SILTSTONE & SHALE
- K_{Js}-FRANCISCAN SANDSTONE,
SILTSTONE & SHALE

- K_{Jg}-BASALTIC VOLCANIC
ROCKS
- K_{Jch}-CHERT
- K_{Jsch}-SCHIST
- sp-SERPENTINE
- Q_c-COLLUVIUM

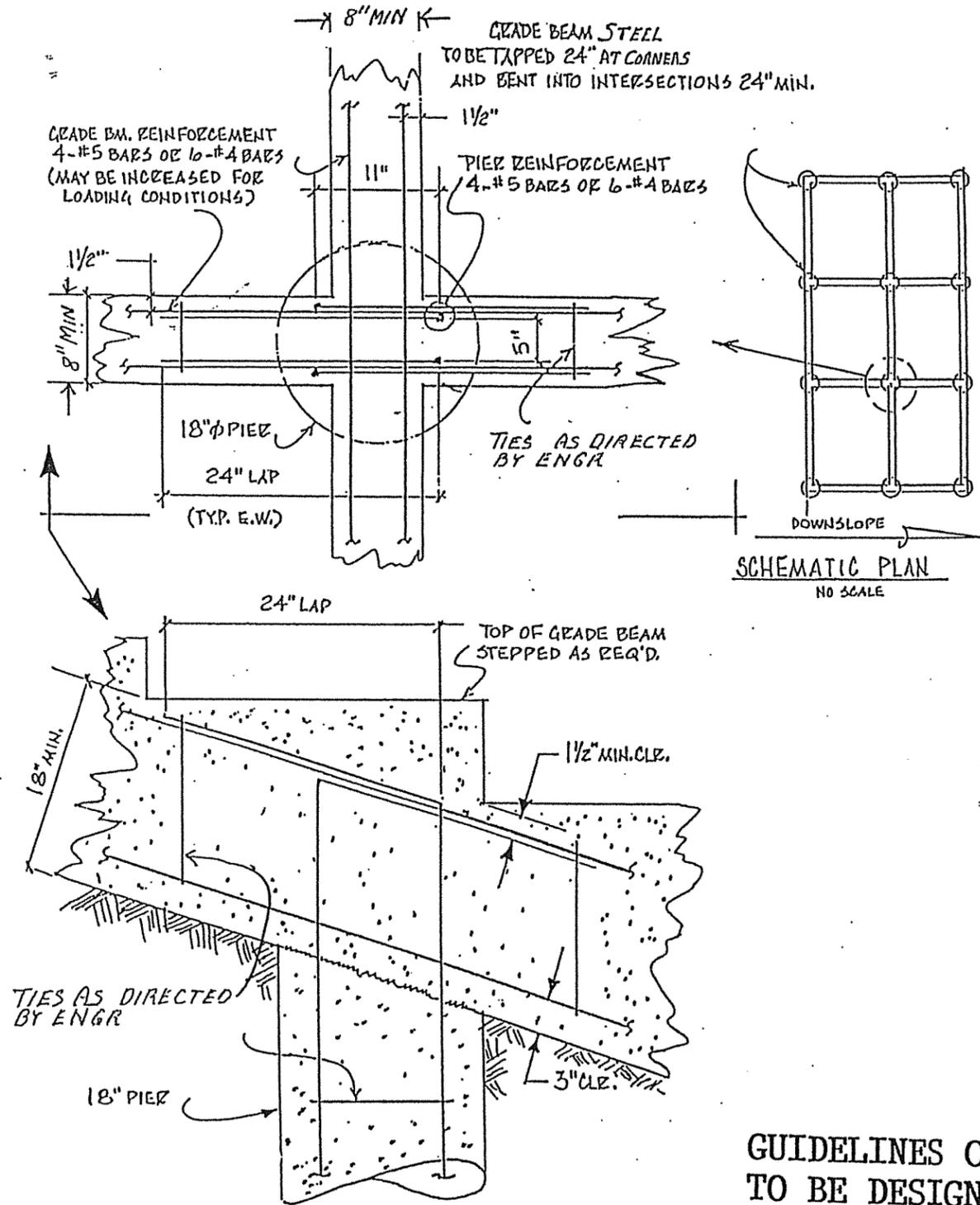


1 in. ≈ 1000 ft.
40 ft. contours

Geologic Map

FIG 4

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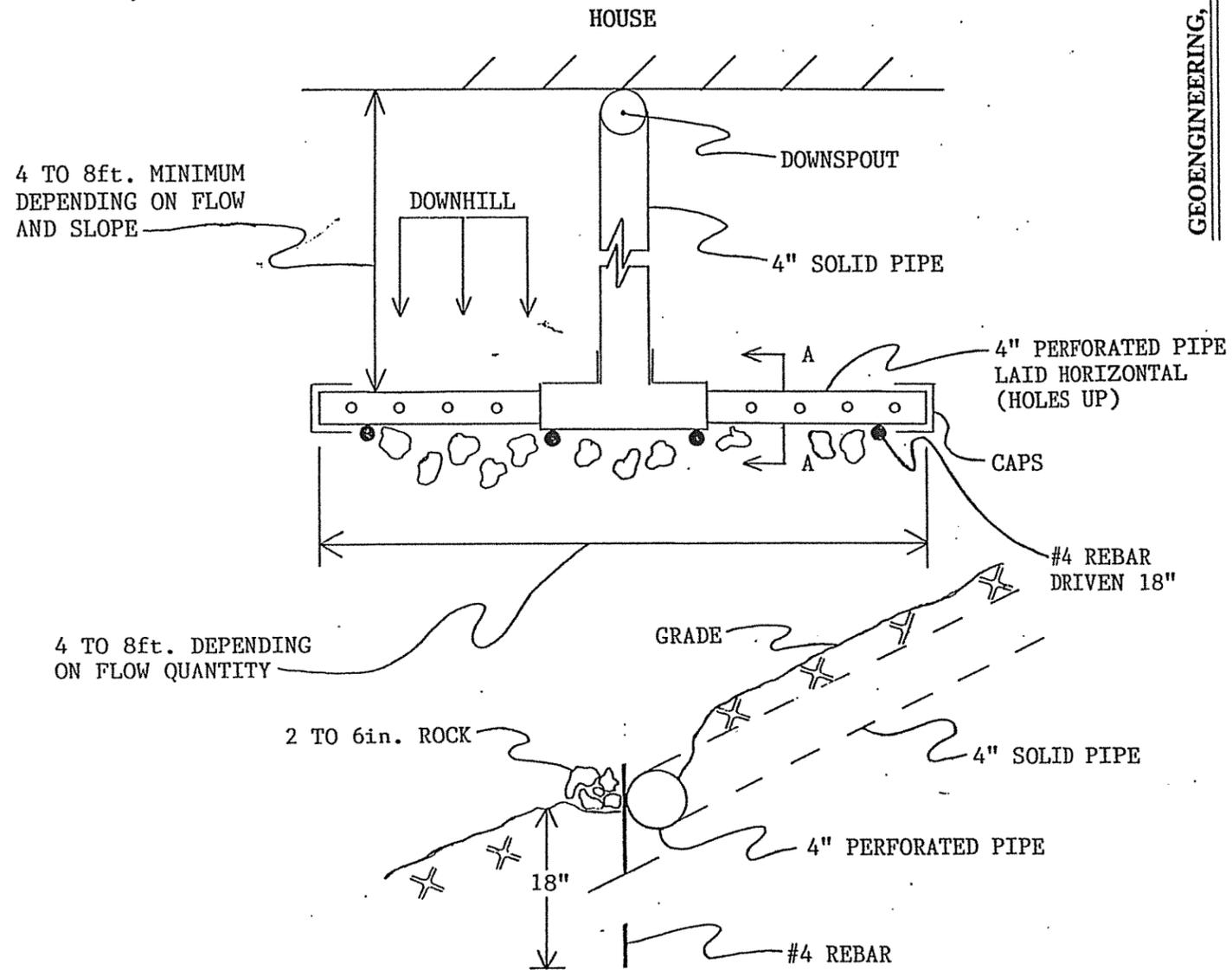


GUIDELINES ONLY
TO BE DESIGNED
BY ENGINEER

Guidelines For Drilled Pier And Grade Beam Foundation Systems

FIG 5

GEOENGINEERING, INC.

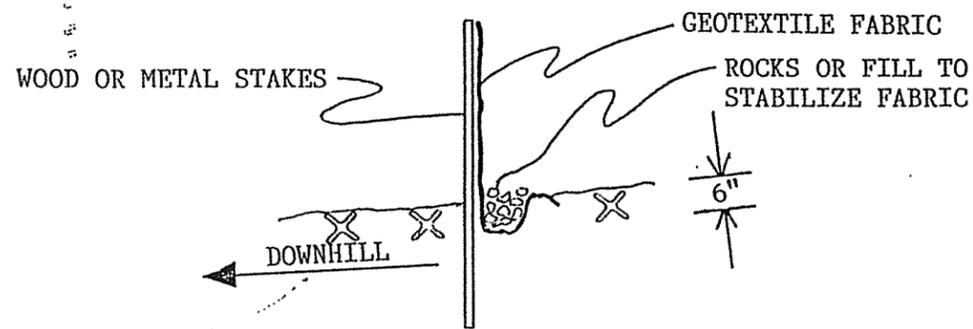


NOTE: DRAINAGE SHOULD BE DISPERSED
AT AS MANY POINTS AS FEASIBLE.
CONCENTRATED DISCHARGE POINTS
SHOULD BE AVOIDED.

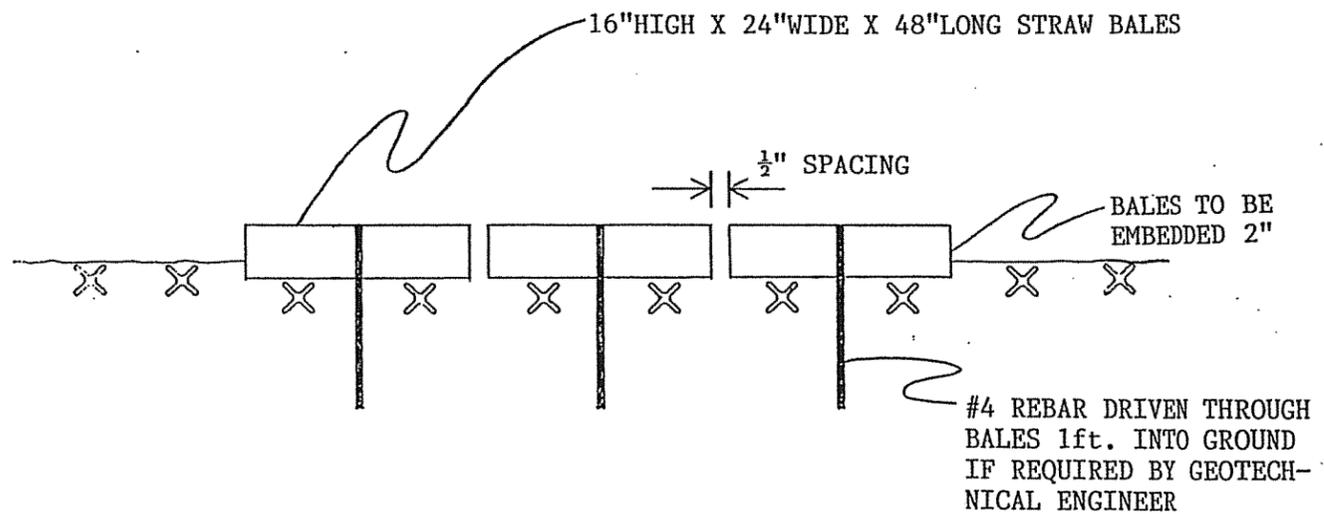
Perforated Pipe Dispersion Flume

FIG 6

GEOENGINEERING, INC.



GENERAL SECTION FOR SILT FENCING



GENERAL DETAIL FOR STRAW BALE SILT BARRIER

*NOTE: SILT BARRIER TO BE APPROVED BY GEOTECHNICAL ENGINEER

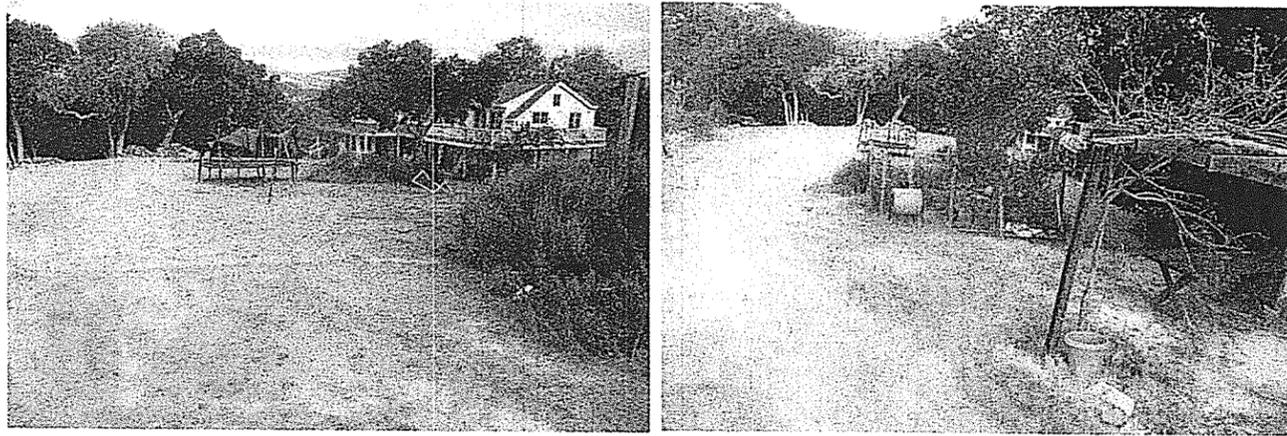
TOWN OF FAIRFAX

NOV 04 2013

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Geotechnical Engineering Consultants

File 2-13N-kdl



GEOTECHNICAL EVALUATION
PROPOSED POOL, CABANA,
AND EQUIPMENT FACILITY
232 HILLSIDE DRIVE
FAIRFAX, CA



GEOTECHNICAL ENGINEERING, INC.

Geotechnical Engineering Consultants
124 Paul Drive, Suite #105
San Rafael, CA 94903

Phone & Fax (415) 492-1747
Robert H. Settgast P.E. G.E.

Kelly & Deborah London
232 Hillside Avenue
Fairfax, CA 94930

November 2, 2013
File No. 2-13N-kdl

*GEOTECHNICAL EVALUATION
PROPOSED SWIMMING POOL,
CABANA, & EQUIPMENT FACILITY
232 HILLSIDE AVENUE
FAIRFAX, CALIFORNIA*

1. BACKGROUND

Our firm has been retained to perform the entitled services. The architects are Rushtom Chartock Architecture, and the current structural engineers are Anderson-Woodrow, both of Fairfax. The terms of our involvement are outlined in the final section of this report.

The information and recommendations contained herein are based on a geotechnical evaluation performed on 3/29/13 that included five manually advanced augered test borings with multiple percussion soundings. We also reviewed data developed during an a 3/22/95 geotechnical evaluation for the residence, and consulted the geologic and slope stability maps.

2. SETTING & PROJECT DESCRIPTION

As the attached Site Plan shows, the pool and cabana will be aligned on the crest of a ridge that trends northwesterly uneven grades averging ~15 %. Within its mid ~40 ft it slopes very gently to its flanks at ~5% .where it falls to ~30%. Only the equipment facility lies on these steeper slopes.

Some cuts and fills with retaining walls will be required to develop the required grades.

The cabana site is now a garden and there is generally sparse vegetation within the remaining building areas although there are some tree stumps--one near the planned equipment facility.

3. GEOLOGY & SUBSOILS

Our measured depths to weathered bedrock and residual soils are shown on the Site Plan at the respective boring locations.

Bedrock typically lies within 1-1/2 from present grades below the pool and cabana sites, and 4 ft deep below the cabana site. It consists of sandstones/shales that typically grades from very highly weathered with weak cementation to highly weathered within its upper 1-1/2 ft.

The bedrock is separated from the mantle soils by ~ 1/2 ft of residual soils (fully weathered bedrock) except for the equipment facility site they are 1-1/2 ft thick (~ 2-1/2 ft deep).

The mantle soils are sandy clays with satisfactory engineering properties.

The 1976 Geologic maps show conditions comparable to those found by us. They also show shallow earth movement nearby, but not on this site. The slope stability maps class this site as Zone 2, which is favorable.

Groundwater should not be a factor due to the ridge setting, although trapped groundwater may collect over the bedrock surfaces on the flanks following heavy rainfall and irrigation.

4. DISCUSSION & CONCLUSIONS

4.1 SUMMARY & FOLLOW UP SERVICES

We should review the foundation plans during the earlier, and the final stages, of their design--and our acceptance is subject to approval of foundation drilling and excavation. If the criteria contained herein pose severe cost penalties, we should be notified--we would then review our requirements, and implement appropriate revisions if possible.

Non-drilled foundations would suffice for this project, although the equipment facility foundations will require 3 to 4 ft of embedments from present grades,
In most cases the soil mantle will be absent. It may be assumed not to exceed 3 ft outside the areas of cut.

4.2 FOUNDATIONS

1. Foundations should penetrate 1-1/2 ft below adjacent grades, but below the lowest grades within 3 ft.
2. Foundations bearing on bedrock or residual soils may be designed for allowable soil pressures of 2,200 psf for dead and code live loads, 15 psf for sustained dead loads, and 3,000 for all loads including wind and seismic forces. These value should be reduced by 1/2 for those not bearing on residual soils/bedrock.
3. Lateral loading may be resisted using equivalent fluid passive earth pressures of 700 pcf*. Uniform lateral pressures 1,000 psf may be added in residual soils/bedrock which is expected to be present within 1 ft of grade for all units on the crest.. Additional resistance to sliding may be achieved using friction factors of 0.45* between the foundations and subgrades.

** These are ultimate values and the standard 1.5 code safety factor should be applied for active earth pressures on walls. It need not be added for seismic loading.*

4.3 RETAINING WALLS

Retaining walls that are integrated with buildings may be designed for allowable active earth pressures of 50 pcf within the soil mantle or fill, and 40 pcf below the bedrock or residual soils. These values should be increased in proportion to 2/3 the backslope rise--ie, a backslope rise of 45% corresponds to a 30% increase--but they need not exceed 65 pcf. These pressures may be reduced by 25% for detached site retaining walls. Uniform lateral pressures equal to 1/3 of any surcharge loads should be added.

Retaining walls shall be backdrained and provided with separate surface drainage to avoid infiltration and related backdrain overcharging. When acting as building walls, they must also be waterproofed. No special drainage problems are anticipated here, and conventional backdrainage sill suffice.

Retaining walls that are integrated with other structures, must always be backfilled before framing or subsequent construction to avoid effects of initial wall deflections from backfilling.

4.4 SITE PREPARATION, GRADING, & DRAINAGE

Site grading should be performed to optimize site drainage. Ground surfaces should be sloped for rapid drainage away from building areas. Upslope drainage should be channeled around structures or into a separate system.

Multiple discharge points are preferable to concentrated discharge. In most cases the downslope downspouts can empty onto splash blocks unless they carry large quantities of water. If drainage dispersal is not feasible erosion protection could be achieved by discharging through multiple outlets over 6 inch rip rap rock. Horizontal drainage spreaders or flumes that allow uniform spillage, such as lined swales or top perforated pipes capped, would also suffice--a sketch is available on request.

4.5 EXCAVATION AND ENGINEERED FILL PLACEMENT

Subgrades below fill or paving must be cleared of vegetation and debris, and stripped of topsoil. Stripping depths should be determined during earthwork but we expect they will be ~1/2 ft. The exposed subgrades should be scarified & moisture conditioned to near optimum, and compacted to 90% of the maximum dry density as determined by the *Modified AASHTO test*.

Engineered fill (that placed below buildings and pavements) should be approved by the geotechnical engineer. It should be spread in approximate 8 inch lifts, and moisturized and compacted as outlined above for the subgrades. On-site soils can be used as engineered fill, pending our approval.

In no case may workman enter the space between retaining walls and unbraced cuts over 5 ft high. As for all such sites, hard resistance cannot be forecasted, and the contractor should be prepared for this--but we expect no special problems.

4.6 SLABS AND PAVEMENTS

The subgrades below slabs and pavements should be prepared as recommended above, and approved by the geotechnical engineer.

Prior to placement of baserock or concrete, subgrades for interior slabs should be sloped for drainage, compacted as recommended above, and rolled to smooth surface. At least 4 inches of free draining baserock should be placed and compacted over the subgrade to act as a capillary break, and to provide subslab drainage for potential groundwater at the lower corners of the baserock blanket. Drain outlets through the low foundation intersections should be provided.

Impervious barriers should be placed below the slab to impede moisture permeation unless slab dampness is acceptable. Current practices recommend against the use of sand below reinforced concrete slabs, due to its tendency to shift, which results in uneven slab thicknesses. Instead, currently available durable membranes should be used in lieu of Visqueen. Slabs may be poured on the membrane. Slow curing additives or surface sealants may reduce the differential curing. Slabs be at least 5 in thick to achieve adequate coverage of the reinforcing.

Floor slabs within living areas always require extra precautions with respect to drainage and waterproofing, especially if they abut basement walls. In critical areas, pressure treated plywood covering bearing on pressure treated fir 2 by 4 "sleepers" would be prudent.

4.7 SWIMMING POOL

The downslope pool edges must be keyed at least 1 ft into bedrock unless we approve.. The upper 3 ft of the pool walls, and segments above grade, should be designed as free standing, which means they may not rely on the adjacent soils for lateral support. The pool walls may be designed for the active earth pressures outlined for retaining walls.

The pool bottom must be designed to span unsupported for at least 4 ft if it bears partially on mantle soils and partially on bedrock, unless we approve.

4.8 EARTHQUAKE DESIGN CRITERIA

The structures may be designed to the following seismic criteria outlined in current International Building Code (IBC)--also outlined in ASCE 7-05 dated 2006:
For the simplified Seismic Base Shear (Section 12.14.8.1), an F_a value of 1.0 (*soft bedrock sites*) may be used;

Less stringent criteria may be developed with other formulae using soil .Soil Type C (soft bedrock)--with respective latitudes & longitudes of 37.9826 & -122.5820 degrees.

5. CLOSURE AND LIMITATIONS

By accepting this report the client and other recipients acknowledge their understanding and acceptance of the following terms and conditions. They also acknowledge that no verbal or written guarantees were made by the undersigned. Even though we see no reason to suspect that the soil or foundation behavior will differ from our predictions, one must recognize that factors contributing to hillside and foundation instability, surface and groundwater seepage, and other geotechnical related problems cannot always be detected.

Our work is limited to geotechnical aspects of design. We may cite minimum criteria, but structural design and inspection are the responsibility of the structural engineer and/or designer. Even though we may comment on toxic materials, their identification is excluded from our services and responsibility. Hydrological and flood studies are also excluded from our work scope. Identification of underground lines is the contractor's responsibility.

Earth slippage and subfloor water are sometimes unavoidable especially during rainfall and/or irrigation. Sub-drain performance can never be predicted and blockages in such system are common. Concrete curing and stress cracks will also develop. These occurrences cannot be avoided and we are not responsible for their effects. Since we are not contracted to provide full time observations, we cannot be held liable for construction errors.

This report represents our best judgment based on the available information and complies with current standards of practice for comparable projects. No forms of warranty or insurance coverage are expressed or implied in our reports or other communications.

It is also understood that certain risks must be assumed for all types of foundation and earth systems. These risks can always be lessened by upgrading these systems even though the margin of additional safety may be small compared to the additional costs involved. Although the engineer may assist in selection of the optimum balance between safety and economy, the client and all recipients understand that the risk is their own.

If a claim is made against GeoEngineering, Inc. for any act relating to our professional services, the initiator(s) of the claim shall pay for all costs and lost time associated with our defense. This includes (but is not limited to) attorney fees and our time which would be charged at the prevailing hourly billing rate.

In any case, our liability cannot exceed our fee for this project. We carry no errors and omission insurance.

- o o o

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

Respectfully submitted,
GEOENGINEERING INC.

Robert H. Settgast
Robert H. Settgast
Professional Geotechnical Engineer

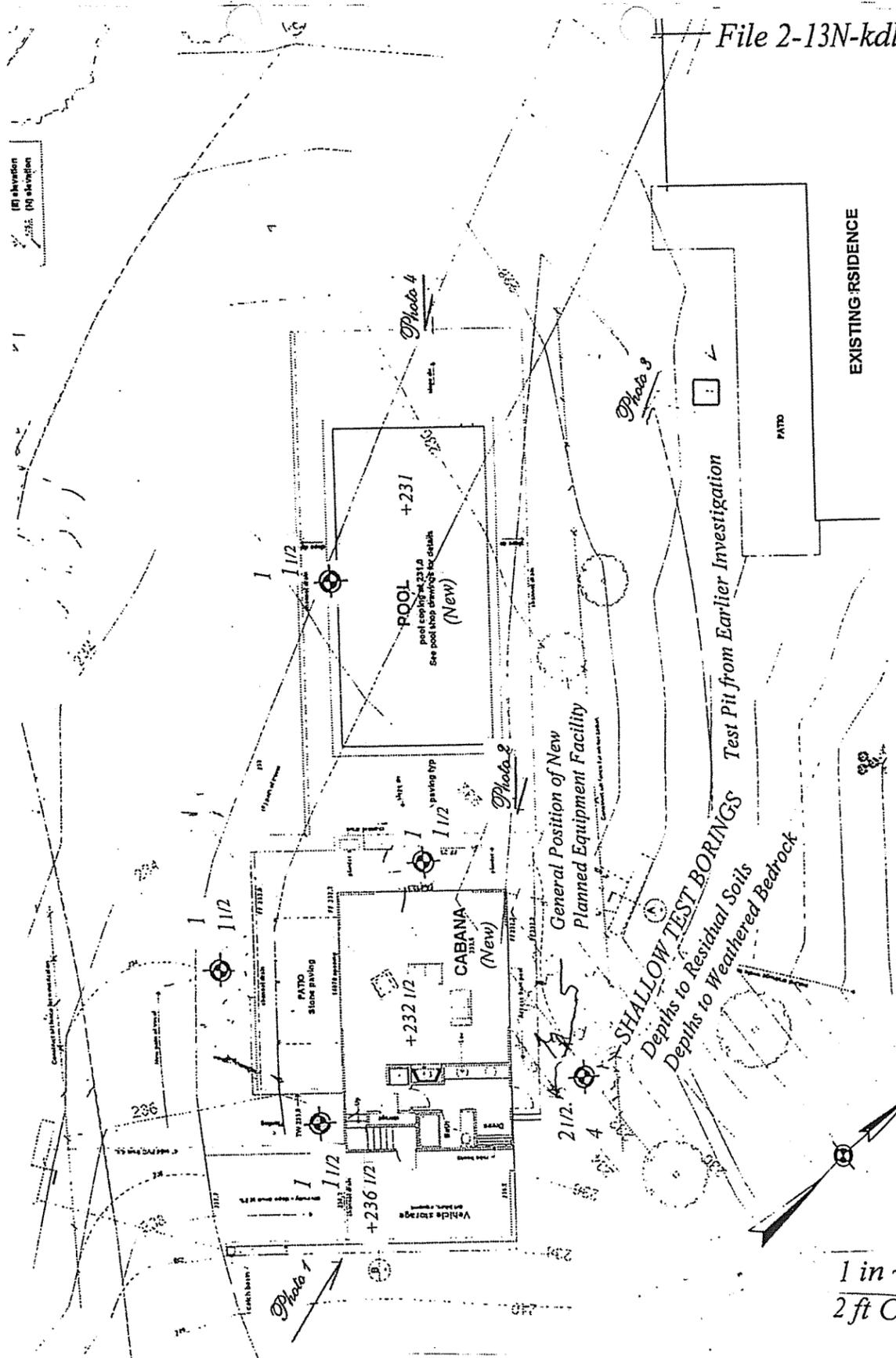


RHS:lw

Attachments: Cover - Photos
Site Plan

CC: Rushton Chartock Architecture

(B) elevation
25% (A) elevation



GEOENGINEERING, INC.
 127 PAUL DRIVE, STE 105
 SAN RAFAEL, CA 94903

PROPOSED
 POOL & CABANA
 232 HILLSIDE DR
 FAIRFAX, CA

1 in ~ 20 ft
 2 ft Contours

SITE PLAN

J. L. ENGINEERING

CIVIL ENGINEERING - LAND SURVEYING

1539 Fourth St, San Rafael, CA 94901 Ph: (415) 457-6647 Fax: (415) 457-2517 Email: jlengrs@sbcglobal.net

Date: March 31, 2014

To: Deborah London Cell: 415-269-6970
232 Hillside Dr Ph:
Fairfax, CA 94930 Eml:kdlondon@comcast.net Fax:

Re: 232 Hillside Dr, Fairfax (APN 002-181-03) JLE# 2012-048
Civil plan set re-Submittal Subdiv Map:Unrec. Map of Deer Park, 2001-RS-16, 2002-RS-33

Enclosed:
14 civil plan sets
2 Deed & Lot Closure Calculations

TOWN OF FAIRFAX

APR 01 2014

RECEIVED

Remarks:

In response to ray Wrynsinki's memo dated March 3,2014

We have per enclosure:

C2 has been re-scaled to the appropriate 1"=8' scale.

Copy of title report and deed along with closure calc's are included and conform with C1 plan sheet.

As is usual, although all bearing are as described, the distances for two course differ within acceptable tolerances for our resolved closure calculations. Our standard note remains unaltered on the C1 cover sheet which indicates that a 'Final Resolution requires the recordation of a "Record of Survey"' to be filed at such time as may be appropriate.

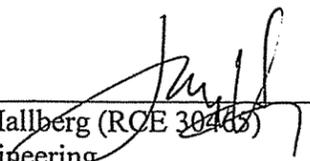
All easements are also shown as noted before.

Topographic info has been expanded to include all trees within 75 ft. of the new cabana as is now shown on all sheets.

All other comments appear to indicate sufficient information was provided. We have indicated the pool depths being 4 ft. shallow end and 8' in the deep end.

We trust this will answer the Town's comment in particular for additional trees and request for lot closure calculation.

Sincerely,


Jay L. Hallberg (RCE 30465)
J.L.Engineering

cc: Rich Rushton, Rushton+Chartock Cell:
P.O. Box 173 Ph: 415-457-2802x205
Fairfax CA 94978 Eml: rushtonchartock@comcast.net Fax:

Lands of Teixeira-London

AP# 002-181-03

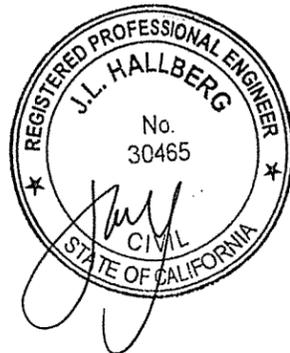
Mar 2014

Parcel name: DN2007-013065

	North: -409.2414		East : 2001.9341
Line	Course: N 28-59-00 W	Length: 185.1677	
	North: -247.2639		East : 1912.2101
Line	Course: N 31-42-00 W	Length: 255.6000	
	North: -29.7966		East : 1777.8996
Line	Course: N 04-52-00 W	Length: 56.0500	
	North: 26.0513		East : 1773.1444
Line	Course: N 56-36-00 E	Length: 183.5000	
	North: 127.0645		East : 1926.3390
Line	Course: N 76-33-00 E	Length: 40.0000	
	North: 136.3684		East : 1965.2420
Line	Course: N 13-27-00 W	Length: 108.2000	
	North: 241.6008		East : 1940.0750
Line	Course: S 59-58-00 E	Length: 53.7400	
	North: 214.7038		East : 1986.5996
Line	Course: N 80-20-00 E	Length: 58.0800	
	North: 224.4563		East : 2043.8549
Line	Course: N 66-08-00 E	Length: 64.4200	
	North: 250.5213		East : 2102.7663
Line	Course: S 67-21-00 E	Length: 25.6300	
	North: 240.6511		East : 2126.4196
Line	Course: S 13-29-00 E	Length: 128.8700	
	North: 115.3331		East : 2156.4672
Line	Course: S 33-50-00 E	Length: 74.7300	
	North: 53.2578		East : 2198.0753
Line	Course: S 02-08-00 E	Length: 35.4600	
	North: 17.8224		East : 2199.3953
Line	Course: S 84-28-00 E	Length: 49.4400	
	North: 13.0551		East : 2248.6050
Line	Course: S 02-08-00 E	Length: 298.9800	
	North: -285.7176		East : 2259.7345
Line	Course: S 45-00-00 W	Length: 149.3400	
	North: -391.3170		East : 2154.1352
Line	Course: S 83-17-00 W	Length: 153.2529	
	North: -409.2414		East : 2001.9341

Perimeter: 1920.4606 Area: 207,964 SF 4.774 acres

Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.0000 Course: S 41-00-38 E
 Error North: -0.00002 East : 0.00001
 Precision 1: 1,920,460,600.0000



RECORDED AT REQUEST OF
FIDELITY NATIONAL TITLE

RECORDING REQUESTED BY:

530925-70

When Recorded Mail Document
and Tax Statement To:

Deborah Teixeira-London and Kelly London
232 Hillside Drive

Fairfax, CA 94930



2007-0013065

Recorded Official Records REC FEE 10.00
County of Marin
JOAN C. THAYER
Assessor-Recorder

08:08AM 01-Mar-2007 Page 1 of 2

APN: 002-181-03

SPACE ABOVE THIS LINE FOR RECORDER'S USE

GRANT DEED

The undersigned grantor(s) declare(s) **INTO TRUST**
Documentary transfer tax is \$ 0.00 City Transfer Tax is \$

- computed on full value of property conveyed, or
- computed on full value less value of liens or encumbrances remaining at time of sale,
- Unincorporated Area City of Fairfax,

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, Deborah Teixeira-London and Kelly A. London, wife and husband, as joint tenants

hereby GRANT(S) to Deborah A. Teixeira-London and Kelly A. London, Trustees of the Teixeira-London Living Trust dated 9-5-97

the following described real property in the City of Fairfax, County of Marin, State of California:
SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

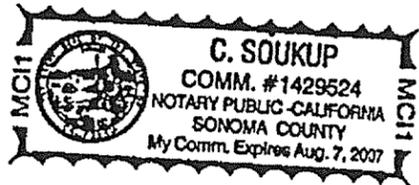
DATED: February 22, 2007

STATE OF CALIFORNIA
COUNTY OF Sonoma
ON 2/22/07

before me,
C. Soukup, Notary Public
(here insert name and title of the officer), personally
appeared DEBORAH A. TEIXEIRA-LONDON
AND KELLY A. LONDON

Deborah A. Teixeira-London
Kelly A. London

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Witness my hand and official seal!

Signature C. Soukup (Seal)

MAIL TAX STATEMENTS AS DIRECTED ABOVE

GRANT DEED

EXHIBIT "A"

The land referred to herein is situated in the State of California, County of Marin, City of Fairfax, and is described as follows:

PARCEL ONE;

Beginning at the corner common to Lots 470, 471 and 470A, as shown upon that certain Map entitled, "Map No. 3 Deer Park, Fairfax, Marin Co., Cal.", recorded March 8, 1916 in Volume 4 of Maps at Page 96, Marin County Records; running thence North 56° 36' East, 183.5 feet to the Southeast corner of Lot 476, as shown on said Map; thence North 76° 33' East, 40 feet to the Southeast corner of Lot 476A, as shown on said Map; thence North 13° 27' West, 108.2 feet to the Northeast corner of said Lot 476A and to the South side of a 30 foot road; thence along the Southerly side of said 30 foot road, South 59° 58' East, 53.74 feet; thence North 80° 20' East, 58.08 feet; thence North 66° 08' East, 64.42 feet; thence South 67° 21' East, 25.63 feet; thence South 13° 29' East, 128.87 feet; thence South 33° 50' East, 74.73 feet; thence South 2° 08' East, 35.46 feet; thence South 84° 28' East, 49.44 feet; thence leaving the Southerly line of said 30 foot road and running South 2° 08' East, 298.98 feet; thence South 45° West, 149.34 feet; thence South 83° 17' West, 155 feet to the Southeast corner of Lot 514, as shown on said Map; thence North 28° 59' West, 187.8 feet; thence North 31° 42' West, 255.6 feet; and North 4° 52' West, 56.05 feet to the point of beginning.

PARCEL TWO::

An easement for the passage of vehicles, persons, animals, and for utilities over that certain parcel of land described as follows:

Beginning at a point on the Northerly line of the parcel granted by Crocker Land Company to John B. Kelly, recorded February 9, 1925 in Book 64 of Official Records at Page 495, Marin County Records; said point being the Northeast corner of Lot 476A and the South side of a 30 foot strip of land as said lot and strip are shown on Sheet 2 of Map No. 3 of Deer Park, recorded March 8, 1916 in Volume 4 of Maps at Page 98, Marin County Records; running thence along the Northerly line of the Lands of Kelly and the Southerly line of said strip, South 59° 58' East, 53.74 feet; thence North 80° 20' East, 58.08 feet; thence North 66° 08' East, 64.42 feet; thence South 67° 21' East, 25.63 feet; thence South 13° 29' East, 128.87 feet; thence South 33° 60' East, 74.73 feet; thence South 02° 08' East, 35.46 feet; thence South 84° 28' East, 49.44 feet to the Northeast corner of the lands of Kelly; thence leaving the Southerly line of said strip and the Lands of Kelly, North 02° 08' West, 30.27 feet to the Northerly line of said 30 foot strip of land and a point on the Southerly line of the parcel granted by Crocker Land Company to the Villa Roma Club Inc., recorded February 10, 1930 in Book 190 of Official Records at Page 302, Marin County Records; thence along a strip line of the Lands of Villa Roma Club parcel, North 84° 28' West, 19.17 feet; thence North 02° 08' West, 17.74 feet; thence North 33° 50' West, 77.86 feet; thence North 13° 29' West, 138.73 feet; thence North 67° 21' West, 53.77 feet; thence South 66° 08' West, 73.58 feet; thence South 80° 20' West, 43.51 feet; thence North 59° 58' West, 41.52 feet; thence leaving said line, South 32° 41' 10" West, 30.03 feet to the point of beginning.

PARCEL THREE:

An access easement for pedestrian and equestrian use as set forth in that certain Grant of Easement for Pedestrian and Equestrian Use from Andrew L. Carver, et al, to Deborah A. Teixeira, recorded August 23, 1994 as Instrument No. 1994-063274, Marin County Records.



Ross Valley Fire Department
777 San Anselmo Ave
San Anselmo, Ca 94960
Ph. 415-258-4686

FIRE DEPARTMENT PLAN REVIEW

PROJECT: Pool/Cabanna
ADDRESS: 232 Hillside Dr
Fairfax CA, 94930

Page: 1 of 2
Date: 11/25/2013
Reviewed by: Rob Bastianon
(415) 258-4673

TYPE OF REVIEW: Planning
Bldg. Dept. 11/5/13 Fire Dept. # 13-0367
E-mail: rbastianon@rossvalleyfire.org
Review No. 1
Fire Department Standards can be found at: www.rossvalleyfire.org

Applicant*: FFX Planning
Address:

**Applicant is responsible for distributing these Plan Review comments to the Design Team.*

Occupancy Class: R-3	Fire Flow Req: 1000 GPM	Sprinklers Required: YES
Type of Construction: V-B	On-site Hyd. Req: NO	Fire Alarm Required: NO
Bldg Area: sqft:	Turn-Around Req: NO	Permits Required:
Stories: +	Fire Flow Test Required: NO	
Height: +ft.	Wildland Urban Interface: YES	

The project listed above has been reviewed and determined to be:

- APPROVED (no modifications required)
- APPROVED AS NOTED (minor modifications required - review attached comments)
- NOT APPROVED (revise per attached comments and resubmit)
- INCOMPLETE (provide additional information per attached comments and resubmit)

NOTE: Please review the comments and make corrections and/or add notes as required. Changes and/or additions shall be clouded and referenced by date on a legend. Approval of this plan does not approve any omission or deviation from the applicable regulations. Final approval is subject to field inspection. Approved plans shall be on site and available for review at all times.

ROSSVALLEY FIRE DEPT.
REVIEWED

DATE: 11/25/13

Inspections required:

- Access/Water Supply prior to delivery of combustibles
- Defensible Space/Vegetation Management Plan
- Sprinkler Hydro/Final
- Final

EXHIBIT #

E



Ross Valley Fire
Department
777 San Anselmo Ave
San Anselmo, Ca 94960
Ph. 415-258-4686

FIRE DEPARTMENT PLAN REVIEW

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ADDRESS: 232 Hillside Dr
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Page: 2 of 2
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TYPE OF REVIEW: Planning E-mail: rbastianon@rossvalleyfire.org
Bldg. Dept. 11/5/13 Fire Dept. # 13-0367 Review No. 1
Fire Department Standards can be found at: www.rossvalleyfire.org

ITEM #	SHEET	COMMENTS	Corr. Made
1		The existing fire apparatus access road will need to be extended to reach the new structure. Please provide a site plan show how requirement will be met.	
		Submitter's Response: Correction has been completed. See Sheet ___ of <input type="checkbox"/> Plans <input type="checkbox"/> Calculations.	
2		Maintain around the structure an effective firebreak by removing and clearing all flammable vegetation and/or other combustible growth. Ross Valley Fire Department Fire Protection Standard 220 Vegetation/Fuels Management Plan is available online @ Rossvalleyfire.org to assist the applicant in meeting the minimum defensible space requirements.	
		Submitter's Response: Correction has been completed. See Sheet ___ of <input type="checkbox"/> Plans <input type="checkbox"/> Calculations.	

*If re-submittal is required, all conditions listed above shall be included in revised drawings.
Fire and life safety systems may require a separate permit. Fire permits may be noted as deferred.*



**MARIN MUNICIPAL
WATER DISTRICT**

RECEIVED

NOV 14 2013

TOWN OF FAIRFAX

220 Nellen Avenue Corte Madera CA 94925-1169
www.marinwater.org

November 12, 2013
Service No. 56015

Linda Neal
Town of Fairfax Planning Dept
142 Bolinas Rd
Fairfax CA 94930

RE: WATER AVAILABILITY - Single Family Dwelling
Assessor's Parcel No.: 002-181-03
Location: 232 Hillside Dr, Fairfax

Dear Ms. Neal:

The above referenced parcel is currently being served. The purpose and intent of this service are to provide water to a single family dwelling. The proposed construction of a pool cabana/storage structure and swimming pool will not impair the District's ability to continue service to this property provided the pool cabana is not considered a second living unit.

Compliance with all indoor and outdoor requirements of District Code Title 13 – Water Conservation is a condition of water service. Indoor plumbing fixtures must meet specific efficiency requirements. Landscape plans shall be submitted, and reviewed to confirm compliance. The Code requires a landscape plan, an irrigation plan, and a grading plan. Any questions regarding District Code Title 13 – Water Conservation should be directed to the Water Conservation Department at (415) 945-1497. You can also find information about the District's water conservation requirements online at www.marinwater.org.

Should backflow protection be required, said protection shall be installed as a condition of water service. Questions regarding backflow requirements should be directed to the Backflow Prevention Program Coordinator at (415) 945-1559.

If you have any questions regarding this matter, please contact me at (415) 945-1532.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Eischens".

Joseph Eischens
Senior Engineering Technician

JE:mp

cc: Town of Fairfax Building Dept

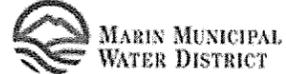
Linda Neal

From: Joseph Eischens [jeischens@marinwater.org]
Sent: Tuesday, May 06, 2014 2:44 PM
To: Linda Neal
Cc: Ana Arena; Christopher Borjian
Subject: 232 Hillside Av - FX APN: 002-181-03

Linda,

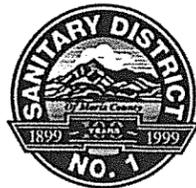
The above referenced parcel is currently being served. The purpose and intent of this service are to provide water for a single family dwelling. It has come to the District's attention that there are a total of three living units in two residential structures on the property. In order to be in compliance with current MMWD Code, the applicant will be required to install a separate meter for each detached residential structure and purchase water entitlement for the additional two living units. The applicant will also be required to meet any applicable conditions of the Water Conservation Code and Backflow Prevention Department.

Joseph Eischens
Senior Engineering Technician
Development Services



220 Nellen Av
Corte Madera CA 94925
t (415) 945-1532
f (415) 945-1599
jeischens@marinwater.org

Follow us on the [Web](#), [Twitter](#), [Facebook](#) and our [Blog](#).



ROSS VALLEY SANITARY DISTRICT
2960 Kerner Blvd
San Rafael, CA 94901
(415) 259-2949 ~ rvsd.org

RECEIVED

DEC 11 2013

TOWN OF FAIRFAX

Dec 11, 2013

Linda Neal, Senior Planner
Town of Fairfax
Dept of Planning and Building Services
142 Bolinas Road
Fairfax, CA 94930

**SUBJECT: DESIGN REVIEW, LONDON RESIDENCE,;
232 HILLSIDE DRIVE, FAIRFAX; APN: 002-181-03**

Dear Ms. Neal:

We are in receipt of your transmittal letter received Nov 07, 2013 concerning the above- referenced project. Please see the attached Section 610 from our Sanitary Code with respect to Swimming Pools. Requirements for discharge of contents of a swimming pool into our sanitary sewer system include the following:

- **Permit and inspection.** (See attached. The \$250 permit fee for inspection will apply for discharging contents of a swimming pool.)
- Compliance with the Sanitary Code and District Standard Specifications and Drawings.
- Pipe not larger than two inches.
- Head not to exceed 20 feet.
- Discharge rate for pumping not to exceed 100 gpm.
- Equipped with separator to preclude any possibility of backflow of sewage.
- No surface or subsurface drainage, rainwater, stormwater, etc. shall be permitted to enter any sanitary sewer **by any device or method whatsoever.**

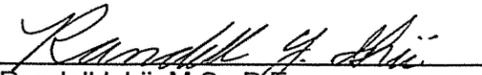
Please note, the District will only allow temporary discharges of contents of swimming pools. **No permanent connections** for discharge to the sanitary sewer system will be acceptable.

If not already installed, the District requires that the side sewer be equipped with an appropriate backwater prevention device (e.g., Contra Costa valve as warranted by the individual site conditions).

After the project is approved, the owner or contractor should contact the District to arrange for a District inspector to approve the existing installation (or approve the plans for the proposed installation) of the backwater prevention device and any work done on the side sewer lateral in order to make a record for the District's files.

If you need further information regarding this matter, please contact the office.

Sincerely,


Randall Ishii, M.S., P.E.
District Engineer

Enclosures

Sanitary District No. 1 of Marin County Side Sewer Connection Permit & Inspection Process

1. Applicant obtains a building permit from the building department of jurisdiction.
2. Prior to connecting the building to the public sewer and prior to the final inspection of the building by the building department of jurisdiction, applicant must pay the applicable connection fee.
3. If installation of the side sewer requires digging in a street or public right-of-way, applicant must obtain the necessary encroachment permit from the city, town, or county having jurisdiction over the street or right-of-way.
4. The sewer contractor must arrange a District inspection prior to performing any work. The contractor can begin the sewer work on the date of the scheduled inspection. It is the responsibility of the sewer contractor to arrange for the necessary District inspections as the work progresses. Forty-eight hour notice to the District is required for all inspections. Work performed without inspection will be required to be exposed and tested.
5. When the side sewer work is completed, a District inspector will provide a final inspection upon 48-hour notification by the sewer contractor.
6. Inspection of partial installations of side sewers may be requested prior to obtaining the sewer connection permit, but the building cannot be connected to the sewer main until the permit fees have been paid and the permit has been issued. "Connecting" to the sewer main requires the side sewer to be connected to both the sewer main and the structure, so the following scenarios could exist for inspection of partial installations of side sewers without a permit:
 - a. Side sewer is connected to the sewer main, but not to the structure; or
 - b. Side sewer is connected to the structure but not to the sewer main.



ROSS VALLEY SANITARY DISTRICT
2960 Kerner Blvd
San Rafael, CA 94901
(415) 259-2949 ~ rvsd.org

RECEIVED
DEC 11 2013
TOWN OF FAIRFAX

**Re: Requirements for Discharging Contents of Swimming Pools
into Sanitary Sewers in Sanitary District No. 1 of Marin
County**

SECTION 610: SWIMMING POOLS. It shall be unlawful for any person to discharge the contents of a swimming pool into sanitary sewer except in the manner specified herein. The size of the pipe carrying discharge water shall not be larger than two inches and shall not be under a head to exceed twenty (20) feet. If the water is discharged by pumping, the rate of flow shall not exceed one hundred (100) gallons per minute. Each swimming pool discharging to a sanitary sewer shall be equipped with an approved separator to preclude any possibility of a backflow of sewage into the swimming pool or piping system.



ROSS VALLEY SANITARY DISTRICT

2960 Kerner Blvd
San Rafael, CA 94901
(415) 259-2949 ~ rvsd.org

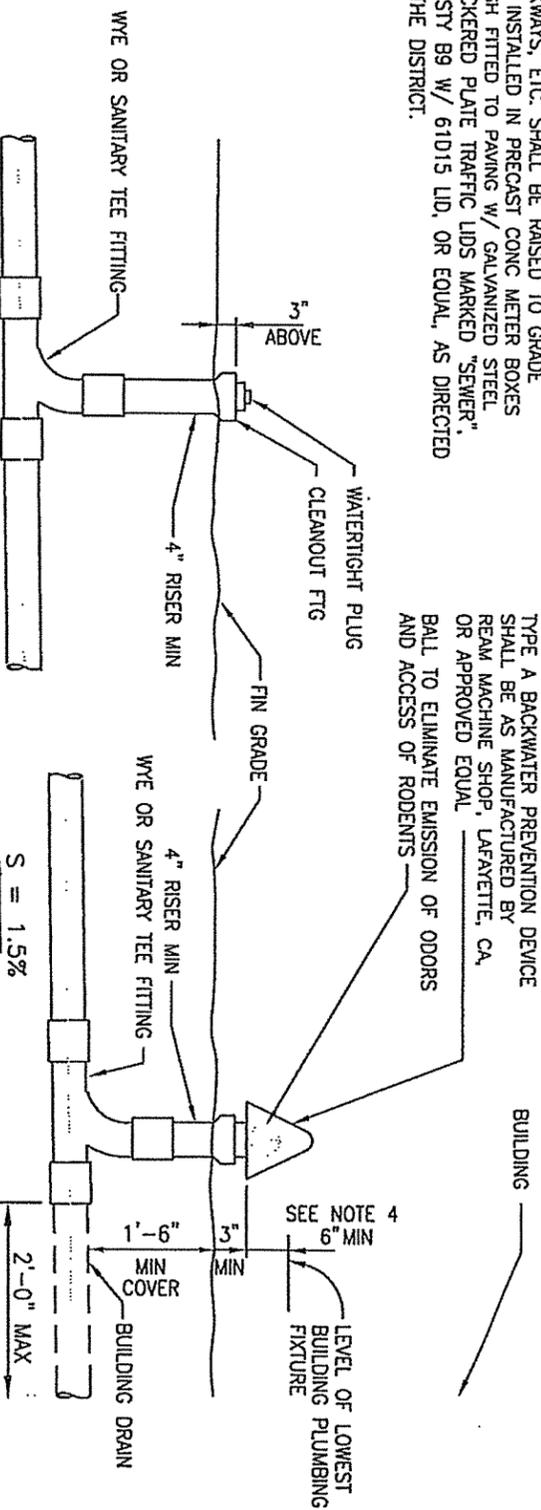
**Article IV, Section 414, BACKWATER PREVENTION DEVICES,
of the District's Sanitary Code provides:**

All Side Sewers for new construction shall be equipped with a District-approved backwater prevention device, a check valve or both as deemed appropriate by the District. Any existing Side Sewer that experiences a backup or flood out which occurs by reason of a blockage in the Public Sewer shall be similarly equipped with an approved backwater prevention device, check valve, or both as deemed appropriate by the District.

Furthermore, should the District make a determination, based upon, without limitation, observable property conditions, that installation of a backwater prevention device, check valve, or other device is warranted, such device shall be installed, pursuant to the provisions set forth below. In the event that the property owner, after written notice from the District, fails to install the appropriate device(s) within ninety (90) days of such notice, the District shall have the right to install the appropriate backwater prevention device(s) and bill the property owner for the cost thereof. If full payment is not made within sixty (60) days of the date of billing, the property owner shall be in violation of this ordinance, and the District shall have the right to place a lien upon the property or to disconnect the sewer facilities pursuant to Section 805.

If the property owner fails to install such devices after notice from the District and the District does not exercise its right to install the appropriate backwater prevention device(s), the District shall not be responsible for any injury or damage which results from a future backup or flood out.

CLEANOUTS LOCATED UNDER PAVED DRIVEWAYS, WALKWAYS, ETC. SHALL BE RAISED TO GRADE AND INSTALLED IN PRECAST CONC METER BOXES FLUSH FITTED TO PAVING W/ GALVANIZED STEEL CHECKERED PLATE TRAFFIC LIDS MARKED "SEWER", CHRISTY B9 W/ 61015 LID, OR EQUAL, AS DIRECTED BY THE DISTRICT.



STANDARD CLEANOUT

TYPE A BACKWATER PREVENTION DEVICE

NOTES:

1. A STANDARD 4" CLEANOUT IS THE MINIMUM DISTRICT REQUIREMENT.
2. A BACKWATER PREVENTION DEVICE IS REQUIRED AND SHALL BE INSTALLED ON ALL SIDE SEWERS.
3. A TYPE "A" BACKWATER PREVENTION DEVICE SHALL BE INSTALLED IN A LOCATION WHERE SEWAGE CAN OVERFLOW ON THE SURROUNDING AREA WITHOUT DAMAGE TO PROPERTY.
4. IF THE DIFFERENCE IN ELEVATION OF THE LOWEST FIXTURE AND THE TYPE "A" BACKWATER PREVENTION DEVICE IS LESS THAN SIX (6) INCHES, A BACKWATER CHECK VALVE SHALL BE INSTALLED AS SHOWN IN STANDARD DETAIL SD 7.

SANITARY DISTRICT No. 1 OF MARIN COUNTY	STANDARD CLEANOUT AND BACKWATER PREVENTION DEVICE
2009	SD 6

ATTN: CHIT MORIN

**TOWN OF FAIRFAX
DEPARTMENT OF PLANNING AND BUILDING SERVICES**

142 Bolinas Road, Fairfax, California 94930
Phone (415) 453-1584 FAX (415) 453-1618

LETTER OF TRANSMITTAL

From: Fairfax Planning and Building Services Department

Date: November 5, 2013

To: Town Engineer Fairfax Police Dept. Marin County Open Space Dist.
 Town Attorney Sanitary Dist. 1 Other – Building Official
 MMWD Public Works Dept.
 Ross Valley Fire Marin County Health Dept.

Address and Parcel No: 232 Hillside Drive; Assessor's Parcel No. 002-181-03

Project Description: Construction of a 1,418 square foot pool cabana/storage structure including a full bath, laundry closet, fire place and dressing room and a storage room for bikes and pool equipment and installation of a swimming pool requiring the excavation and fill of 480 cubic yards of material.

These plans are being transmitted for review either: a) prior to public hearings on discretionary permits before the Fairfax Design Review Board and Planning Commission; or, for review prior to issuance of a building permit. Please provide your comments on the completeness and adequacy of the submittal for your agencies reviewing purposes within 10 days.

1	10/26/13	Development plans dated 10/30/13 by Rich Rushton, pages A1.1, A2.5, A2.6, A2.7, A7.2, (original house submittal plans dated 10/31/13) 2.1, 4.2, 4.3, 4.4 and 12.4

REMARKS _____

There is also an existing detached residential second unit on this property for a total of 2 living units.

Please respond by November 22, 2013. Thanks

If you have any questions please contact: Linda Neal, Principal Planner

Or Morin

**TOWN OF FAIRFAX
DEPARTMENT OF PLANNING AND BUILDING SERVICES**

142 Bolinas Road, Fairfax, California 94930
Phone (415) 453-1584 FAX (415) 453-1618

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REMARKS NO COMMENTS AT THIS TIME

There is also an existing detached residential second unit on this property for a total of 2 living units.

Please respond by November 22, 2013. Thanks

If you have any questions please contact: Linda Neal, Principal Planner