



**CITY OF BELMONT
MEMORANDUM**

TO: Planning Commission

FROM: Rob D. Gill, Associate Planner

VIA: Carlos de Melo, Community Development Director

SUBJECT: September 4, 2012 Planning Commission Meeting – Agenda Item 5A
Application No. 2011-0055 – 49 Ralston Ranch Road
Single Family Design Review

SUMMARY

The applicant requests Single Family Design Review approval to construct a new 1,138 square foot single-family residence that is below the zoning district permitted 1,140 square feet for this site. At the May 1, 2012 meeting, the Planning Commission directed continuance of the application to allow the applicant to revise plans to address the concerns discussed on page 4.

RECOMMENDATION

Staff recommends that the Planning Commission **approve** the Single Family Design Review subject to the conditions of approval contained in the attached draft resolution¹.

PRIOR ACTIONS

The subject property consists of lot 115 and a portion of lot 116, originally established in 1927 as part of the Belmont Country Club Subdivision No. 10. At that time, the right-of-way fronting the subject site was delineated as Green Court.

Other key actions affecting the subject site are as follows:

- September 1995 – Hillside Roadway Improvement Plan & 20-lot subdivision approved showing Ralston Ranch Road as the new right-of-way fronting the subject property.

¹ Please note: This recommendation is made in advance of public testimony or Commission discussion of the project. At the public hearing, these two factors, in conjunction with the staff analysis, will be considered by the Commission in rendering a decision on the project.

- August 2001 – Zone Text Amendment adopted by the City Council removing the Floor Area Exception process (BZO Section 4.2.10) for all properties zoned HRO-1, HRO-2, and HRO-3, and requiring all exceptions to floor area standards be subject to the Variance provisions of Section 14.
- January 2003 – City Council adopts a Zone Text Amendment amending the HRO-2 Floor Area Ratio Table and creating a “sliding scale” minimum for lots at 31% - 45% and larger slope. The resulting action mandates a maximum permitted dwelling size for the subject site of 1,140 sq ft. (based upon the 33% slope of the property).
- September 2004 – The City Council adopts a Resolution approving a summary vacation of a portion of right-of-way directly adjacent to the subject site. The additional right-of-way area vacated expanded the lot to its current size.
- October 4, 2005 – A requested Floor Area Variance and Single Family Design Review was denied by the Planning Commission. On January 24, 2006, the City Council upheld the Planning Commission decision.

BACKGROUND

At the May 1, 2012 meeting, the Planning Commission directed staff to work with the applicant to make plan revisions to address the concerns/comments listed below:

- Site Modifications and Tree Removal
- Floor Plan Modifications
- Building Bulk

Revised project plans (see Attachment X, Plan Set dated (8/1/12) addressing the above issues were subsequently submitted for the dwelling and are summarized in the Discussion section below. A complete staff report was prepared for the 5/1/12 Planning Commission public hearing (see Attachment IX). All facts and information contained in that report remain the same with the exception of the Project Analysis and the Single Family Design Review Evaluation sections that have been modified to incorporate the project revisions that are included in this memo.

DISCUSSION

Site Plan Modification and Tree Removal

The applicant proposes to reduce the size of the rear attached deck (from 796 sq. ft. to 469 sq. ft. of deck area) and retain the protected size oak tree (#10) that was surveyed. The site plan has also been redesigned to include an accessible pathway (on-grade steps) from the front yard to the rear of the property. The liquidambar tree as shown on the landscape plan has also been changed from a 15-gallon size to a 24” box size.

Floor Plan Modifications

The floor plan has been redesigned to include a more functional interior design. The applicant proposes to increase the dwelling size (18 sq. ft.) to create a laundry area within the garage. Bedroom #1 has been shifted in line with the living room to create additional wall space in the living room area. The bathroom includes a privacy door. The roof over the rear deck that was accessed from the living room and bedroom #1 has been eliminated to help create more natural interior lighting.

Building Bulk

The project has been designed to address bulk issues. The rear deck has been reduced in size, and the deck roof off the living room and bedroom #1 has been eliminated. The elimination of the roof deck has also reduced the overall height of the dwelling (from 27' to approx. approximately 24').

PROJECT ANALYSIS

The proposed new two-story (one level of occupancy), 1,138 square foot single-family residence consists of the following:

Floor Plan

The 694 square foot living area consists of living and kitchen areas, two bedrooms, and one and half bathrooms. The project design includes a covered front entry porch and a rear deck which are both open in design and are not included in the floor area calculations. The residence also includes a 444 square foot two-car garage (20' x 20' interior dimension), a laundry area, and an understorey/crawl space area.

Dwelling Area Summary
Proposed Square Footage
Main Living Area: 690 Sq. Ft.
Garage/Laundry Area: 444 Sq. Ft.
Total for dwelling: 1,134 Sq. Ft.

Exterior Materials/Colors

The proposed dwelling would have a stucco exterior finish with tile roofing. Architectural design features include a wood framed and bay window design, arched stucco columns incorporated into the front entry, and wood railings enclosing the rear deck. The color palette is earth tones: dark gray for the stucco finish, and light gray for the window and door trim. The building colors and materials are illustrated on the attached sample sheet (See Attachment X).

Landscaping and Groundwork

The City Arborist surveyed thirteen mature trees within the project scope and prepared a report (dated February 28, 2012) (Attachment VII) that lists tree protection measures. The City requires mitigation plantings for removal of a protected tree at a 3:1 ratio using 15-gallon or 24-inch box size trees or an in-lieu fee. The applicant proposes to plant two 15-gallon size trees (Japanese maples) and one 24" box size tree (Liquidambar) as mitigation plantings for the removal of one protected size tree. In addition, the applicant shall be required to pay in-lieu fees for the removal of the other protected size tree as conditioned.

The applicant proposes a landscape plan for the site that will include new shrub plantings of five to one-gallon size, three trees planting (15-gallon size and 24" box size) and ground cover. Other exterior site improvements will consist of three-foot tall block walls, an on-grade walkway and steps, and a two-car driveway.

A large ground-based twig nest of dusky footed woodrat(s) was located between the trunks of oaks #6 and #7 (see tree location map in Arborist report). The dusky footed woodrat is considered a California species of special concern. A biologist report (prepared by Wood Biological Consulting, dated March 13, 2012) (Attachment VIII) was submitted by the applicant that addresses the site and construction boundaries and limitations.

Groundwork and Geotechnical Recommendations

Estimated earthwork quantities for the project include 62 cubic yards (CY) of cut and 62 CY of fill, resulting in a net of 0 CY of fill to be imported to the site. American Soil Testing, Inc. performed a geotechnical investigation (report dated November 21, 2011) for the subject site. The report was peer-reviewed by the City's Consulting Geologist, Cotton, Shires & Associates (CSA), in a letter dated January 17, 2012. A copy of the letters/peer review is included in Attachment VI. CSA has concluded that a residential structure is geotechnically feasible for the site with utilization of appropriate geotechnical design criteria. The City Geologist's recommendations for plan review and construction inspections are included in the conditions of project approval (Attachment III). Should the project be approved, the City Geologist will evaluate the proposed grading quantities and design layout in conjunction with the building permit submittal when the construction drawings, including those for the foundation, are available.

PROJECT DATA

Criteria	Existing	Proposed	Required or Max. Allowed
Lot Size	13,130 sq. ft.	No Change	No Change
Slope	33%	No Change	No Change
FAR	NA	0.087	0.087
Square Footage	NA	1,138 sq. ft.	1,140 sq. ft. max. per BZO 4.7.11(c)

Table continued from page 5

Criteria	Existing	Proposed	Required or Max. Allowed
Parking	NA	Two-car garage (20' x 20') Two uncovered	Two-car garage Two uncovered
Setbacks:			
Front (south)	NA	18 ft.	15 ft.
Side (right)	NA	28 ft.	7 ft.
Side (left)	NA	7 ft.	7 ft.
Rear (north)	NA	Approx. 57 ft.	15 ft.
Driveway length	NA	18 ft.	18 ft.
Height	NA	Approx. 24 ft.	28 ft.

GENERAL PLAN CONFORMANCE

The proposed new single-family residence does not change the intended land use of the site. The residence is in conformance with the Hillside Residential Open Space (HROP) general plan designation.

ZONING CONFORMANCE

1. The project plans indicate the proposed crawl space/understory area for the dwelling will include a floor to ceiling height of 6' 5". Thus, this crawl space/understory area will not result in additional floor area for the site¹.

A Condition of Approval has also been included requiring following:

During the course of construction, the crawl space/understory beneath the living area shall be subject to inspection by City's Building Department to ensure that this area has a floor to ceiling height less than 6'6".

2. Current Zoning Ordinance regulations require that no primary dwelling within a single family zoning district shall exceed 28-feet in height². The proposed dwelling (approx. 24-feet in height) complies with this section of the BZO.

¹2.60 FLOOR AREA, GROSS – "The sum of all finished and un-finished framed-in floor surfaces with an interior vertical height of six and one-half feet (6' 6") or more from floor to ceiling, capable of accommodating living space..."

² 4.2.5 HEIGHT (e) No dwelling or other primary structure shall have a height in excess of twenty-eight (28) feet.

A Condition of Approval has also been included requiring following:

Building plans shall be submitted that reflect that no part of the residence shall exceed the 28-foot height limit as measured from the finished grade to the uppermost point of the residence immediately above. A California licensed surveyor or civil engineer shall provide a wet-stamped certification that the home conforms with the 28-foot height limit prior to the roof diaphragm inspection.

The proposed new residence and site improvements meet all setbacks, height, FAR, and permitted use regulations of the HRO-2 zoning district.

NEIGHBORHOOD OUTREACH

The applicant performed neighborhood outreach as detailed in the Neighborhood Outreach Strategy and letter attached to this report. The property owner reported sending a letter with attached plans to all neighbors within 300 feet of the vacant property on March 22, 2012 informing them of the project and requesting any comments. The applicant has reported no objections to the project. Staff has not received any public comments, or letters from other Ralston Ranch property owners. The applicant appears to have achieved the outreach strategy tasks.

ENVIRONMENTAL CLEARANCE (CEQA)

The proposed new single-family home is categorically exempt from the provisions of the California Environmental Quality Act by provision of Section 15303, Class 3(a):

"Class 3 consists of construction and location of limited numbers of new, small facilities or structures... Examples of this exemption include but are not limited to:

(a) One single-family residence, or a second dwelling unit in a residential zone. In urbanized areas, up to three single-family residences may be constructed or converted under this exemption."

The proposed residence meets the above requirements for CEQA exemption.

SINGLE FAMILY DESIGN REVIEW EVALUATION

The Belmont Zoning Ordinance establishes the following findings for the review of single-family residential projects (Section 13A.5 (A-H)). Each finding is listed below with staff's analysis of whether this project meets each finding in the affirmative.

A. *The buildings and structures shown on the site plan are located to be consistent with the character of existing development on the site and in the neighborhood, as defined; minimize disruptions of existing public views; protect the profile of prominent ridgelines.*

The proposed new residence would be situated on the portion of the lot closest to the street and would be set back 18' from the street to provide the required driveway length. The low profile of the house from the street and side yard areas that meet or exceed required setbacks would not disrupt public views from Ralston Ranch Road. This finding can be made in the affirmative.

B. The overall site and building plans achieve an acceptable balance among the following factors:

- (1) building bulk*
- (2) grading, including*
 - (a) disturbed surface area and*
 - (b) total cubic yards, cut and fill*
- (3) hardscape, and*
- (4) tree removal*

Building bulk

The lot size, 13,130 square feet, is sufficient to support the proposed 1,138 square foot dwelling (maximum permitted size house is 1,140 square feet for this location). The residential structure has been designed with varying roof lines that help break up the bulk and mass of the two story structure. The architectural style of the residence is generally well designed to compliment the site and is compatible with adjoining developed properties. Architectural design features include arched stucco columns incorporated into the front entry, wood railings enclosing the rear deck, a wood framed and bay window design, tile roofing, a complimentary palette of earth tone colors, and an extensively landscaped front yard. The architectural details appear to moderate the building bulk and are appropriate for this structure and the neighborhood.

Grading/Hardscape

Estimated earthwork quantities for the project include 62 cubic yards (CY) of cut and 62 CY of fill, resulting in balanced grading program for the project. The driveway is not excessive in size and meets the minimal parking requirements for the site. The only other hardscape feature is a paved walkway to the front entrance. The hardscape elements do not appear to be excessive for development of a new single family home and are appropriate in the neighborhood context. Most of the site would remain in native vegetation.

Tree Removal

The City Arborist surveyed thirteen mature trees within the project scope. Two protected size trees (#1 and #9) are proposed for removal. The applicant has submitted a revised plan that would retain a protected size oak tree (#10) that was surveyed. As conditioned, the applicant shall be required to plant mitigation plantings for the loss/damage of the protected trees and pay an in- lieu fee to the City's tree fund.

All four factors (building bulk, grading, hardscape, and tree removal) appear to have been appropriately addressed in the building design and site/groundwork that result in breaking up the

vertical mass and lines of the structure, ensuring soil stability and suitable construction techniques, and limiting the hardscape. An overall balance appears to be achieved with the proposed design. This finding can be made in the affirmative.

C. *All accessways shown on the site plan and on the topographic map are arranged to provide safe vehicular and pedestrian access to all buildings and structures.*

The driveway is of adequate width, length and slope to provide a safe backup space and to park two cars. The front entrance is accessed by a level, paved walkway from the driveway that is safe for pedestrian usage. This finding can be made in the affirmative.

D. *All proposed grading and site preparation have been adequately reviewed to protect against site stability and ground movement hazards, erosion and flooding potential, and habitat and stream degradation.*

Estimated earthwork quantities for the project include 62 cubic yards (CY) of cut and 62 CY of fill, resulting in a balanced grading for the site. A Geotechnical Investigation, prepared by American Soil Testing, Inc. and reviewed by the City Geologist (Cotton, Shires & Associates), concludes that the proposed dwelling can be feasibly built on the site. The design will keep the front exterior walkway on grade and there will be no retaining walls over six feet in height. The reports do not contain any recommendations for reducing the site grading. Should the project be approved, the City Geologist will evaluate the proposed grading quantities and design layout in conjunction with the building permit submittal when the construction drawings, including those for the foundation, are available. This finding can be made in the affirmative.

E. *All accessory and support features, including driveway and parking surfaces, underfloor areas, retaining walls, utility services and other accessory structures are integrated into the overall project design.*

The driveway meets the BZO criteria for adequate backup space and parking for two cars. The front entrance is easily accessible from the proposed walkway on the level portion of the site. The site improvement features are well integrated into the overall project design. This finding can be made in the affirmative.

F. *The landscape plan incorporates:*

- (1) Native plants appropriate to the site's environmental setting and microclimate, and,*
- (2) Appropriate landscape screening of accessory and support structures, and,*
- (3) Replacement trees in sufficient quantity to comply with the standards of Section 25 (Trees) of the Belmont City Code.*

The site is currently covered in native grasses and with several protected/mature trees. The City Arborist surveyed thirteen mature trees within the project scope. Two protected size trees (#1 and #9) are proposed for removal. The applicant has submitted a revised plan that would retain a protected size oak tree (#10) that was surveyed. Tree protection measures as recommended by the

City Arborist have been included as part of the project conditions of approval. The new landscaping includes three additional trees (15-gallon and 24" box size), shrubs (1 and 5 gallon size), and ground cover plantings within the front and side yard areas. The rear lot area will remain in native vegetation. This finding can be made in the affirmative.

G. *Adequate measures have been developed for construction-related impacts, such as haul routes, material storage, erosion control, tree protection, waste recycling and disposal, and other potential hazards.*

Review of staging areas, recycling and disposal procedures and adequacy of erosion control measures will be reviewed by the Building Division as part of the structural plan check. The City Geologist has reviewed and approved the geotechnical recommendations for site construction and erosion control, and these recommendations are included in the conditions of project approval. All construction would be completed in compliance with the California Building Code and NPDES standards as administered by the City of Belmont. This finding can be made in the affirmative.

H. *Structural encroachments into the public right-of-way associated with the project comply with the standards of Section 22, Article 1 (Encroachments) of the Belmont City Code.*

Other than a standard driveway approach which requires Temporary Encroachment Permit approval as administered by the Public Works Department, the proposal includes no encroachments into the public right-of-way. This finding can be made in the affirmative.

CONCLUSION AND RECOMMENDATION

Based on the foregoing analysis, staff recommends approval of the Single Family Design Review application subject to the Conditions of Approval in Attachment III.

ACTION ALTERNATIVES

1. Continue the application for redesign.
2. Deny the Single-Family Design Review. The Commission will identify specific facts to support a denial, and a resolution would be returned to the Commission for final action.

ATTACHMENTS

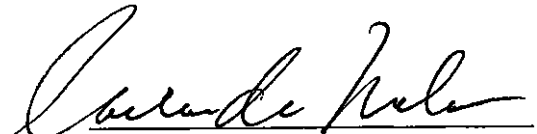
- I. 300/500 foot radius map of project site
- II. Resolution approving the Single Family Design Review
- III. Conditions of Approval
- IV. Neighborhood Outreach Materials
- V. Geotechnical Site Investigation, American Soil Testing, Inc., November 21, 2011 (Commission only)
- VI. Geotechnical Review, Cotton, Shires & Associates, January 17, 2012 (Commission only)

- VII. Arborist Report, February 28, 2012 (Commission only)
- VIII. Biologist Report, Wood Biological Consulting, March 13, 2012 (Commission only)
- IX. Staff Report (attachments deleted) dated 5/1/12 (Commission only)
- X. Applicant's plans & materials board Commission only)

Respectfully submitted,



Rob D. Gill
Associate Planner



Carlos de Melo
Community Development Director

CC: Applicant/Owner

RESOLUTION NO. 2012-

RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF BELMONT APPROVING
A SINGLE FAMILY DESIGN REVIEW
AT 49 RALSTON RANCH ROAD (APPL. NO. 2011-0055)

WHEREAS, Slim Lu, owner/applicant, requests Single Family Design Review approval to construct a new 1,138 square foot single-family residence for the site; and,

WHEREAS, public hearings were duly noticed, held, and closed on May 1, 2012 and September 4, 2012; and,

WHEREAS, the Planning Commission hereby adopts the staff report dated September 4, 2012 and the facts contained therein as its own findings of facts; and,

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission approves the Single Family Design Review to construct a new 1,138 square foot single-family residence at 49 Ralston Ranch Road, subject to the conditions in Exhibit "A", upon finding that:

Environmental Review

The project is categorically exempt pursuant to the California Environmental Quality Act, Section 15301, Class 1 (e) (1):

"Additions to existing structures provided that the addition will not result in an increase of more than:

- (1) 50 percent of the floor area of the structures before the addition, or 2,500 square feet, whichever is less...;

Residential Design Review

The required Single Family Design Review Findings, Section 13A.5 (A-H), are made in the affirmative as follows:

- A. *The buildings and structures shown on the site plan are located to be consistent with the character of existing development on the site and in the neighborhood, as defined; minimize disruptions of existing public views; protect the profile of prominent ridgelines.*

The proposed new residence would be situated on the portion of the lot closest to the street and would be set back 18' from the street to provide the required driveway length. The low profile of the house from the street and side yard areas that meet or exceed required setbacks would not disrupt public views from Ralston Ranch Road. This finding is affirmed.

- B. *The overall site and building plans achieve an acceptable balance among the following factors:*
- (1) *building bulk*
 - (2) *grading, including*
 - (a) *disturbed surface area and*
 - (b) *total cubic yards, cut and fill*
 - (3) *hardscape, and*
 - (4) *tree removal*

Building bulk

The lot size, 13,130 square feet, is sufficient to support the proposed 1,138 square foot dwelling (maximum permitted size house is 1,140 square feet for this location). The residential structure has been designed with varying roof lines that help break up the bulk and mass of the two story structure. The architectural style of the residence is generally well designed to compliment the site and is compatible with adjoining developed properties. Architectural design features include arched stucco columns incorporated into the front entry, wood railings enclosing the rear deck, a wood framed and bay window design, tile roofing, a complimentary palette of earth tone colors, and an extensively landscaped front yard. The architectural details appear to moderate the building bulk and are appropriate for this structure and the neighborhood.

Grading/Hardscape

Estimated earthwork quantities for the project include 62 cubic yards (CY) of cut and 62 CY of fill, resulting in balanced grading program for the project. The driveway is not excessive in size and meets the minimal parking requirements for the site. The only other hardscape feature is a paved walkway to the front entrance. The hardscape elements do not appear to be excessive for development of a new single family home and are appropriate in the neighborhood context. Most of the site would remain in native vegetation.

Tree Removal

The City Arborist surveyed thirteen mature trees within the project scope. Two protected size trees (#1 and #9) are proposed for removal. The applicant has submitted a revised plan that would retain a protected size oak tree (#10) that was surveyed. As conditioned, the applicant shall be required to plant mitigation plantings for the loss/damage of the protected trees and pay an in- lieu fee to the City's tree fund.

All four factors (building bulk, grading, hardscape, and tree removal) appear to have been appropriately addressed in the building design and site/groundwork that result in breaking up the vertical mass and lines of the structure, ensuring soil stability and suitable construction techniques, and limiting the hardscape. An overall balance appears to be achieved with the proposed design. This finding is affirmed.

- C. *All accessways shown on the site plan and on the topographic map are arranged to provide safe vehicular and pedestrian access to all buildings and structures.*

The driveway is of adequate width, length and slope to provide a safe backup space and to park two cars. The front entrance is accessed by a level, paved walkway from the driveway that is safe for pedestrian usage. This finding is affirmed.

- D. *All proposed grading and site preparation have been adequately reviewed to protect against site stability and ground movement hazards, erosion and flooding potential, and habitat and stream degradation.*

Estimated earthwork quantities for the project include 62 cubic yards (CY) of cut and 62 CY of fill, resulting in a balanced grading for the site. A Geotechnical Investigation, prepared by American Soil Testing, Inc. and reviewed by the City Geologist (Cotton, Shires & Associates), concludes that the proposed dwelling can be feasibly built on the site. The design will keep the front exterior walkway on grade and there will be no retaining walls over six feet in height. The reports do not contain any recommendations for reducing the site grading. Should the project be approved, the City Geologist will evaluate the proposed grading quantities and design layout in conjunction with the building permit submittal when the construction drawings, including those for the foundation, are available. This finding is affirmed.

- E. *All accessory and support features, including driveway and parking surfaces, underfloor areas, retaining walls, utility services and other accessory structures are integrated into the overall project design.*

The driveway meets the BZO criteria for adequate backup space and parking for two cars. The front entrance is easily accessible from the proposed walkway on the level portion of the site. The site improvement features are well integrated into the overall project design. This finding is affirmed.

- F. *The landscape plan incorporates:*

- (1) Native plants appropriate to the site's environmental setting and microclimate, and,*
- (2) Appropriate landscape screening of accessory and support structures, and,*
- (3) Replacement trees in sufficient quantity to comply with the standards of Section 25 (Trees) of the Belmont City Code.*

The site is currently covered in native grasses and with several protected/mature trees. The City Arborist surveyed thirteen mature trees within the project scope. Two protected size trees (#1 and #9) are proposed for removal. The applicant has submitted a revised plan that would retain a protected size oak tree (#10) that was surveyed. Tree protection measures as recommended by the City Arborist have been included as part of the project conditions of approval. The new landscaping includes three additional trees (15-gallon and 24" box size), shrubs (1 and 5 gallon size), and ground cover plantings

within the front and side yard areas. The rear lot area will remain in native vegetation. This finding is affirmed.

G. *Adequate measures have been developed for construction-related impacts, such as haul routes, material storage, erosion control, tree protection, waste recycling and disposal, and other potential hazards.*

Review of staging areas, recycling and disposal procedures and adequacy of erosion control measures will be reviewed by the Building Division as part of the structural plan check. The City Geologist has reviewed and approved the geotechnical recommendations for site construction and erosion control, and these recommendations are included in the conditions of project approval. All construction would be completed in compliance with the California Building Code and NPDES standards as administered by the City of Belmont. This finding is affirmed.

H. *Structural encroachments into the public right-of-way associated with the project comply with the standards of Section 22, Article 1 (Encroachments) of the Belmont City Code.*

Other than a standard driveway approach which requires Temporary Encroachment Permit approval as administered by the Public Works Department, the proposal includes no encroachments into the public right-of-way. This finding is affirmed.

* * * * *

Passed and adopted at a regular meeting of the Planning Commission of the City of Belmont held on September 4, 2012 by the following vote:

AYES,
COMMISSIONERS: _____

NOES,
COMMISSIONERS: _____

ABSENT,
COMMISSIONERS: _____

ABSTAIN,
COMMISSIONERS: _____

RECUSED,
COMMISSIONERS: _____

Carlos de Melo
Planning Commission Secretary

EXHIBIT "A"

CONDITIONS OF PROJECT APPROVAL
SINGLE FAMILY DESIGN REVIEW
49 RALSTON RANCH ROAD (2011-0055)

- I. COMPLY WITH THE FOLLOWING CONDITIONS OF THE COMMUNITY DEVELOPMENT DEPARTMENT:
 - A. The following conditions shall be shown on plans submitted for a building permit and/or site development permit or otherwise met prior to issuance of the first building permit (i.e., foundation permit) and shall be completed and/or installed prior to occupancy and remain in place at all times that the use occupies the premises except as otherwise specified in the conditions:

Planning Division

1. Plans submitted for building permit and all construction shall conform to the plans on file in the Planning Division for Appl. No. 2011-0007, date stamped 8/1/12. The Director of Community Development may approve minor modifications to the plans.
2. All construction and related activities which require a City building permit shall be allowed only during the hours of 8:00 a.m. to 5:00 p.m. Monday through Friday, and 10:00 a.m. to 5:00 p.m. on Saturdays. No construction activity or related activities shall be allowed outside of the aforementioned hours or on Sundays and the following holidays: New Year's Day, President's Day, Memorial Day, 4th of July, Labor Day, Thanksgiving Day and Christmas Day. All gasoline powered construction equipment shall be equipped with an operating muffler or baffling system as originally provided by the manufacturer, and no modification to these systems is permitted.
3. Prior to issuance of building permits, the property owners shall file with the Director of Community Development, on forms provided by the City, an acknowledgment that they have read, understand and agree to these conditions of approval.
4. In accordance with the Belmont Zoning Ordinance, the permit(s) granted by this approval shall expire one (1) year from the date of approval, with said approval date indicated on the accompanying Planning Commission resolution. Any request for extension of the expiration date shall be made in accordance with the applicable provisions of the Belmont Zoning Ordinance.
5. In the event that this approval is challenged by a third party, the property owners and all assignees will be responsible for defending against this challenge, and agree to accept responsibility for defense at the request of the City. The property owners and all assignees agree to defend, indemnify and hold harmless the City of Belmont and all officials, staff, consultants and agents from any costs, claims or liabilities arising from the approval, including without limitation, any award of attorneys fees that might result from the third party challenge.

6. The project is subject to Public Works Department and City Geologist review and approval with the following conditions:

- Geotechnical Plan Review – The Project Geotechnical Consultant shall review and approve all geotechnical aspects of the project building and grading plans (i.e., site preparation and grading, site drainage improvements and design parameters for foundations, retaining walls and driveway) to ensure that their recommendations have been properly incorporated. The consultant should specifically evaluate geotechnical design aspects of the proposed storm drain infiltration structures including placement and potential for adverse slope stability impacts. Any appropriate geotechnical design revisions should be recommended.

The results of these inspections and the as-built conditions of the project should be described by the geotechnical consultant in a letter and submitted to the City Engineer for review prior to final (granting of occupancy) project approval.

Appropriate documentation to address the above should be summarized by the geotechnical consultant in a letter and submitted to the City along with other documentation for building plan-check.

Geotechnical Construction Inspection – The geotechnical consultant should inspect, test (as needed), and approve all geotechnical aspects of the project construction. The inspections should include, but not necessarily be limited to: site preparation and grading, site surface and subsurface drainage improvements, and excavations for foundations and retaining walls prior to the placement of steel and concrete. The consultant should inspect final complete site drainage improvements to verify geotechnical acceptance.

The results of these inspections and the as-built conditions of the project should be described by the geotechnical consultant in a letter and submitted to the City Engineer for review prior to final (granting of occupancy) project approval.

7. The project is subject to Community Development Department and Consulting City Arborist (CCA) review and approval with the following conditions regarding tree removal, tree retention measures, tree protection fencing and irrigation. The following detailed recommendations must be included as “tree protection notes” in the final stamped building set of plans.

(a) TREE PROTECTION FENCING:

- (i) Install chain link fence per locations determined during the pre-construction meeting around all trees being retained, ideally at or uphill from the canopy driplines as shown on the tree location map in the City Arborist report. Fencing material used for all protective fences must be steel chain-link, at least five-feet in height, mounted on two-inch diameter galvanized iron posts

6-feet in length, driven a minimum of 24-inches into the ground. Posts for post and hook fencing must be mounted no wider than six-feet apart. This fence must be erected prior to any heavy machinery traffic or construction material arrival on site.

- (ii) Silt fences with built-in stakes (e.g. TENAX) shall be installed per the package directions for the TPZ fencing to be installed on the uphill side of the fence to prevent materials migration downhill during construction. Straw wattles shall be installed along the bottom edge of the silt fence with wood stakes into the wattles to secure them at the base of the silt fence for added protection for the TPZ root preservation areas.
 - (iii) Compliance inspections will occur (1) at the time of fence erection (2) approximately once monthly during grading and construction, and (3) after construction is complete. All fencing must remain in place until all construction is completed and the fencing and other protection has been received a final signoff letter from the city arborist. Permit approval will not occur until after the first inspection has been performed and the protection measures are approved by the city arborist.
 - (iv) The protective fencing must not be temporarily moved during construction. No materials, tools, excavated soil, liquids, substances, etc. are to be placed or dumped, even temporarily, inside the TPZ/CRZ.
 - (v) The TPZ fencing shall have one sign affixed with UV resistant zip ties to the chain link at eye level for every 15-linear feet of fencing, minimum 8”X11” size each, plastic laminated or otherwise waterproofed, stating: TREE PROTECTION FENCE DO NOT ALTER OR REMOVE CALL CITY ARBORIST 48-HRS ADVANCE (650) 697-0990.
- (b) TRUNK BUFFER:
- (i) Trees #2, 3, & 4 shall be supplied with trunk buffers covering the exposed lower trunks between grade elevation and approximately 8 feet above grade (or the lowest scaffold limbs). The buffer shall consist of orange plastic wrapped approximately 20 times to create a layer 2 inches thick (a single large tree uses up to 1 or 1.5 rolls of orange plastic fencing material). Place 2X4 wood boards over the buffer, standing up side by side around the entire trunk circumference. Secure with duct tape or rope, or continue wrapping orange plastic over the wood boards and affix with UV resistant zip-ties. Do not use wires. See spec photo in Arborist report.

(c) PRUNING:

- (i) Any pre-project pruning of trees on or adjacent to the subject property, such as clearance pruning shall be performed only by or under direct site supervision of an ISA Certified Arborist, and shall conform to the most recent edition of ANSI A300 Part I: Tree, Shrub, and Other Woody Plant Maintenance, Standard Practices, Pruning.

(d) ROOT PRUNING:

- (i) If any woody roots measuring 1 inch diameter or greater are encountered during site work such as retaining wall excavation or pier drilling near trees being retained, stop site plan work and call a qualified tree care contractor to prune roots at right angles to the root growth direction, using sharp tools such as an A/C powered Sawzall, lopper, professional pruning saw, etc. If roots are required to be left exposed for more than 24 hours, then cover with 6 layers of wet, muddy burlap. If possible, cover the root(s) completely with existing site soil and irrigate thoroughly to saturate. Cover the soil with wood chip mulch. See spec photo in Arborist report. Call the CCA at cell 415-203-0990 immediately upon encountering the roots (prior to pruning) so that digital images of the root locations, depths, and densities can be archived.

(e) WOOD CHIP MULCH:

- (i) Spread out an even 4 inch thick layer of chipper truck type natural wood chips (available from Lyngso in Redwood City) over the entire TPZ areas of trees #2, 3, 4, and 10. The wood chips shall cover the entire area from 2 feet out from trunk, to the TPZ fencelines. See spec photo in Arborist report.

(f) TEMPORARY IRRIGATION:

- (i) Use a temporary water source such as a neighbor's hose bib attached to a soaker hose (see image above right) or a tow-behind water tank (see image below right), to supply irrigation to the wood chip mulched areas of trees #2, 3, 4, and possibly #10. The CCA will check soil moisture using a Lincoln probe on a once monthly basis to determine if relative soil moisture levels are adequate for proper cultural care of various individual site trees. Irrigation adjustments may be required depending on these monthly probe readings. Typical irrigation for temporary watering of trees being retained is +/- 100 to 200 gallons per tree, 1x/month or 2x/month.
- (ii) The general contractor shall keep an irrigation log book on site as a record available for the City Arborist to view upon entering the site for random unannounced inspections. The log book shall indicate date of each watering

event, and note tree tag numbers irrigated, along with roughly estimated volumes of water applied to each tree.

(g) **SITE PLAN ADJUSTMENTS:**

- (i) Relocate the proposed storm drain infiltration trenches such that they are outside the canopy driplines of all trees being retained as shown on the tree location map in the City Arborist report. This may mean that the trenches end up being tightlined against the north corners of the proposed residence.
- (ii) Relocate irrigation main line pipe trenching such that there is a separation of at least 15 linear feet between trees #2 & 3 and the work.

(h) **TREE REMOVAL / MITIGATION FEES:**

- (i) The applicant shall pay tree removal fees of \$4,968 (removal of tree(s) #1 & 9) as noted in the Arborist addendum (dated 2/28/12). Payment can be made at the Permit Center where building staff will route all fees to the Parks Department's Tree Planting and Establishment Fund.
- (ii) The applicant shall pay in- lieu fee fees of \$2,982 (in-lieu fees for six (6) required mitigation plantings which will not be installed). Payment can be made at the Permit Center where building staff will route all fees to the Parks Department's Tree Planting and Establishment Fund.
- (iii) A bond of \$ 13,661 shall be posted with City to hedge against damage to or death of potentially impacted trees to tress #2, 3, 4 and 10 in close proximity to proposed work.

(i) **ARBORIST INSPECTIONS & FEES:**

- (i) The applicant shall pay a tree inspection fee of \$1,950 at the Permit Center, payable to the City of Belmont prior to permit issuance and prior to the initial tree protection inspection meeting on site to cover inspections and signoff letters by the city arborist throughout the life of the project (\$1,500 arborist fee plus 30% City mandated administration fee).
- (ii) After the City permits are approved but before beginning construction, the Project Team shall hold a preconstruction conference with Contract City Arborist and other interested parties.

8. The project is subject to the following condition listed in the Biologist Report prepared by Wood Biological Consultants:
 - To insure the woodrat nest is not impacted during construction, a short section of orange construction fencing (20-feet long) or equivalent shall be erected on the uphill side of the nest approximately 10-feet away.
9. During the course of construction, the understory beneath the living area shall be subject to inspection by City's Building Department to ensure that this area has a floor to ceiling height less than 6'6".
10. Building plans shall be submitted that reflect that no part of the residence shall exceed the 28-foot height limit as measured from the finished grade to the uppermost point of the residence immediately above. A California licensed surveyor or civil engineer shall provide a wet-stamped certification that the home conforms with the 28-foot height limit prior to the roof diaphragm inspection.

Building Division

1. The City of Belmont Municipal Code requires a soils and engineering geology report for all new or substantially altered foundations. Provide such a report and a letter from the geotechnical engineer confirming that the foundation plan has been reviewed and that it has been determined that the recommendations in the soils report are properly incorporated into the plans. BMC 7-12, IBC 106.1 & 1804.3.
2. Prior to the issuance of a building permit, the applicant shall submit a record of survey.
3. This project is subject to the School Facilities Fee. Proof of payment must be presented to the City of Belmont before the permit will be issued. Contact the Sequoia Union School District directly for further information (Sequoia Union School District, Maintenance & Operation, 480 James, Avenue, Redwood City, CA 94062 650.369.1411 ext. 2290 or 2203. www.seq.org).
4. This project is subject to the requirements of the Green Building Ordinance. Based on the scope of work, the project is required to achieve a compliance level 70 Build it Green points using the New Home Checklist.
5. Pursuant to the Belmont Fire Department Ordinance #2006-21, Section 1003.2.9.2(A), the building will receive a fire sprinkler system and the plan will be a deferred submittal.
6. Pursuant to Regulation 6, Rule 3 per the Bay Area Air Quality Management District, effective January 1, 2009, no person or builder shall commence construction of a new building or structure permitted to contain or containing a wood-burning device or install a new wood-burning device resulting from a remodel unless the device meets the

requirements of Section 6-3-303. Any gas fueled heating device or electric-powered heating device is allowed under this standard.

7. The City of Belmont is located in a region once inhabited by Native Americans. A significant archaeological site has been formally identified at the Northeast quadrant of the City. Human remains and artifacts have been discovered elsewhere within the city limits. Consequently, please amend the cover sheet of the plans to state in the event human remains are discovered work will be stopped and the County Coroner will be contacted immediately. In addition, it is a violation of Public Resources Code 5097.99 to retain any Native American Artifacts. Health and Safety Code 7050.5.
 8. All retaining walls shall be required to be engineered meet the California Building Code Standards.
 9. The applicant/owner shall specify on the plan that the 2006 IBC, 2006 UPC, 2006 UMC and 2005 NEC as amended by the State of California and all applicable City of Belmont ordinances will be employed during this project.
 10. The applicant/owner shall investigate opportunities for salvaging material for reuse.
 11. The contractor/property owner shall provide space on the subject property for recycling containers.
 12. The applicant/owner shall be responsible to notify all contractors and subcontractors of the City of Belmont expectations of maximizing diversion of solid waste.
 13. The applicant/owner shall require all contractors and subcontractors to make a good faith effort to contact a construction and demolition provider.
 14. The contractor/property owner shall post hours of operation and phone numbers for noise complaints.
- II. COMPLY WITH THE FOLLOWING CONDITIONS OF THE PUBLIC WORKS DEPARTMENT:
- A. The following conditions shall be shown on plans submitted for a building permit and/or site development permit or otherwise met prior to issuance of the first building permit (i.e., foundation permit) and shall be completed and/or installed prior to occupancy and remain in place at all times that the use occupies the premises except as otherwise specified in the conditions.
 1. Streets, sidewalks and curbs in need of repair within and bordering the project shall be repaired and/or removed and replaced in accordance with the Department of Public Works approved standards. Photographs or video of before condition are recommended.

2. New curb and gutter shall be installed in accordance with the Department of Public Works approved standards.
 3. A residential driveway approach shall be installed in accordance with Department of Public Works approved standards.
 4. Roof leaders and site drainage shall be directed to the City stormwater drainage system. A dissipator box or other energy reduction method shall be used.
 5. Roof downspout systems shall be designed to drain into designated, effective infiltration areas or structures (refer to the Bay Area Stormwater Management Agencies Association (BASMAA) Start at the Source Design Guidance Manual for Stormwater Quality Protection [available from BASMAA @ 510-622-2465]).
 6. The owner/applicant shall pay planned drainage fees in accordance with City ordinances.
- B. The following conditions shall be met prior to the issuance of the first building permit (i.e., foundation permit) and/or site development permits except as otherwise specified in the conditions.
1. The property owner/applicant shall apply for and obtain temporary encroachment permits from the Department of Public Works for work in the City public right-of-way, easements or property in which the City holds an interest, including driveway, sidewalk, sewer connections, sewer clean-outs, curb drains, storm drain connections, placement of a debris box.
 2. The property owner/applicant shall apply for and obtain a permanent encroachment agreement from the Department of Public Works, with approval by the City Council, for a structure, retaining wall, awning, or other features constructed in the public right-of-way, easement or on property in which the City holds an interest.
 3. Property owner/applicant shall apply for and obtain a grading permit from the Department of Public Works. The grading permit fee is based on the total amount of earth moved including cut and fill.
 4. Verify location of utility meters, valves, back flow preventers, and hydrants with appropriate utility company. Show relationship of each to site improvements, such as retaining walls.
 5. The owner/applicant shall submit a grading plan prepared by a California-registered Civil Engineer in accordance with City Grading Ordinance, Chapter 9, Section 3 of the City Code, with a grading permit application, for approval by the Department of Public Works and Building Division prior to any grading or clearing being performed on-site.
 - a) The applicant should note that if the proposed grading meets one or more of the criteria outlined in Section 9-23 of the City Code, a Planning Commission review will be required. Caution: If the total grading quantity changes after Planning Commission approval, a new grading approval may be required. The applicant may choose to complete the grading plan and calculations early in the planning process to

limit delays in scheduling this review. (See Section 9-28 of City Code for review process). The plan shall incorporate the following restrictions:

- b) All soils stockpiled on the site during construction shall be covered or otherwise protected from wind and water erosion.
 - c) During construction, erosion and sedimentation control plans shall be implemented in order to retain sediments on-site.
 - d) Site grading and finished construction shall be designed and executed in such a manner as to avoid diverting runoff onto other properties.
 - e) Restrictions and recommendation of the Geologic and Soils report as approved by the City's Geologist.
6. Applicant shall revise and resubmit the grading plan prior to issuance of the Grading and Building permits. This plan shall indicate grading calculations and conform to the requirements described in the City Grading Ordinance, Chapter 9, Section 3 of the Belmont Municipal Code. The grading plan shall include requirements included in the soil and foundation investigation report prepared by American Soil Testing, Inc.
 7. The owner/applicant shall submit a dust control plan for approval by the Department of Public Works. To reduce dust levels, exposed earth surfaces shall be watered as necessary. The application of water shall be monitored to prevent runoff into the storm drain system. Spillage resulting from hauling operations along or across any public or private property shall be removed immediately. Dust nuisances originating from the contractor's operations, either inside or outside of the right-of-way shall be controlled.
 8. A written report prepared by a Geotechnical Engineer shall be submitted in accordance with Section 9-36 of the City Code.
 9. The proposed development may add or replace the impervious surface area of the property. The applicant shall provide calculations showing the total impervious area of the completed project with the building permit application. Calculations shall be submitted to the Department of Public Works for review and approval.
 10. A written report prepared by a Geotechnical Engineer shall be submitted in accordance with Section 9-36 of the City Code.
 11. The owner/applicant shall perform a video inspection of the sewer lateral from the house/building to the sewer main, submit the inspection to the Department of Public Works for review and make any necessary repairs to the lateral.
 12. Applicant shall install the sanitary sewer connection in accordance with Department of Public Works approved standards and pay the applicable sewer connection fee.
 13. Sanitary sewer to include a back flow prevention device.
 14. If PG&E is requiring the developer to put in the gas and/or electrical connection, then the developer must submit plans for the encroachment to the Department to Public Works.
 15. The applicant shall submit an erosion and sedimentation control plan describing Best Management Practices (BMPs) to be used to prevent soil, dirt, and debris from entering the

storm drain system. The plan shall include the following items: All landscaping shall be maintained and shall be designed with efficient irrigation systems to reduce runoff, promote surface filtration, and minimize the use of fertilizers, herbicides and pesticides.

- a) A site plan showing the property lines, existing and proposed topography, and slopes; areas to be disturbed, locations of cut/fill and soil storage/disposal area; areas with existing vegetation to be protected; existing and proposed drainage patterns and structures; watercourses or sensitive areas on-site or immediately downstream of project; and designated construction access routes, staging areas and washout areas.
 - b) Erosion and sediment controls to be used during construction, selected as appropriate from the California Regional Water Quality Control Board, San Francisco Bay Region Erosion and Sedimentation Control Field Manual (available from: Friends of the San Francisco Estuary, P.O. Box 791, Oakland, CA 94604-0791).
 - c) Methods and procedures to stabilize denuded areas and install and maintain temporary erosion and sediment control continuously until permanent erosion controls have been established.
 - d) Provision for preventing erosion and trapping sediment on-site, such as sediment basins or traps, earthen dikes or berms, fiber rolls, silt fence, check dams, storm drain inlet protection, soil blankets or mats, covers for soil stock piles and/or other measures.
 - e) Provisions for installing vegetative cover in disturbed areas, including areas to be seeded, planted, and/or mulched, and types of vegetation proposed.
 - f) Provision for diverting on-site runoff around exposed areas and diverting off-site runoff around the project site (e.g., swales and dikes).
 - g) Notes, specifications, and/or attachments describing the construction, operation and maintenance of erosion and sediment control measures, including inspection frequency; methods and schedule for grading, excavation, filling clearing of vegetation and storage and disposal of excavated or cleared material; types of vegetative cover and mulch, including methods and schedules for planting and fertilization; and provisions for temporary and permanent irrigation.
16. All landscaping shall be maintained and shall be designed with efficient irrigation systems to reduce runoff, promote surface filtration, and minimize the use of fertilizers, herbicides and pesticides.
17. The proposed development may add or replace the impervious surface area of the property. The applicant shall provide calculations showing the total impervious area of the completed project with the building permit application. Calculations shall be submitted to the Department of Public Works for review and approval.
- C. The following conditions shall be met prior to occupancy except as otherwise specified in the conditions.
1. The owner/applicant shall ensure that applicable Best Management Practices (BMPs) from the San Mateo Stormwater Pollution Prevention Program (STOPPP) are followed to prevent discharge of soil or any construction material into the gutter, stormdrain system or creek.

2. The property owner/applicant shall apply for and obtain an administrative permanent encroachment agreement from the Department of Public Works, for placement of non-standard materials (i.e., brick pavers) within the public right-of-way
3. Grading shall be performed in accordance with the City Grading Ordinance, Chapter 9 of the City Code. Soil or other construction materials shall not be stockpiled in the public right-of-way unless an encroachment permit is obtained from the Department of Public Works. Grading shall neither be initiated nor continued between November 15 and April 15. Grading shall be done between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday unless otherwise specifically authorized by the Director of Public Works. The Stormwater Pollution Prevention Program Best Management Practices (BMPs) for construction shall be implemented to protect water quality.
4. The owner/applicant shall ensure that applicable Best Management Practices (BMPs) from the San Mateo Stormwater Pollution Prevention Program (STOPPP) are followed to prevent discharge of soil or any construction material into the gutter, stormdrain system or creek.
5. The owner/applicant shall ensure that all construction personnel follow standard BMPs for stormwater quality protection during construction of project. These includes, but are not limited to, the following:
 - a) Store, handle and dispose of construction materials and wastes properly, so as to prevent their contact with stormwater.
 - b) Control and prevent the discharge of all potential pollutants, including solid wastes, paints, concrete, petroleum products, chemicals, washwater or sediment, and non-stormwater discharges to storm drains and watercourses.
 - c) Use sediment controls, filtration, or settling to remove sediment from dewatering effluent.
 - d) Do not clean, fuel, or maintain vehicles on-site, except in a designated area in which runoff is contained and treated.
 - e) Delineate clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses with field markers or fencing.
 - f) Protect adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching or other measures as appropriate.
 - g) Perform clearing and earth moving activities only during dry weather (April 15 through November 14).
 - h) Limit and time applications of pesticides and fertilizers to prevent polluted runoff.
 - i) Limit construction access routes and stabilize designated access points.
 - j) Do not track dirt or other materials off-site; clean off-site paved areas and sidewalks using dry sweeping methods.

6. If construction is not complete by the start of the wet season (November 15 through April 15), prior to November 15 the developer shall implement a winterization program to minimize the potential for erosion and sedimentation. As appropriate to the site and status of construction, winterization requirements shall include inspecting/maintaining/cleaning all soil erosion and sedimentation controls prior to, during, and immediately after each storm event; stabilizing disturbed soils through temporary or permanent seeding, mulching, matting, tarping or other physical means; rocking unpaved vehicle access to limit dispersion of mud onto public right-of-way; covering/tarping stored construction materials, fuels, and other chemicals. Plans to include proposed measures to prevent erosion and polluted runoff from all site conditions. As site conditions warrant, the Department of Public Works may direct the developer to implement additional winterization requirements.
7. After the City permits are approved but before beginning construction, the owner/applicant shall hold a preconstruction conference with Building and Public Works Department staff and other interested parties. The developer shall arrange for the attendance of the construction manager, contractor, and all subcontractors.
8. Failure to comply with any permit condition may result in a “Stop Work” order or other penalty.

III. COMPLY WITH THE FOLLOWING CONDITIONS OF THE BELMONT FIRE DEPARTMENT:

1. An approved automatic fire sprinkler system meeting the current ordinance requirements of the Belmont Fire Department shall be provided.
2. Address numbers shall be illuminated and visible on all new and existing buildings. Rear addressing is/may also be required. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabet letters. Numbers shall be a minimum of 4 inches (102mm) high with a minimum stroke width of 0.5 inch (12.7mm).

IV. COMPLY WITH THE FOLLOWING CONDITIONS OF THE POLICE DEPARTMENT:

1. All activities shall be subject to the requirements of the Belmont Noise Ordinance
2. No debris boxes or building materials shall be stored on the street.
3. Flag persons shall be positioned at both ends of blocked traffic lanes.
4. 24-hour written notice to the Police Department is required before any lane closure.

Certification of Approved Final Conditions:

Rob D. Gill, Associate Planner

Date



NEIGHBORHOOD OUTREACH STRATEGY

Belmont Permit Center APPLICANT'S GUIDE AND FORM

I. INTRODUCTION

The City of Belmont is committed to an open process of development review, and requires that applicants take a proactive approach to neighborhood outreach. Therefore, every development request which is decided by the Planning Commission or City Council in a public hearing must include a Neighborhood Outreach Strategy, submitted with the application. The strategy must include your proposal for contacting your neighbors, informing them of your proposed project and receiving their feedback in advance of the City's review. This form is provided to assist you in preparing your Neighborhood Outreach Strategy

II. OUTREACH STRATEGY

In order to provide an effective Neighborhood Outreach Strategy, you must address these issues:

- A. *Contacting Your Neighbors* – Since you will be providing the City with labels for all property owners and tenants within 300 feet of your property, it is strongly suggested that you notify these same people of your neighborhood outreach efforts. You can mail your own notices to them, post bulletins, make telephone calls or go door-to-door, if you wish. (Please note that these options do not give you the right to trespass or conduct any other activities which are contrary to the law.)
- B. *Informing Your Neighbors of the Project* – This can be accomplished a variety of ways, but is most easily accomplished by a scheduled meeting or open house on the property. At the meeting, you are encouraged to have your project plans available, as well as your architect, engineer or other consultants as necessary to explain and answer questions about the project. The more convenient the meeting date, time and arrangements, the more success you will have in establishing a positive atmosphere for the dialogue. You may choose other means for informing your neighbors, such as mailing a project information packet.
- C. *Receiving Neighbor Feedback* – If you host a neighborhood meeting, you will be able to receive immediate feedback on your proposal. You are urged to take notes on the comments you receive, as well as who attends. If you mail information, some means of communication must be established to allow neighbors to contact you and leave their comments.
- D. *A Schedule for Action* – Your strategy must also include a schedule for achieving the above tasks prior to the first public hearing conducted by the City. While the City acknowledges that schedules may change, you must identify the approximate timing of the three steps described above.

III. YOUR NEIGHBORHOOD OUTREACH STRATEGY

Please submit a written description of your Neighborhood Outreach Strategy on the attached sheet, addressing the four points described above. You are required to implement the Strategy prior to the public hearing on your project. You may be asked by the Planning Commission or City Council about the results of your efforts. Failure to implement the strategy prior to the public hearing on your application may result in the hearing being continued to a later date.



1. How do you plan to contact your neighbors?

Mail

2. How will you inform your neighbors about the project?

Mail

3. How will you gather feedback from your neighbors?

e-mail or Phone

4. Here are the tentative dates for completing my outreach strategy:

- A. Contact: _____
- B. Informing _____
- C. Feedback _____

4. As property owner, I, _____ (print property owner's name), hereby acknowledge that I will make every reasonable effort to obtain neighbor comments on my project prior to presenting my request to the Planning Commission or City Council in public hearing. I understand that the purpose of the Neighborhood Outreach Strategy is to foster a positive and constructive dialogue regarding my project and its possible effects on surrounding homeowners and tenants.

Shawn Lu
Property Owner's Signature

10-27-2011
Date

Name and Address of Sender
Lu Slim
520 N Whisman Rd
Mountain View, CA 94043-

Check type of mail or service:
 Certified
 COD
 Delivery Confirmation
 Express Mail
 Insured
 Recorded Delivery (International)
 Registered
 Return Receipt for Merchandise
 Signature Confirmation

Attach Stamp Here
 (If issued as a certificate of mailing, or for additional copies of this bill) Postmark and Date of Receipt

Article Number	Address (Name, Street, City, State, & ZIP Code)	Postage	Fee	Handling Charge	Actual Value if Registered	Insured Value	Due Sender if COD	DC Fee	SC Fee	SH Fee	RD Fee	RR Fee
1.	<i>Nice Lot. Small Home</i> Chao Katherine 17 Ralston Ranch Rd Belmont, CA 94002-1234											
2.	<i>Big Deck. good land</i> City Of Belmont One Twin Pines Lane Ste 375 Belmont, CA 94002-											
3.	<i>None</i> Dunwoody John C 16 Ralston Ranch Rd Belmont, CA 94002-1238											
4.	<i>None</i> Ehrlich Linda Greif Tr 18 Ralston Ranch Rd Belmont, CA 94002-1238											
5.	<i>None</i> Goswamy Surinder P 35 Ralston Ranch Rd Belmont, CA 94002-1234											
6.	<i>None</i> Guillard Maryse 61 Ralston Ranch Rd Belmont, CA 94002-1234											
7.	<i>None</i> Lee Howard 10 Ralston Ranch Rd Belmont, CA 94002-1238											
8.	<i>None</i> Lee Khim W 51 Ralston Ranch Belmont, CA 94002-1234											

Total Number of Pieces Listed by Sender: **8**
 Total Number of Pieces Received at Post Office: **8**

Postmaster: Per (Name of receiving employee)
PNY

PS Form 3877, February 2002 (Page 1 of 2)

Complete by Typewriter, Ink, or Ball Point Pen

U.S. POSTAGE
 PAID
 SUNNYVALE, CA
 PERMIT NO. 112
 AMOUNT
\$352
 00033254-16

See Privacy Act Statement on Reverse

Name and Address of Sender
 520 N. Whisman Rd
 Sunnyvale, CA
 94063

94643

Article Number

1.

None

None

None

None

None

None

8.

Check type of mail or service:

- Certified
- COD
- Delivery Confirmation
- Express Mail
- Insured
- Recorded Delivery (International)
- Registered
- Return Receipt for Merchandise
- Signature Confirmation

Address (Name, Street, City, State, & ZIP Code)

Postage

Fee

Handling Charge

Actual Value if Registered

Insured Value

Due Sender if COD

DC Fee

SC Fee

SH Fee

RD Fee

RR Fee

Affix Stamp Here

(If issued as a certificate of mailing, or for additional copies of this bill) Postmark and Date of Receipt

Maiman Michael H Tr

72 Ralston Ranch Rd
 Belmont, CA 94002-1238

Mchugh Michael

2600 Belmont Canyon Rd
 Belmont, CA 94002-1203

Moser Louise Elizabeth

Po Box 13963
 Santa Barbara, CA 93107-3963

Rossi Alberto & Carol G

76 Ralston Ranch Rd
 Belmont, CA 94002-1238

Rytkin Alexander Tr

68 Ralston Ranch Rd
 Belmont, CA 94002-1238

Singh Chitdarshini

3061 Ne 40th Ct
 Fort Lauderdale, FL 33308-5831

Singh Chitdarshini

3061 Ne 40th Ct
 Fort Lauderdale, FL 33308-5831

Carol

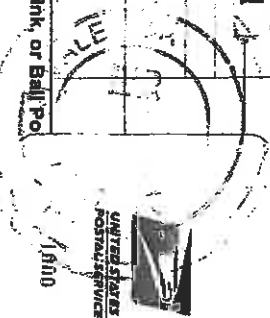
Total Number of Pieces Listed by Sender

Total Number of Pieces Received at Post Office

Postmaster, Postmarks of receiving employees)

PS Form 3877, February 2002 (Page 1 of 2)

Complete by Typewriter, Ink, or Ball Point



U.S. POSTAGE PAID SUNNYVALE, CA 94089-12 RANDJN1

\$264
 00033254-1B

VERSE

**Soil and Foundation Investigation of
Proposed Single Family Residence
49 Ralston Ranch Road
Belmont, California**

**Prepared for
Mr. Slim Lu
520 N Whisman Road
Mountain View, CA 94043**

**American Soil Testing, Inc.
2734 S. Bascom Avenue
San Jose, CA 95124
(408) 559-6400**

American Soil Testing, Inc.
Soil, Foundation and Environmental Engineers
2734 S. Bascom Avenue, San Jose, CA 95124
408-559-6400 - Fax 408-559-6688 www.americansoiltestinginc.com

File No. 11-3469-S

November 21, 2011

Mr. Slim Lu
520 N Whisman Road
Mountain View, CA 94043

Subject: Proposed Single Family Residence
49 Ralston Ranch Road, APN: 043-072-740
Belmont, California

SOIL AND FOUNDATION INVESTIGATION

Gentlemen

Per your request and authorization, our firm has performed a Soil and Foundation Investigation for the above-mentioned project. The site is located at 49 Ralston Ranch Road in Belmont, California.

Our findings indicated that the proposed one or two story wood framed single family residence may be constructed on the above mentioned property provided the recommendations contained in this report are carefully followed and implemented during construction.

This report presents our findings on the surface and subsurface soil investigation, laboratory test results, field and office studies.

We are pleased to have been of service to you in this matter. Should you have any questions or require additional information, please feel free to call our office at your convenience.

Very truly yours,
American Soil Testing, Inc.



Ben Rahimi, C.E.S.

REA-1-03843

Project Engineer



Andrew A. Ghofrani, P.E.

R.C.E. 38159

Exp. 3-31-13



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SOIL INVESTIGATION

Introduction

The purpose of the soil investigation was to gather sufficient data to provide recommendations for foundation engineering. This report presents an explanation of how we conducted that investigation, the results of the testing program, our conclusions based upon their results, and our recommendations for earthwork and foundation design to best suit the proposed development to the existing natural conditions. Our investigation did not include an environmental assessment or any field or laboratory testing for hazardous materials in the soil, air or groundwater at the project site.

Site description and location of Project

The site is located at in 49 Ralston Ranch Road in Belmont, California. APN: 043-072-740. At the time of our investigation, the subject property was a vacant lot. The lot was an irregular shaped parcel of land. General slopes are varying in their inclinations toward the north and northwest. Surface vegetation on the site consisted of tall fresh green grass with scattered shrubs and bushes. The proposed structure will be constructed at existing parking area at a designated pad, which will be located at the later date.

At the time of our site visit, the property access was through Ralston Ranch Road.

Field Investigation

After consideration of the nature of the proposed development, review of available data on the area, and discussion with the client, a field investigation was conducted at the project site. It included a surface site reconnaissance to detect any unusual surface features and drilling of two borings on 10-31-2011 to determine subsurface soil characteristics.

The approximate boring locations are shown on Appendix A, Figure 2. The soil encountered was logged in the field. Relatively undisturbed subsurface samples were obtained by hammering a split tube sampler into the natural ground. The boring log,

Figures 1 and 2 (Appendix B) are graphic representation of the soil profile, showing the depths at which the samples were obtained.

Laboratory Investigation

A Laboratory testing program was performed to determine the physical and engineering properties of the soil underlying the site. Moisture content and dry density tests were performed on all the relatively undisturbed soil samples in order to determine their consistencies, and the moisture variation throughout the explored soil profile, the laboratory testing performed in accordance with the ASTM (American Society for Testing and Materials) procedure. The expansion characteristics of the near-surface soils were evaluated by means of Atterberg Limits Test performed in accordance with ASTM D-423 and D-424. The results of laboratory tests are summarized on Appendix "B",

The focus of our laboratory testing program was to evaluate pertinent engineering determined on selected samples and are recorded on the boring logs at the appropriate depths. Since water has a significant influence on soil, the natural moisture content provides a rough indicator of the soil's compressibility, strength and potential expansion characteristics. The Atterberg limits provide an indication of potential expansive soil behavior. The results of the field and laboratory testing appear on the logs at the depths where sampling or testing were completed. The strength characteristics of the underlying earth materials were estimated from standard penetration tests of in situ materials or penetrometer measurements on recovered soil samples. The boring logs are graphic representation of the soil profile, showing the depths at which the samples were obtained.

Subsurface Conditions

After reviewing the laboratory test data, boring logs and examination of the soil samples collected in different depths, the subsurface soils underlying the project site appears to be relatively uniform throughout the area. The upper Silty clayey soil has moderate expansion

potential. The surface and near surface soils consist of very stiff olive brown Silty clay with fine gravel.

Seismic Design Criteria

The subject site is located in the seismically active San Francisco Bay region; therefore any structure within this area will most likely be subjected to strong ground shaking sometime during its actual lifetime. Major Faults like San Andreas Faults, Calaveras Faults and Hayward Faults have produced large magnitude earthquake in the past and can be expected to do so within the next 50 years. It is reasonable to assume that the proposed building will be subjected to at least one moderate to severe earthquake during the 50 years period following construction. During such an earthquake, severe ground shaking will occur at the site.

The proposed residence is to be designed in accordance with the applicable provisions set forth in the current edition of the California Building Code (CBC).

The Structure Engineer for this project should make his own independent evaluation as to the applicability of the seismic design criteria presented in the CBC, 2010 Edition.

The following may be used from the California Building Code, CBC, 2010 Edition:

Conterminous 48 States

2005 NEHRP Seismic Design Provisions

2005 ASCE 7 Standard

49 Ralston Ranch Rd, Belmont, CA 94002-1234

from geocoder.ca	latitude	longitude	altitude
decimal	37.511650	-122.324850	
deg-min-sec	37° 30' 41.94"	-122° 19' 29.46"	

Spectral Response Acceleration SMs and SM1

SMs =Fa x Ss and SM1=Fv x S1

Site Class = D – Fa= 1.0, Fv = 1.5

Period (Sec)	Sa (g)
0.2	2.170 (SMs, Site Class D)
1.0	1.830 (SM1, Site Class D)

2003 NEHRP Seismic Design Provisions

Design Spectral Response Acceleration SDs and SD1

SDs=2/3 x SMs and SD1 = 2/3 x SM1

Site Class = D – Fa= 1.0, Fv = 1.5

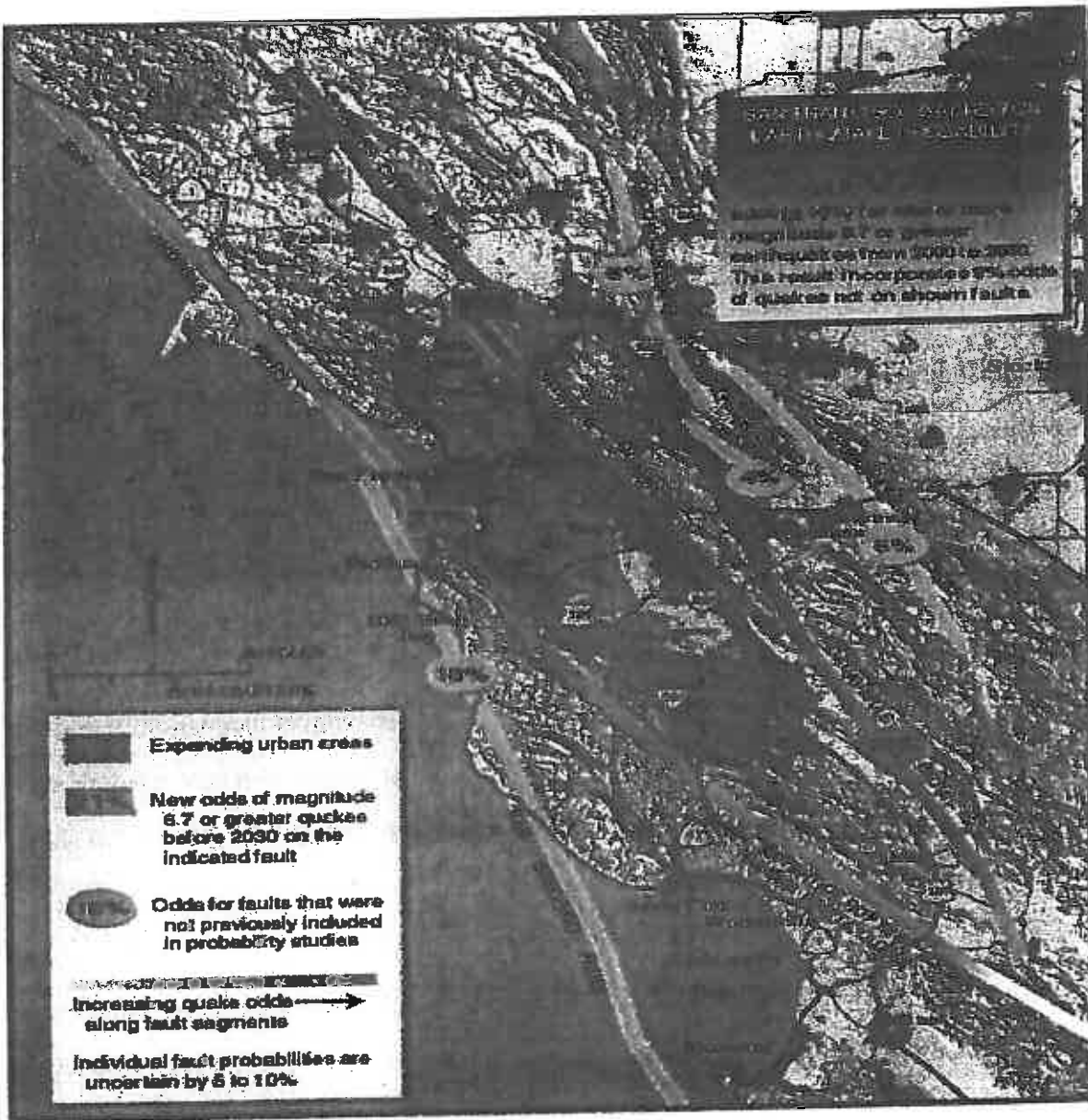
Period (Sec)	Sa (g)
0.2	1.446 (SDs, Site Class D)
1.0	1.220 (SD1, Site Class D)

Consideration should also be given to anchoring or otherwise stabilizing freestanding appliances or home furnishings, which may be prone to toppling during seismic vibrations.

Secondary Seismic hazards

Secondary effects of seismic activity, which are normally considered as potential hazard to the site, include several types of ground failure. Various general types of ground failures, which might occur as a consequence of several ground shaking including land sliding, ground subsidence, ground lurching, shallow ground rupture, and liquefaction. The probability of occurrence of each type of these ground failures depends on the severity of the earthquake, distance from faults, topography, subsurface conditions, ground water elevation, and other factors.

Assessment of the above mentioned geologic consideration is beyond the scope of this investigation.



URL <http://quake.wr.usgs.gov/seismology/wg02>

Earthquake Probability Map

Figure 1. The threat of earthquakes extends across the entire San Francisco Bay region, and a major quake is likely before 2030. Knowing this will help people make informed decisions as they continue to prepare for future quakes.

RECOMMENDATIONS

Grading Specifications

1. The placement of fill and control of any grading operations at the site shall be done in accordance with the recommendations of this report prepared by American Soil Testing Inc. These recommendations set forth the minimum standards to satisfy all requirements of this report.

A representative of American Soil Testing Inc. (AST) shall be present during the sub-excavation and re-grading operations.

Any filling operations on slopes steeper than 6:1 should be keyed and benched into competent bedrock materials, with subsurface drainage as shown on Appendix "B" Figure 5, "Typical Details for Fills on Slope". We recommend that all fill slopes be thoroughly compacted to the face of the slopes; this can be accomplished by overfilling the slope and then cutting back the slope after the filling operations are completed.

We recommend that all cut and fill slopes at the site have a maximum inclination of 3:1. At the above inclination, cut and fill slopes will probably be subjected to minor erosion, thus requiring periodic maintenance of the slopes. **We recommended that all cut and fill slope be planted to minimize erosion.**

2. All structural fill shall be placed in uniform horizontal lifts of not more than 6 to 8 inches in uncompacted thickness and compacted to not less than 90% relative compaction using the D1557-Latest Edition procedure. **Five feet around the entire perimeter of the building pad shall also be compacted to not less than 90% relative compaction using the afro-mentioned procedure.**

3. All existing surface and subsurface structures that will not be incorporated in the final development shall be removed prior to any grading operations. These objects shall be accurately located on the grading plans (prepared by the project Civil Engineer) to assist the Field Engineer in establishing proper control over their removal. This is to include but not

be limited to any abandoned septic tank, leach field, basements, utility lines, underground tanks, and any other improvements.

A representative of American Soil Testing Inc. shall be present during the demolition operation.

4. All organic surface material and debris, including organically rich top soil estimated to be 6-12 inch deep, shall be stripped prior to any other grading operations and transported away from all areas that are to receive improvements or structural fill. These organically contaminated soils may be stockpiled for later use in landscaping areas. This material is not suitable for use as structural fill. In addition, any trees that are not being included in the final development must be removed. This removal is to include a thorough cleaning of all underground roots.

5. The depressions left by the removal of any surface and subsurface structures, trees, trenches, etc. shall be cleaned of all debris and backfilled with imported non-expansive soil. This backfill shall be compacted to not less than 90% relative compaction in accordance with ASTM test procedure D1557-Latest Edition .

6. The exposed native surface shall be scarified to a depth of 12 inches and should be water conditioned as necessary and compacted to 90% relative compaction at water content of at least 2 to 5 percent above the optimum value according to ASTM test procedure D1557-Latest Edition . At this point, the site will be in condition to receive additional compacted fill. Based on the exposed field condition if deemed necessary, AST Project Engineer may provide additional recommendations in the field.

Before compaction begins, the fill shall be brought to a water content that will permit proper compaction by either: 1) Aerating the material if it is too wet, or 2) spraying the material with water if it is too dry. Each lift shall be thoroughly mixed before compaction to assure a uniform distribution of water content. When fill material includes rocks, nesting of rocks will not be permitted, and all voids shall be carefully filled and properly

compacted, No rocks larger than 4 inches in diameter shall be used in the construction of the building pad.

7. The AST Project Engineer shall be notified at least 48 hours prior to commencement of any grading operations so that he may coordinate the work in the field with the Grading Contractor.

8. All imported fill material must be sampled, tested and approved by the AST Project Engineer prior to being brought to the site. Import soil must have a plasticity index no greater than (12) and an "R" value greater than (25).

9. All grading work shall be observed and approved by AST Project Engineer.

10. The top two feet of the soils exposed in cut slope must be properly compacted. Unretained cut slopes shall not exceed 3:1 (horizontal to vertical) in competent bedrock; Surface runoff water should be collected by swales at the shoulder and toe of each slope and diverted away from the slope.

11. Fill slopes shall not exceed 3:1, and must incorporate an adequately drained base key founded in competent bedrock.

12. In the event that any unusual conditions not covered by the special provisions are encountered during the grading operations, the Soil Engineer shall be immediately notified for further recommendation.

Water Wells

All water wells (if any) on the site, which are to be abandoned, shall be capped according to the requirements of the San Mateo Water District. The final elevation of the top of the well casing must be a minimum of 3 feet below any adjacent grade prior to any grading operations. Foundation over decommissioned well is ok as long as it does not conflict with any piers or structure.

Trench Backfill

Utility and pipeline trenches should be backfilled with compacted structural fill. If on-site soil is used, the material should be placed in lifts not exceeding 8 inches in uncompacted thickness and compacted to at least 90 percent relative compaction by mechanical means only. Imported sand may also be used for backfilling trenches provided the sand is compacted to at list 90 percent relative compaction. In all Building pad areas and pavements, the upper 3 feet of trench backfill should be compacted to at least 95 percent relative compaction where imported sand backfill is used.

In addition the upper 8 inches of all trench backfill in pavement area should be compacted to at least 95 percent relative compaction D1557-Latest Edition.

Groundwater

Groundwater or seepage was not encountered in our borings during investigation. Based on the general topography of the area, the groundwater level may fluctuate because of variations in seasonal rainfalls, amount of irrigation, and other unknown factors. Perched groundwater may be present during pier drilling due to the infiltration surface water into the permeable soils. If ground or perched water is encountered during drilling, dewatering is required.

FOUNDATION DESIGN CRITERIA

1. The proposed structure should be supported on drilled, cast-in-place, straight-shaft piers and grade beam type foundation. The piers should be not less than 16 inches in diameter, and extend to an appropriate depth, depending upon structural loads, spacing, and diameter as can be determined by the project Structural Engineer. The piers shall be designed based on skin friction acting between the soil and the piers using the design friction value of 400 p.s.f. for dead plus live loads. This value may be increased by one-third to include short-term seismic and wind effects.

The depth and spacing of friction piers will depend upon the structure loads transmitted to the piers and based on the surface friction value.

Judging from the investigation, the piers should be drilled minimum 12 feet into the stiff natural soil or at least 24" into competent bedrock. The friction of the upper 36 inches should be ignored when computing pier depth, this is due to seasonal moisture changes in the top layer. To create a reasonable amount of pier rigidity, it is recommended that the drilled piers be reinforced with at least four No. 4 bars that are placed to within 3 inches of the bottom of the drilled pier holes. The steel should be tied together with suitable ties.

The piers that support the grade beams that act as low retaining walls, such as along the downhill side of the proposed structure should be designed to resist two pressures:

(a) The lateral pressure that acts against the piers due to the tendency of the fill and soil to creep downhill, using the criteria given in the above paragraph. In designing the piers to resist the lateral force from potential soil creep activity, it should be assumed that the pressure begins at the finished exterior ground surface.

(b) The lateral soil pressure that acts against the grade beams, using a lateral soil pressure due to an equivalent fluid weighing at least 80 p.c.f.

It is recommended that the edge-to-edge distance between the piers along the downhill side of the structure not be more than 5 feet.

Our firm should be retained to provide testing and inspection services during the grading and foundation installation portion of the work. We highly recommend that the Soil Engineer inspect all pier holes to ascertain that proper penetration has been achieved.

Should unusual or unexpected soil conditions be encountered, the Soil Engineer may alter the lengths of the piers, as conditions may warrant.

All perimeter piers should be reinforced with minimum of four #4 bars for their full length with the reinforcement of the pier tied at least 12 inches to the top reinforcement of the grade beam, **this recommendation is not a substitute for structural design of the friction piers, therefore the final design of the foundations and reinforcing required shall be determined by the Structural Engineer responsible for foundation design.**

2. The grade beam should be found a minimum of 12-inches below adjacent pad grade and should be reinforced with a minimum of four # 4 bars, two near the top and two near the bottom. **We recommend that all piers should be tied together up and down slope with grade beams.**

The reinforcement steel from the piers should extend sufficient distance into the grade beams to develop its full strength in bond.

3. If the grade beam is to be cast directly on the compacted pad, grade beams should be constructed on a firm, moist sub grade and all drying cracks in the sub grade must be closed by sprinkling, flooding, or other methods.

4. **All pier holes should be inspected by the AST Project Engineer to ascertain that proper penetration has been achieved, and the supporting soils should not be allowed to dry before the hole is filled with concrete. The piers should have a minimum spacing of three pier diameters.**

5. At the time of placing of concrete for piers foundation, the pier tops should not be allowed to mushroom out or have spillage at the side of the grade beams, the excess concrete should be trimmed to the design size. The bottoms of the pier should be dry and reasonably free of loose soils prior to installing reinforcing steel and placing concrete.

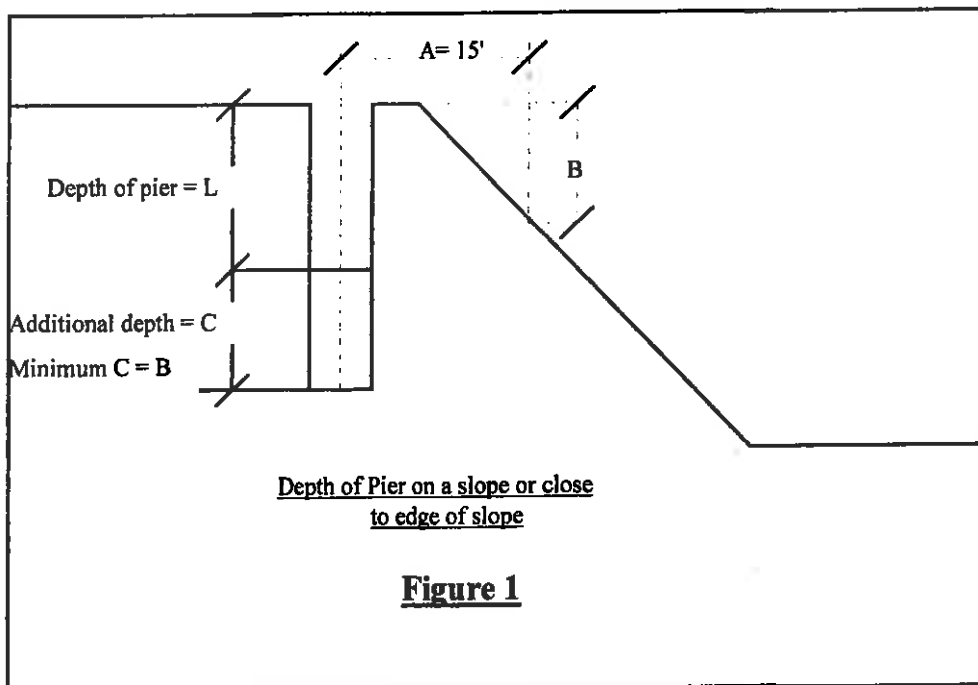
7. If the foundations are founded in engineered fill consisting of imported soil, the above-mentioned bearing capacity should be re-evaluated and a proper value should be used.

8. **Piers on the slope or close to the edge of slope should be advanced sufficiently deep to provide at least 15 feet of soil between the nearest adjacent slope and the bottom of the pier or additional pier's depth could be determined according to the figure 1.**

9. Piers can resist lateral forces by passive pressure; lateral loads on piers may be resisted by passive pressures acting against the sides of the piers. We recommend a passive pressure equal to an equivalent fluid weighing 250 pounds may be used to provide lateral support. The top 36 inches of each pier should be neglected in computing pier's passive resistance capacity.

Settlements

Since all foundations will be extended into competent materials and will be tied together, total settlements should not exceed 3/4 inch and post - construction differential settlements across the buildings should not exceed 1/4 inch. Slight settlements should be considered in the design of foundations and proposed structures



CONCRETE SLABS-ON-GRADE CONSTRUCTION

We recommend the following for all slab-on-grade construction:

All slab-on-grade shall be supported on a minimum of 12 inches thick capillary break material such as, 3/4" clean crushed rock or permeable aggregate and 2 inches of sand should be used between the finished subgrade and concrete slab **for all interior slabs** along with a minimum of 10 mil thick polyethylene or its equivalent vapor membrane which shall be placed between the crushed rock and the sand.

Minimum reinforcement should consist of at least #4 rebar, 18 inches on center both ways for shrinkage control to minimize the impact of expansion. However, slab reinforcing could exceed the minimum requirements depending on the anticipated usage and loading conditions. Proper expansion and contraction joints shall be provided in the slab to minimize the cracks in the slab.

Concrete slabs around the landscaping area should be protected from water seepage. The water seepage from these areas usually creates over-saturation of the base rock and the subgrade, thereby causing unstable conditions. Henceforth, we recommend the following:

Provide vertical cut-off or a deep vertical curb section all along the landscaping areas. The vertical cut-off should extend through the base rock and a minimum of six inches into the subgrade. This will limit the water seepage into the adjacent concrete slabs.

Positive surface drainage (minimum 2%) shall provide at all times adjacent to the building to direct water away from the foundations and slabs to suitable discharge facility, during and after the construction phase of the project.

If deemed necessary by the Soil Engineer, prior to placing the vapor membrane or pouring concrete, the sub grade shall be moistened with water to reduce the swell potential. The sub grade soils under the slabs area should be water conditioned to raise the water content; spraying the water at least a day prior the concrete is poured can do this. Minor cracking of the concrete slabs on grade should be anticipated due to long-term differential movement of any underlying fill or natural soil. **The project Structural Engineer should be**

determined the exact thickness and reinforcements based on the design live load and dead load.

Garage slab Construction

For the slab construction in garages, the slabs should be underlain by a minimum of 12 inches layer of permeable aggregate base or 3/4" clean crushed rock and **should be poured structurally independent of the foundations or any fixed members. Expansion joints shall be constructed in the slab at least 10 feet from the interior face of the walls.**

Minimum reinforcement should consist of at least #4 rebar, 16 inches on center both ways for shrinkage control to minimize the impact of expansion. However, slab reinforcing could exceed the minimum requirements depending on the anticipated usage and loading conditions. Proper expansion and contraction joints shall be provided in the slab to minimize the cracks in the slab.

If deemed necessary by the Soil Engineer, prior to placing the vapor membrane or pouring concrete, the sub grade shall be moistened with water to reduce the swell potential. The sub grade soils under the slabs area should be water conditioned to raise the water content; spraying the water at least a day prior the concrete is poured can do this. Minor cracking of the concrete slabs on grade should be anticipated due to long-term differential movement of any underlying fill or natural soil. **The project Structural Engineer should be determined the exact thickness and reinforcements based on the design live load and dead load.**

RETAINING WALLS

1. Retaining walls should be designed for a lateral earth pressure (active) of 50 pounds equivalent fluid pressure, plus surcharge loads for sloping surfaces flatter than 4:1. If the retaining walls are restrained from free movement at both ends, or have 3:1 back slopes, they shall be designed for the earth pressure resulting from 65 pounds equivalent fluid pressure, to which shall be added any surcharge loads.

2. The effects of earthquakes may be simulated by applying a horizontal line load surcharge to the stem of the wall at a rate of $19 \times H^2$ lb/ horizontal foot of wall, where H is the height of the surface of the backfill above the base of the wall. This surcharge should be applied at a height of 0.6 H above the base of the wall.

3. A coefficient of "friction" of 0.30 may be used to calculate the ultimate resistance to horizontal sliding of the wall base over the ground beneath the base.

4. An equivalent fluid pressure of 250 psf/ft may be used to calculate the ultimate passive resistance to lateral movement of the ground in front of the toe of the wall and in front of any "key" beneath the toe or stem of the wall.

It is recommended that upslope retaining walls have freeboard to provide catchments for debris flows and minimize the potential for overtopping of the wall surficial slough.

Gradient of the back slope	Unrestrained equivalent fluid pressure (p.c.f)	Passive Resistance	Coefficient of friction
Flat to 4:1	50	250	0.30
3:1 or Restrained	65	250	0.30

5. The above values assume a drained condition and moisture content compatible with those encountered during our investigation. To promote proper drainage, a layer of at least 12 inches of $\frac{3}{4}$ " clean crushed rock or drain rock up to $\frac{3}{4}$ of the height of the wall should be placed between the facility and the retained material. Minimum 4-inch (schedule 70)

perforated pipes (perforation down) shall be included in the design to conduct excess water from behind the retaining structure.

6. All retaining walls shall be swale protected with at least a concrete lining. Surface waters shall not be allowed to flow into retaining wall sub drain, to approach the foundation, or to approach the crests.

7. Sub drain placed behind retaining walls should be approved and inspected by American Soil testing representative prior to the placement of fill.

8. The walls should be supported on pier foundations designed in accordance with the recommendations presented previously under Foundation Design criteria.

9. We should have the opportunity for a general review of all designs pertaining to facilities retaining a soil mass prepared for this project.

General Construction Requirements

1. Where utility lines cross under or through perimeter footings and sand is used as backfill material, the trench shall be completely sealed by at least 3' concrete plug, to prevent moisture intrusion into the areas under the slabs and/or by compacting soil material for 5 feet on both sides of the exterior footings.

2. Rain water discharge at down spouts must be directed into solid pipe to carry away the excess water and prevent water from collecting in the soil adjacent to the foundation. The connection could be in a closed conduit which discharges at an approved location away from the structure.

3. If utility trenches are parallel to the sides of the building, they should not extend below a line sloping down and away at a 2 to 1 (horizontal to vertical) slope from the bottom outside edge of all footings

4. All trenches may be backfilled with the native material provided they are free of organic material and rocks over 4 inches in diameter or with approved imported granular material with the soil compacted to a 95% minimum relative compaction in paved areas and a 90% in other area.

Testing and Inspections during construction

American Soil Testing should be retained to perform testing and inspections during following stage of construction for the above mentioned project:

- 1. Testing and inspection during grading operations**
- 2. Inspection during pier drilling or foundation excavation (before the forms are installed)**
- 3. Inspection during installation of sub drains system behind the retaining walls. Inspection of Miradrain, Filter Fabric and Permeable aggregate material behind the retaining walls. Testing and observation during backfilling operation behind the retaining walls and utility trenches if any.**
- 4. Final inspection after completion of the project**

Plan Review and Observation

We should have the opportunity for a general review of the final grading and foundation plans prepared for this project. Our firm should also be retained to provide testing and inspection services during the grading and foundation installation portion of the work. American Soil Testing, Inc. is not responsible for compliance with design recommendations for grading or foundation plans controlled, inspected and approved by others.

Conclusions

1. The Site covered by this investigation is suitable for the proposed single family residence, provided the recommendations set forth in this report are incorporated into the design considerations and the project plans and specifications.
2. The native soil with the exception of the organically contaminated surface soil, are suitable for engineered fill. The organically contaminated soil may be used for landscaping only.
3. The native surface and near surface soil at the project site have been found to have moderate expansion potential when subjected to fluctuations in moisture.
4. On the bases of our experience during this investigation, it is our opinion that trenches to 5 feet below the existing ground surface do not need shoring. Below 5 feet shoring will be required.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations presented in this report are based on the soil conditions revealed by our test borings and evaluated for the proposed construction planned at the present time. If any unusual soil conditions are encountered during the construction, or if the proposed construction will differ from that planned at the present time, American Soil Testing, Inc. should be notified immediately for the supplemental recommendations.
2. This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the recommendations and information contained herein are called to the attention of the Architect, Structural Engineer and Civil Engineer for the project and are incorporated into the Plans and Specifications of project. Also to ensure that the necessary steps are taken to see that the contractors carries out the recommendations of this report in the field.
3. The findings of this report are valid as of the present time. However, the passing of the time will change the conditions of the existing property due to natural processes, or works of man. In addition, legislation or the broadening of knowledge may require other recommendations. Accordingly, the findings of this report may be invalid, wholly or partly, by changes outside of our control. Therefore, this report is subjected to review and should not be relied upon after a period of three years.
4. This report is not a recommendation to purchase or not to purchase the property and shall be for the exclusive use of the client whose name appears above.
5. The conclusions and recommendations contained herein are professional opinions derived in accordance with the current standards of professional practice and no warranty is intended, expressed or implied.

APPENDIX " A "

PHYSIOGRAPHY

FIGURE 1

VICINITY MAP

FIGURE 2

SITE PLAN

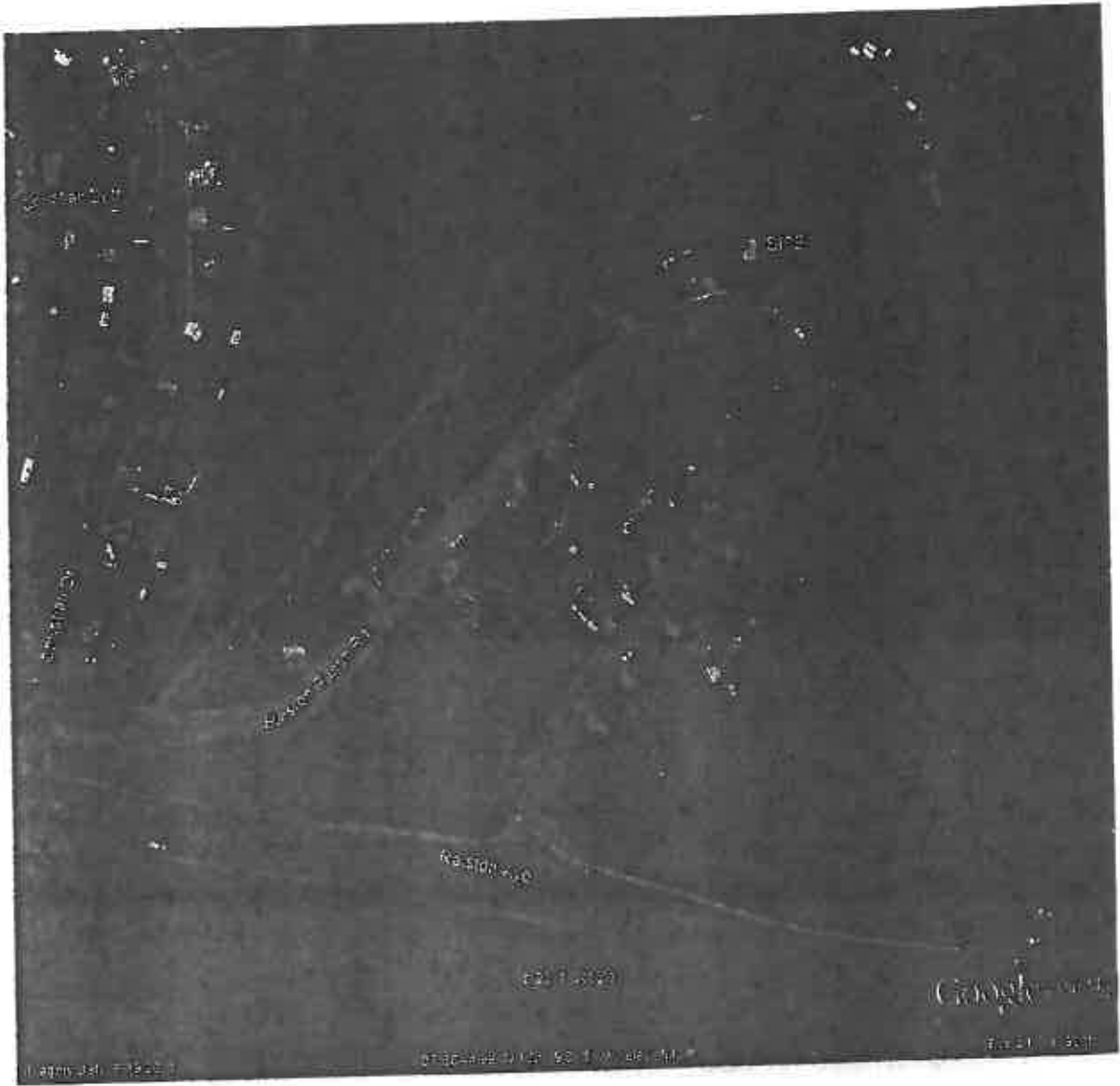


Figure 1

Vicinity Map

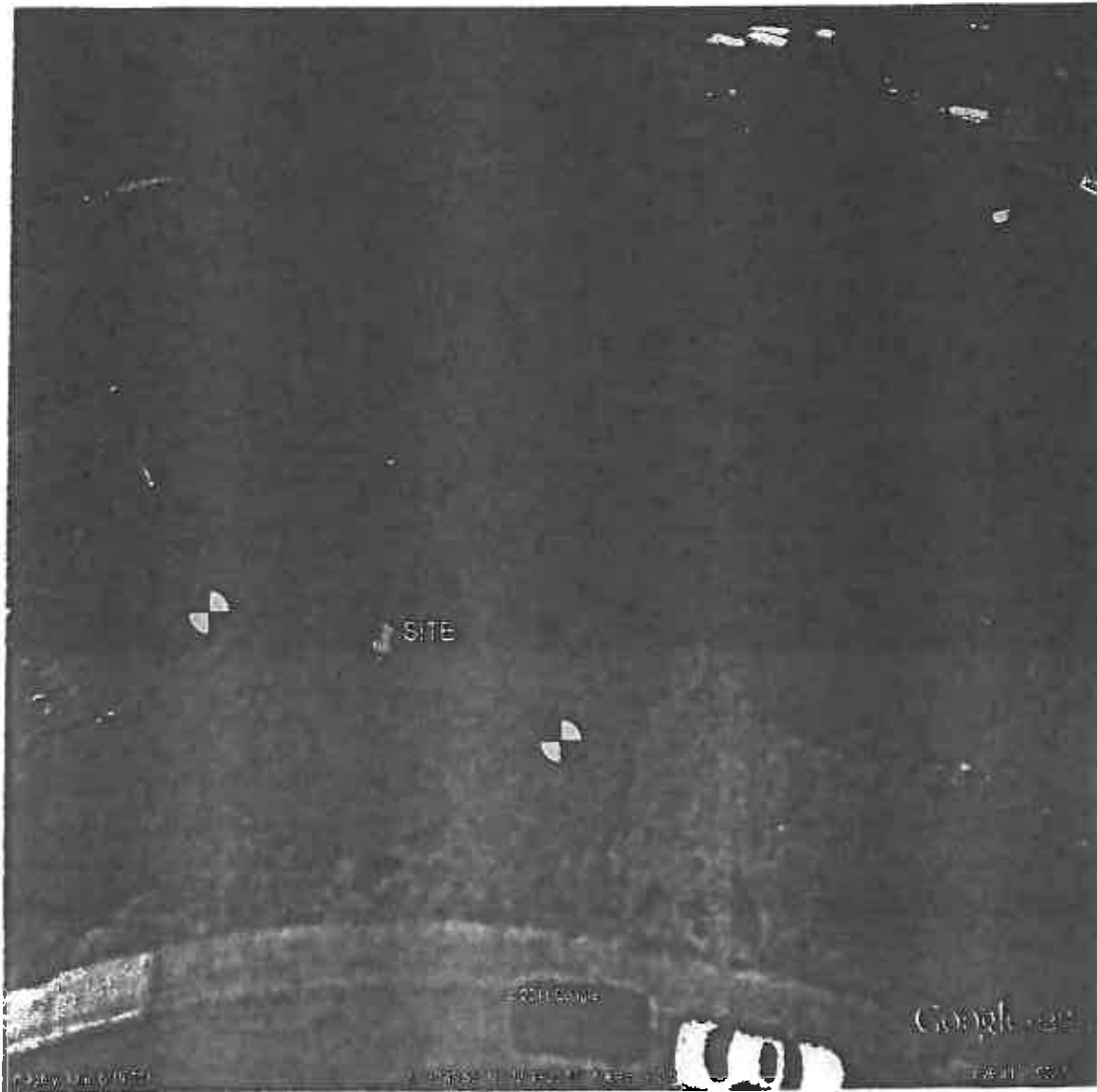


FIGURE 2

SITE PLAN

APPENDIX " B "

SUBSURFACE DATA

- FIGURE 1-2** **Log of test boring**
FIGURE 3 **Plasticity Index**
FIGURE 4 **Key to exploratory boring logs**

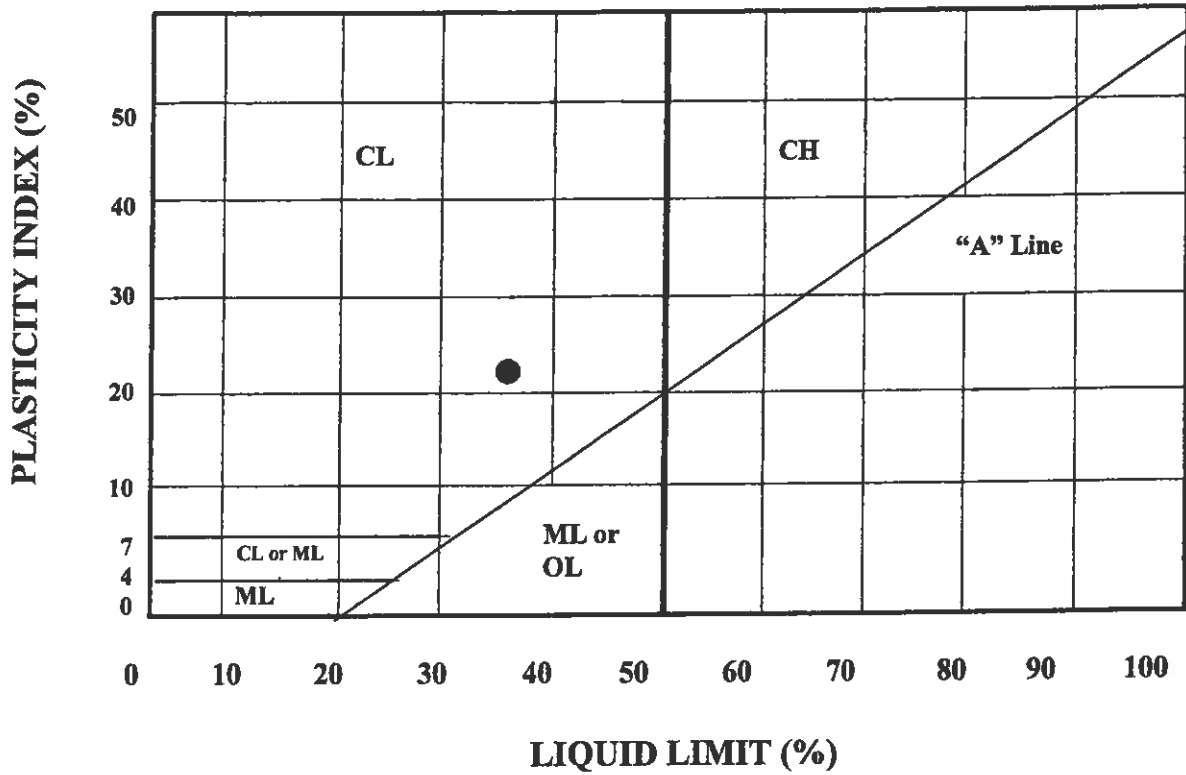
EXPLORATORY BORING LOG

Dated Drilled: 10-31-2011	Hole No. B - 1			Figure No. 1			
Project Nam: 49 Ralston Ranch Road, Belmont, California.	Boring Diameter: 4"			Logged by: BR			
SOIL DESCRIPTION	Boring Log	Depth in Feet	Sampler Number	Penetration Resist. Blows/Foot	U.S.C.S. Soil -group	Moisture Content (%)	Dry Density P.C.F.
24 tall green grass, organic rich, dry, firm	1						
Sandy Silty Clay, olive brown, fine gravel, damp, stiff	2		1-1	14	CL	15.3	101.8
	3						
Sandy Silt Clay, olive brown, fine gravel, damp, very stiff	4		1-2	25	CL	14.5	104.5
	5						
Silty sandy Clay, dark brown. damp, very stiff	6						
	7		1-3	41	CL/ GC	13.4	107.3
Gravelly Sandy Silty Clay, dark brown, damp, dense	8						
	9						
Boring terminated @ 12' blg	10						
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
No groundwater encountered	22						
	23						
	24						
	25						

EXPLORATORY BORING LOG

Dated Drilled: 10-31-2011	Hole No. B - 2			Figure No. 2			
Project Nam: 49 Ralston Ranch Road, Belmont, California.	Boring Diameter: 4"			Logged by: BR			
SOIL DESCRIPTION	Boring Log	Depth in Feet	Sampler Number	Penetration Resist. Blows/Foot	U.S.C.S. Soil -group	Moisture Content (%)	Dry Density P.C.F.
24" tall green grass, organic rich, dry, firm	1						
Gravelly Sandy Silty Clay, olive brown, damp, very stiff	2		2-1	21	CL	14.7	103.4
	3						
Sandy Silt Clay , dark brown, large gravel, damp, very stiff	4		2-2	32	CL/ SC	13.2	108.5
	5						
Sandy Silty Sandy Clay, dark brown. damp, very stiff	6						
	7		2-3	43	CL/ GC	12.5	112.5
Gravelly Sandy Silty Clay, brown, damp, dense	8						
	9						
Boring terminated @ 12' blg	10						
	11						
	12						
	13						
	14						
	15						
	16						
	17						
	18						
	19						
	20						
	21						
No groundwater encountered	22						
	23						
	24						
	25						

PLASTICITY CHART



Key Symbol	Sample Number	Sample depth (ft)	Liquid Limit (%)	Plasticity Index (%)	Unified Soil Classification Symbol
●	BAG A	0 - 1	36	22	CL

FIGURE 3

MAJOR DIVISIONS			GROUP SYMBOLS	SOIL DESCRIPTION
COARSE GRAINED SOILS More than half material is larger than # 200 sieve	GRAVELS (More than 50 % material larger than # 4 sieve)	CLEAN GRAVEL Less than 5% fines	GW	Well Graded Gravels, Gravel-Sand Mixtures, little or Fines
		GRAVEL With Fines (More than 12% fines)	GP	Poorly Graded Gravels or Gravel-Sand Mixtures, little or No Fines
			GM	Silty Gravels, Gravel-Sand-Silt Mixtures, Non-Plastic Fines.
		SANDS (More than 50 % material smaller than # 4 sieve)	CLEAN SAND (Less than 5% fines)	GC
	SW			Well Graded Sands, Gravelly Sands, Little or No Fines.
	SAND With Fines (More than 12% fines)		SP	Poorly Graded Sands or Gravelly Sands, Little or No Fines.
			SM	Salty Sands, Sand-Silt Mixtures, Non-Plastic Fines.
	FINE GRAINED SOILS More than half material is smaller than the #200 sieve	SILTS & CLAYS Liquid Limit is less than 50%	SC	Clayey Sands, Sand-Clay Mixtures, Plastic Fines.
ML			Inorganic Silts, Sandy or Clayey Silts, Low to no Plasticity.	
CL			Inorganic Clay, Sandy or Silty Clay, Low to Medium Plasticity.	
SILTS & CLAYS Liquid limit is greater than 50%		OL	Organic Silt or Organic Silty Clay, Low to Medium Plasticity.	
		MH	Inorganic Silts, Diatomaceous or Micaceous, Fine Sandy or Silty Soils.	
		CH	Inorganic Clays of High Plasticity, Fat Clays.	
		OH	Organic Clays of Medium to High Plasticity, Organic Silts.	
HIGHLY ORGANIC SOILS			PT	Peat and Other Highly Organic Soils.

PARTICLE SIZE LIMITS

(Sieve Openings in mm.)	.074	.425	2.00	4.17	19.0	75.0	300.0	
SILT OR CLAY	SAND			GRAVEL		COBBLES	BOULDERS	
	FINE	MEDIUM	COARSE	FINE	COARSE			
(U.S. Standard sieve Sizes)	# 200	# 40	# 10	# 4	.75 in	3 in	12 in	

RELATIVE DENSITY

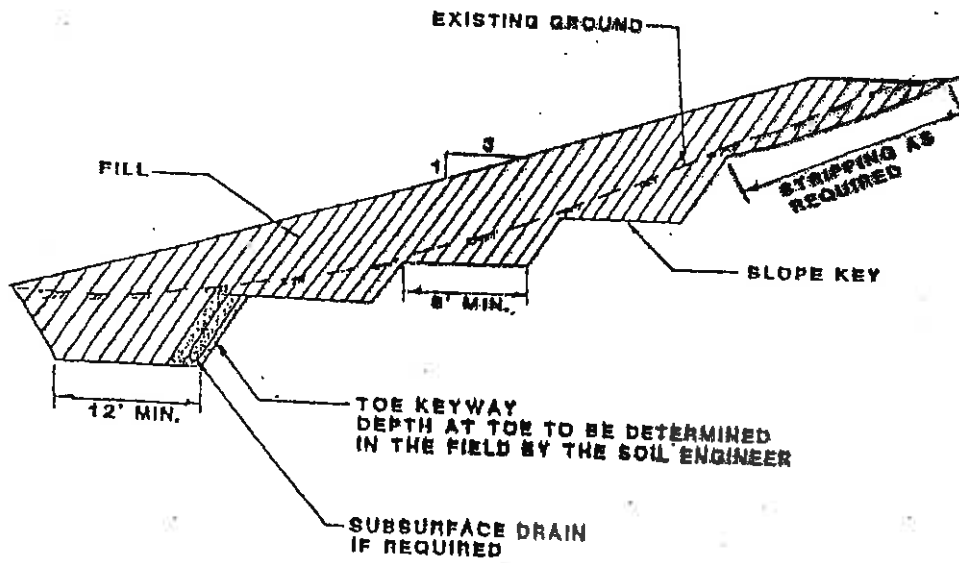
CONSISTENCY

SANDS, GRAVELS AND NON- PLASTIC SILTS	BLOWS / FOOT *	CLAYS AND PLASTIC SILTS	STRENGTH +	BLOWS / FOOT *
VERY DENSE	0 - 4			
ERY LOOSE	4 - 10			
LOOSE	10 - 30			
MEDIUM DENSE	30 - 50			
DENSE	OVER 50	VERY SOFT	0 - 1/4	0 - 2
		SOFT	1/4 - 1/2	2 - 4
		FIRM	1/2 - 1	4 - 8
		STIFF	1 - 2	8 - 16
		VERY STIFF	2 - 4	16 - 32
		HARD	OVER 4	OVER 32

* Numbers of blows of 140 pound hammer falling 30 inches to drive a 2-inch O.D. (1 - 3 / 8 inch I. D.) split spoon (ASTM D -1586).

+ Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the Standard Penetration test (ASTM D - 1586), pocket penetrometer, torvane or visual observation.

FIGURE 4	KEY TO EXPLORATORY BORING LOGS	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D-2487)
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END



January 17, 2012
B5012

TO: Rob D. Gill
Assistant Planner
CITY OF BELMONT
One Twin Pines Lane, Suite 110
Belmont, California 94002

SUBJECT: **Geotechnical Peer Review**
RE: Lu, New Single-Family Residence
49 Ralston Ranch Road

At your request, we have completed a geotechnical peer review of permit applications for project construction using:

- Architectural Plans (3 sheets, various scales) prepared by 61 Studio, dated May 2, 2011;
- Grading and Drainage Plans and Details (9 sheets, 10-scale) prepared by Michael Coughlin, dated September 30, 2011; and
- Geotechnical Report prepared by American Soil Testing, Inc., dated November 21, 2011.

In addition, we have reviewed pertinent maps and documents from our office files and completed a reconnaissance of site conditions.

DISCUSSION

The applicant proposes to construct a residence at the currently undeveloped subject property. It appears that the proposed residence will be built on existing site slopes without major grading. The proposed driveway will require removal of one large eucalyptus tree and extend approximately 40 feet to Ralston Ranch Road.

SITE CONDITIONS

The proposed homesite is generally characterized by gentle to steep (approximately 15 to 36 percent inclination) north-facing undisturbed slopes. The property is located within the "Ps" ground movement potential category indicating the potential for soil creep and shallow slope instability. Site drainage appears to be generally characterized by sheet flow to the north. An abandoned drainage channel is

present in the northwestern portion of the property. No signs of recent slope instability were observed.

The property is underlain, at depth, by bedrock materials of the Franciscan Complex (greenstone, sandstone, and mélangé are locally mapped). Bedrock is overlain by a variable thickness of silty to sandy clay (colluvial soil and artificial fill) possibly reaching a maximum depth on the order of 6 feet. Existing site fill materials were noted southeast of the proposed house site. The active San Andreas fault is located approximately 1½ miles southwest of the site.

CONCLUSIONS AND RECOMMENDED ACTION

Proposed site development is constrained by relatively minor existing undocumented site fill materials, potential soil creep, and anticipated future seismic ground shaking. The Project Geotechnical Consultant has performed an investigation of site conditions and recommended project design criteria in general conformance with prevailing geotechnical standards. We do not have geotechnical objections to the proposed layout of site improvements. We recommend geotechnical approval of permit applications for site development with the following conditions:

1. **Geotechnical Plan Review** - The Project Geotechnical Consultant should review and approve all geotechnical aspects of the project building and grading plans (i.e., site preparation and grading, site drainage improvements and design parameters for foundations, retaining walls and driveway) to ensure that their recommendations have been properly incorporated. The consultant should **specifically evaluate geotechnical design aspects of proposed storm drainage infiltration structures** including placement and the potential for adverse slope stability impacts. Any appropriate geotechnical design revisions should be recommended.

The results of the plan review should be summarized by the geotechnical consultant in a letter and submitted to the City along with other documentation for building permit plan-check.

2. **Geotechnical Construction Inspections** - The geotechnical consultant should inspect, test (as needed), and approve all geotechnical aspects of the project construction. The inspections should include, but not necessarily be limited to: site preparation and grading, site surface and subsurface drainage improvements, and excavations for foundations and retaining walls prior to the placement of steel and concrete. The consultant should inspect the drilling of foundation piers to verify satisfactory embedment into competent bedrock.

The results of these inspections and the as-built conditions of the project should be described by the geotechnical consultant in a letter and submitted to the City Engineer for review prior to final (granting of occupancy) project approval.

LIMITATIONS

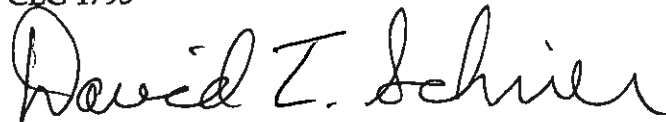
This geotechnical peer review has been performed to provide technical advice to assist the City with its discretionary permit decisions. Our services have been limited to review of the documents previously identified, and a visual review of the property. Our opinions and conclusions are made in accordance with generally accepted principles and practices of the geotechnical profession. This warranty is in lieu of all other warranties, either expressed or implied.

Respectfully submitted,

COTTON, SHIRES AND ASSOCIATES, INC.
CITY GEOTECHNICAL CONSULTANT



Ted Sayre
Principal Engineering Geologist
CEG 1795



David T. Schrier
Principal Geotechnical Engineer
GE 2334



Walter Levison
CONSULTING ARBORIST



PNW-ISA Certified Tree Risk Assessor #593

ASCA Registered Consulting Arborist #401

ISA Certified Arborist #WC-3172

**Assessment of and recommendations for 13 protected trees
at
49 Ralston Ranch Road
Belmont, California**

Prepared at the Request of:

**Rob Gill, Assistant Planner
Permit Center
1 Twin Pines Lane
Belmont, CA 94002**

Site Visit:

Walter Levison, Contract City Arborist (CCA)

12/15/2011

Report:

(CCA)

12/22/2011

Revision 2/28/2012

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Attached: Tree data charts



1 Assignment and Background

Walter Levison, Contract City Arborist (CCA), otherwise known as "WLCA", was requested by Mr. Rob Gill, Assistant Planner, to assess and comment in writing on protected trees at a vacant lot known as 49 Ralston Ranch Road.

The author (WLCA) visited the site on 12/15/2011 to tag and assess the trees. During this time, four (4) previously missing protected size trees #6, 8, 12, and #13 were plotted by WLCA onto the applicant's utility plan sheet C-4 dated 9/16/2011 by Michael Coughlin, project engineer, of Redwood City, California. This marked up sheet is included in this report as the tree location map, which also doubles as a tree protection plan showing preliminary chain link tree protection fence routes suggested by WLCA.

Tree tags are racetrack shaped, and affixed to a major stem at approximately 5 to 7 feet above grade. Tags are numbered 1 through 12. Tree 13 is an overhanging protected size neighbor tree, and as such was not tagged.

Images of the site trees were archived and included in this report.

Tree data has been compiled in an attached Excel spreadsheet.

A tree disposition matrix and a tree impact mitigation matrix are both included below for ease of reference.

I have included suggested protection and maintenance items in the tree data charts and in this report that are to be initiated prior to commencement of, and during, site plan work. This document is therefore a valuable tool for Staff and for site contractor(s) as a reference for all tree maintenance and protection needs.

Full recommendations for maintaining and protecting individual trees are found in the mitigation section of this report. These are designed to guide planning department staff and planning commissioners throughout the decision-making process, as well as provide written documentation for contractors involved with tree preservation measures for this site. These mitigation items are considered the planning division conditions of project approval (COA), and will be deemed so if itemized by Staff in the official Staff report for this project and approved by commission vote.

Tree protection inspections will be performed by the CCA before, during, and after initiation of the site plan project (at the discretion of the planning director). The demolition, grading, and building permits will not be issued without prior city arborist inspection and approval of site tree protection measures.



2 Summary

2.1 Tree Disposition Matrix

Item	Total Number of Trees	Tree Tag Numbers	Removal / Damage Fees
Protected trees total.	13	Trees #1 through #13	
Protected trees to be removed per site plan.	2	Dollar gum #1 Coast live oak #9	\$4,968 (plus up to 3:1 mitigation plantings or in-lieu fees to be determined per each tree removed)
Trees being retained that require protection and maintenance.	11	#2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13	
Post a security bond with City for trees expected to be impacted by site plan-related work	4	#2, 3, 4, 10	\$13,661
Arborist monitoring fees plus City-required administration fee of 30%			\$1,500 X 1.30 = \$1,950
Total Potential Fees			\$20,579 (plus any applicable mitigation plantings and/or in-lieu fees related to the removal of two protected trees)
Landscape Planting Security Deposit required for site plan work involving removal of more than 5 protected trees.			N/A



2.2 Impact Mitigation Matrix

Impact Expected	Trees Tag Numbers Affected	Suggested Mitigation
<p>Storm drain infiltration trench construction within canopy dripline</p>	<p>#2, 3, 8</p>	<p>Move or eliminate the proposed trench between trees #2 and #3 to a location outside the canopy driplines of all trees as shown on the WLCA tree location map in this report.</p> <p>Move or eliminate the proposed trench near tree #8 to a location outside the canopy driplines of all trees being retained. There is no good location for this trench, other than tightlined against the proposed northeast corner of the roofed deck.</p>
<p>Stem footing under residence will encroach to 10 or 11 horizontal feet from trunk edges.</p>	<p>#2, 3, 4</p>	<p>No solution to this issue unless redesign the entire project. Trees will need to be fenced as far as possible from the trunk edges to optimize root zone retention.</p> <p>Need to verify with the applicant that the stem type foundation footings supporting the residence as shown on sheet A3.1 section E are to be installed in an east-west trajectory. If this is the case, then excavation along the east edge of the residence footprint may be minimal. If there is also a full perimeter beam being used that will span the entire east side of the residence in a north-south trajectory, then these three trees may be severely impacted.</p>

Impact Expected	Trees Tag Numbers Affected	Suggested Mitigation
<p>Landscape and irrigation plans revised versions 2/6/2012</p>	<p>#2, 3</p>	<p>Turf and retaining wall construction has been eliminated (good).</p> <p>Concrete steps along the east side of the residence appear to have been eliminated (good).</p> <p>PVC irrigation pipe mainline still encroaches to a few feet from trunk edges of trees #2 and #3 where it T's westward to connect to residence.</p> <p>I suggest rerouting the main line to a location tightlined against the proposed driveway so that it remains westward of the author's proposed tree protection zone fence (TPZ).</p> <p>If a main line PVC irrigation pipe were to be trenched in near the trees, the TPZ would be compromised and the root systems of the trees potentially destroyed.</p>
<p>North edge of deck plus the roof overhang over the deck will encroach to 6 feet or less from the trunk base.</p>	<p>#10</p>	<p>Push back the proposed deck and roof southward 6 to 8 horizontal feet, to allow the canopy of this tree to remain as-is. Otherwise, the tree removal fee of \$3,725 will be levied against this project.</p>
<p>Driveway base section excavation and compaction. Driveway sight line impacts from tree canopy encroachment into project area.</p>	<p>#13 (neighbor-owned redwood)</p>	<p>One option would be to erect a small diameter arc of standing chain link fence panels around the existing canopy dripline to keep construction personnel from damaging branches throughout the site plan work.</p> <p>Another option would be to prune back the canopy using small diameter cuts if possible. The tree may be significantly impacted if pruning is performed at the property line fence itself. Contact the neighbor</p>



Walter Levison
CONSULTING ARBORIST



PNW-ISA Certified Tree Risk Assessor #593

ASCA Registered Consulting Arborist #401

ISA Certified Arborist #WC-3172

Impact Expected	Trees Tag Numbers Affected	Suggested Mitigation
		to discuss options on how to manage this tree in the future, as it may become a sight-line hazard that will prevent normal use of the proposed driveway after this site plan project is completed.

2.3 Monitoring Fees

The applicant will need to deposit an arborist monitoring fee plus a 30% administration fee per City requirement, prior to issuance of permits. The arborist fee is the contract rate for monitoring construction and preparing monthly reports for the eleven (11) expected to be retained and protected at the site in close proximity to the work area as delineated on the current site plan resubmittal.

Total fee: \$1,500 X 1.30 = \$1,950.

2.4 Landscape Plan Issues

Most of the issues present in the original landscape and irrigation plans are now resolved by scaling back the scope of work proposed to occur. However, the main line still T's westward toward the residence just a few horizontal feet from the trunk edges of eucalyptus #2 and #3. I suggest rerouting this main line such that it is located tightlined against the proposed driveway, allowing trenching work to occur far from the trees. Another advantage to moving the main line trenching route is that the chain link tree protection zone (TPZ) fence can remain in place throughout most of the project without being compromised or moved.

3 Protected Trees

Protected trees are defined in the new 2011 Belmont tree ordinance as all trees with trunk diameter(s) totaling 10 inches or greater at 4.5 feet above grade.

Concerning trees situated on land proposed for development/entitlements, there are no exceptions for poorly adapted species, undesirable species, or poor tree condition.

Removal of any protected tree (10 inches and greater in diameter, single or multi-stem total) requires a removal fee based on the chart in the City's 2011-12 Master Fee Schedule.

In addition, removal of protected trees may or may not require mitigation at up to a 3:1 ratio using 15 gallon or 24" box size native oaks or other approved species, or an in-lieu fee of up to (\$497X3 plantings=\$1,491) per single protected tree removed, at the discretion of the planning commission.

4 City of Belmont Master Fee Schedule 2011-12

**CITY OF BELMONT
MASTER REVENUE SCHEDULE
EFFECTIVE JULY 1, 2011**

8. TREE REMOVAL FEES- DEVELOPMENT PROJECTS OR GENERAL PROPERTY MAINTENANCE

Tree removal fees are assessed for the removal of trees required for the development or general maintenance of property. They are collected to mitigate the loss of trees from the City's tree population. Fees are deposited in the City Tree Planting and Establishment Fund.

FEE BASIS:

<u>Tree Size (DBH)</u>	<u>Protected Trees</u>	<u>All Other Species</u>
24" or greater	\$4,968	\$2,484
18" but less than 24"	\$3,725	\$1,241
10" but less than 18"	\$2,484	\$932
6" but less than 10"	\$1,241	\$621
Less than 6"	No Fee	No Fee

NOTES:

- 1) Protected Trees as defined in Chapter 25 of the City Code include: Oaks (all species), Bay, California Buckeye, Monterey Cypress, Coast Redwood, Giant Sequoia and Madrone.
- 2) All Other Species include all other trees except: Acacia (all species), Eucalyptus globulus, Eucalyptus globulus "Compacta" and Monterey Pine.
- 3) Tree size is defined by diameter at breast height (DBH), which means the diameter (at the widest point) of the tree trunk measured at 4.5 feet above natural grade. In the case of multiple stemmed trees, the measurement shall be the sum of the diameter of all stems measured at DBH.
- 4) Payment shall be made prior to the issuance of a grading permit. If no grading permit is required, payment shall be made prior to the issuance of a building permit. If no building permit is required, payment shall be made prior to removal of any protected tree.

9. TREE PLANTING IN-LIEU FEES - DEVELOPMENT OR GENERAL MAINTENANCE PROJECTS

When a requirement to plant trees on the subject property cannot be met, the applicant shall pay a tree planting in-lieu fee to the City Tree Planting and Establishment Fund.

FEE BASIS:

<u>Size of Tree to be Planted</u>	<u>In-lieu Fee</u>
24" Box	\$497

10. PUBLIC NOTICE FEE

\$285



5 Observations & Discussion

The author has informed Staff that a large ground-based twig nest of dusky footed woodrat is located between the trunks of oaks #6 and #7 (see tree location map, this report). Staff is going to require that a biologist report be submitted by the applicant which addresses site woodrat protection, and construction boundaries and limitations per California law.

The site is mainly stocked with native coast live oak (*Quercus agrifolia*)

Only three non-native trees were surveyed: trees #1, 2, and #3.

- Tree #1 is an old non-cultivar seedling of dollar gum: a tree of genetics which are essentially not available in the modern nursery trade. These older trees were not cultivars: they were grown from open pollinated seeds which means they retained the genetics of the original dollar gums grown in the Bay Area such as those in the Caltrans cloverleaf areas along highway 101 in San Mateo and nearby areas. These older seedling dollar gums are truly one of the best eucalyptus in the Bay Area, as they are of decent structure and branch strength with beautiful pest and disease resistant foliage.
- Trees #2 and #3 are Tasmanian blue gum: a eucalyptus species which is an important winter nectar source for bees and hummingbirds, but maintains poor breakage strength and the nasty ability to self-sow and propagate itself as the seeds germinate in the ground. This tree has become a non-native invasive species due to this self-sowing tendency. Note however that Belmont City Ordinance protects all species of trees measuring 10 inches or more (both single and multi-stem specimens). Therefore, trees #2 and #3 are protected.

The remainder of the site trees are native coast live oak as noted above.

One neighbor-owned coast redwood is located west of the proposed driveway.

Overview

The plan calls for construction of an elevated residence of small square footage, set on stem footings which appear from the plan set to run in an east-west trajectory (verify with applicant). Theoretically, this means that root zone impacts to oak #4 should be minimal. However, the canopy of the tree does extend all the way to the proposed siding of the house, leaving little or no room for creation of a construction corridor between a chain link TPZ fenceline and the house.

Also, a proposed concrete stairway will negatively impact roots in this narrow zone between oak #4 and the house, causing even further root zone damage/loss if built as proposed, although it appears that this element has been eliminated from the revised landscape plan version 2/6/2012.

If a perimeter beam footing is to be installed on the east side of the residence, this would impact oak #4 even further (verify with applicant).

Oak #10 is obviously impacted due to direct conflict with the overhanging roof and wood deck proposed within the canopy dripline of the tree. This impact could be significant or severe, and should not be ignored.



Blue gums #2 and #3, as well as coast live oak #8 will be negatively impacted by proposed storm drain infiltration trenches. These items will need to be moved to outside the canopy driplines as shown on the author's tree location map markup in this report. Note that there is very little square footage available to place the infiltration trenches outside the canopy driplines of any trees being retained, as the canopies of trees #2, 3, 4, 8, 10, and #12 cover almost the entire airspace surrounding the east and north sides of the proposed residence footprint. Therefore, this will be an item for immediate discussion between Staff, the City Arborist, and the project team.

Note that there are various additional non-surveyed coast live oaks located downhill from the author's survey area (i.e. north of trees #6, 7, 11, and #12). These trees should remain without any negative impacts from proposed site work, as long as the author's proposed tree protection zone chain link fences are installed with silt fence backup as delineated on the tree location map in this report.

Neighbor redwood #13 may or may not be impacted by proposed driveway work, depending on the actual limits and depth of excavation performed for baserock installation under the drive. I expect impacts to be minor to moderate, unless paint or stucco wastes are dumped along this edge of the property. If tree protection fencing is not erected per my recommendation, significant impacts to both root system and canopy live wood and foliage may occur.

6 Suggested Conditions of Approval

Directions to Staff or Contract Staff associated with this project:

Please enter the following into the Belmont CRW PermitTrack file for this project to prevent permit issuance prior to the City Arborist's evaluation of initial tree protection measures at the site:

'STATUS' field: 'HOLD'

'REMARKS' field: 'PENDING INITIAL TREE PROTECTION INSPECTION AND SIGNOFF'

Prior to issuing a permit for grubbing, demolition, tree removal, grading, excavation, or construction, the following must occur:

1. Pre-Construction Meeting between Project Team and Contract City Arborist (CCA):

Prior to finalization of or approval of the plans, members of the applicant's project team shall make an appointment for a pre-construction meeting with the Contract City Arborist and Staff at the Permit Center. The following items are up for discussion:

- a. **Stem Footings:** CCA will need to verify trajectory of the proposed stem footings (east-west, or north-south) as shown on A3.1 section "E", since this side cut view is not shown as a cut line on any bird's eye view plan sheet in the current application package. Verify whether a perimeter beam footing is to be installed along the east side of residence.
- b. **Tree Protection:** CCA will need to discuss final delineation of chain link fencing with project team. Optimal fencing locations are in conflict with the proposed roofline, deck, SF infiltration trenches, concrete steps, and wall/turf/irrigation piping.



- c. Pruning: CCA will discuss requirement of using an ISA Certified Arborist for pruning of any trees for the site plan project. The pruning vendor performing work will need to verify that ANSI A300 standards for tree care / tree, shrub, and woody plant maintenance / pruning are adhered to.

d. Fees:

Verify that tree-related fees are paid:

Monitoring fee (\$1,500 arborist fee) plus 30% administration fee required by the City for a total of \$1,950 which covers monthly site inspections and letter reports throughout the life of the project from start of work until final signoff.

- i. Tree removal fee of \$4,968 for removal of trees #1 and #9.
- ii. Bond of \$13,661 posted with City to hedge against damage to or death of potentially impacted trees #2, 3, 4, and #10 in close proximity to proposed work.
- iii. Mitigation (in-lieu fees) for loss of 2 protected size trees will be up to 2 X (3:1 mitigation) = maximum of 6 plantings (min. 15 gallon size), or 6 X \$497/tree = \$2,982, or a combination thereof (per planning commission and Staff decision).

Given the heavily stocked forest on this site, I suggest installing zero plantings and instead require the \$2,982 in-lieu fee as a reasonable way of handling the mitigation requirement for the loss of trees #1 and #9.

- iv. Impacts: Verify that the project team understands the CCA will determine prior to final occupancy permit issuance if certain tree specimens were negatively impacted by site plan construction activity to the degree that a damage fee would be required to be paid in the amount of partial or full tree removal fees plus in-lieu fees as applicable.

e. Staging/Storage/Ingress/Egress:

Identify all staging, storage, and ingress/egress areas as outside of the delineated TPZ fence perimeters protecting trees to be retained.

f. Stairs, landscape and irrigation:

Suggest that the PVC irrigation pipe main line be rerouted to a location tightlined against the proposed driveway such that trenching will not occur within the tree protection zone fenced area as drawn on the contract city arborist's tree map.

g. Deck/Roof:

I suggest that the north side of deck with roof be redesigned such that the entire canopy of oak #10 can be retained as-is with no pruning required. This will require pulling back the proposed deck and roof at least 6 to 8 feet southward. If this cannot be performed, then the entire removal fee and



mitigation fee for oak #10 will be levied against the project (i.e. \$3,725 plus an in-lieu fee of \$1,491 per fee schedule).

Note that Staff and planning commission action will dictate whether oak #10 can be severely pruned or removed, or whether it is required to be maintained in its current condition with no impacts to the canopy.

h. Infiltration Trenches:

Verify that the proposed storm drain infiltration trenches currently proposed for under the canopy driplines of trees #2, 3, and #8 are either eliminated or moved to outside the canopy driplines of all trees being retained. This may mean that they will be relocated as tightlined against the northeast corner of the proposed residence footprint, or other locations far from trees.



2. Trunk Buffer:

Trees #2, 3, 4, and #10 shall be supplied with trunk buffers covering the exposed lower trunks between grade elevation and approximately 8 feet above grade (or the lowest scaffold limbs). The buffer shall consist of orange plastic wrapped approximately 20 times to create a layer 2 inches thick (a single large tree uses up to 1 or 1.5 rolls of orange plastic fencing material).

Place 2X4 wood boards over the buffer, standing up side by side around the entire trunk circumference. Secure with duct tape or rope, or continue wrapping orange plastic over the wood boards and affix with UV resistant zip-ties. Do not use wires. See sample images at right.





3. Tree Protection Fencing:

Chain link

Install chain link fence per locations determined during the pre-construction meeting around all trees being retained, ideally at or uphill from the canopy driplines as shown on the tree location map in the City Arborist report. Fencing material used for all protective fences must be steel chain-link, at least five-feet in height, mounted on two-inch diameter galvanized iron posts 6-feet in length, driven a minimum of 24-inches into the ground. Posts for post and hook fencing must be mounted no wider than six-feet apart. This fence must be erected prior to any heavy machinery traffic or construction material arrival on site.



Silt fence with built-in stakes (e.g. TENAX) shall be installed per package directions for the TPZ fencing to be installed on the uphill side of the fence to prevent materials migration downhill during construction (see image at right).

Install straw wattles along the bottom edge of the silt fence and pound wood stakes into the wattles to secure them at the base of the silt fence for added protection for the TPZ root preservation areas.

Fencing locations shall be per final determinations in the field during the pre-construction meeting between the general contractor and the CCA at site.

Compliance inspections will occur (1) at the time of fence erection (2) approximately once monthly during grading and construction, and (3) after construction is complete. All fencing must remain in place until all construction is completed and the fencing and other protection has received a final signoff letter from the contract city arborist at the end of project. Permit approval will not occur until after the first inspection has been performed and the protection measures are approved by the city arborist.

The protective fencing must not be temporarily moved during construction. No materials, tools, excavated soil, liquids, substances, etc. are to be placed or dumped, even temporarily, inside the TPZ. Storm drain infiltration trenches will be relocated to outside the TPZ areas such that they can be installed without moving TPZ fences.

No storage, staging, work, or other activities will be allowed inside the TPZ.



4. Signage:

The TPZ fencing shall have one sign affixed with UV-stabilized zip ties to the chain link at eye level for every 15-linear feet of fencing, minimum 8"X11" size each, plastic laminated or otherwise waterproofed, stating:

TREE PROTECTION FENCE

**DO NOT MOVE OR REMOVE WITHOUT AUTHORIZATION FROM
WALTER LEVISON, CONTRACT CITY ARBORIST (CCA)**

CALL OR EMAIL 48-HRS ADVANCE FOR PERMISSION

Cell (415) 203-0990 <drtree@sbcglobal.net>

5. Root Pruning:

If any woody roots measuring 1 inch diameter or greater are encountered during site work such as retaining wall excavation or pier drilling near trees being retained, stop site plan work and call a qualified tree care contractor to prune roots at right angles to the root growth direction, using sharp tools such as an A/C powered Sawzall, lopper, professional pruning saw, etc. If roots are required to be left exposed for more than 24 hours, then cover with 6 layers of wet, muddy burlap. If possible, cover the root(s) completely with existing site soil and irrigate thoroughly to saturate. Cover the soil with wood chip mulch. See image at right for example of correct root pruning.



Call the CCA at cell 415-203-0990 immediately upon encountering the roots (prior to pruning) so that digital images of the root locations, depths, and densities can be archived.

6. Wood Chip Mulch:

Spread out an even 4 inch thick layer of chipper truck type natural wood chips (available from Lyngso in Redwood City) over the entire TPZ areas of trees #2, 3, 4, and 10. The wood chips shall cover the entire area from 2 feet out from trunk, to the TPZ fencelines. See example image at right.





7. Irrigation Temporary:

Use a temporary water source such as a neighbor's hose bib attached to a soaker hose (see image above right) or a tow-behind water tank (see image below right), to supply irrigation to the wood chip mulched areas of trees #2, 3, 4, and possibly #10.

The CCA will check soil moisture using a Lincoln probe on a once monthly basis to determine if relative soil moisture levels are adequate for proper cultural care of various individual site trees. Irrigation adjustments may be required depending on these monthly probe readings. Typical irrigation for temporary watering of trees being retained is +/- 100 to 200 gallons per tree, 1x/month or 2x/month.



Irrigation Log Book

The general contractor shall keep an irrigation log book on site as a record available for the City Arborist to view upon entering the site for random unannounced inspections. The log book shall indicate date of each watering event, and note tree tag numbers irrigated, along with roughly estimated volumes of water applied to each tree.

8. Pruning:

Retain a qualified ISA-Certified Arborist to perform pruning per current ANSI-A300 standards on an as-needed basis (see report vendor list for approved vendors). Call the City Arborist to meet with the chosen contractor on site prior to performing any pruning.

9. Site Plan Adjustments:

As noted in condition #1, it is suggested that the following items be performed to optimize root zone retention around protected trees being retained:

- a. Relocate the proposed storm drain infiltration trenches such that they are outside the canopy driplines of all trees being retained as shown on the tree location map in the City Arborist report. This may mean that the trenches end up being tightlined against the north corners of the proposed residence.
- b. Pull back the proposed deck and north roofline by 6 to 8 feet so that the canopy of oak #10 can remain as-is with little to no pruning required to clear the work area airspace.
- c. Relocate irrigation main line pipe trenching such that there is a separation of at least 15 linear feet between trees #2 / #3 and the work.



7 Consultant's Qualifications

- Contract Project Arborist, Hetch Hetchy Water Service Improvement Program (WSIP)
San Francisco Public Utilities Commission
10/10-present
- PNW-ISA Certified Tree Risk Assessor #593
- PNW-ISA Certified Tree Risk Assessor Course graduate, 2009
Vancouver, B.C., Canada
- ASCA Registered Consulting Arborist #401
- Millbrae Community Preservation Commission (Tree Board)
2001-2006
- ASCA Arboriculture Consulting Academy graduate, class of 2000
- ISA Certified Arborist #WC-3172
- B.A. Environmental Studies/Soil and Water Resources
UC Santa Cruz, Santa Cruz, California 1990
- Peace Corps Soil and Water Conservation Extension Agent
Chiangmai Province, Thailand 1991-1993
- Associate Consulting Arborist
Barrie D. Coate and Associates
4/99-8/99
- Contract City Arborist to the City of Belmont Department of Planning and Community Development
5/99-present
- Continued education through attendance of arboriculture lectures and forums sponsored by The American Society of Consulting Arborists, The International Society of Arboriculture (Western Chapter), and various governmental and non-governmental entities.

(My full curriculum vitae is available upon request)

8 Assumptions and Limiting Conditions

Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownership to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised and evaluated as through free and clean, under responsible ownership and competent management.

It is assumed that any property is not in violation of any applicable codes, ordinance, statutes, or other government regulations.

Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant/appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.

The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

Unless required by law otherwise, the possession of this report or a copy thereof does not imply right of publication or use for any other purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant/appraiser.

Unless required by law otherwise, neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales, or other media, without the prior expressed conclusions, identity of the consultant/appraiser, or any reference to any professional society or institute or to any initiated designation conferred upon the consultant/appraiser as stated in his qualifications.

This report and any values expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.

Sketches, drawings, and photographs in this report, being intended for visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise. The reproduction of any information generated by engineers, architects, or other consultants on any sketches, drawings, or photographs is for the express purpose of coordination and ease of reference only. Inclusion of said information on any drawings or other documents does not constitute a representation by Walter Levison to the sufficiency or accuracy of said information.

Unless expressed otherwise:

- a. information contained in this report covers only those items that were examined and reflects the conditions of those items at the time of inspection; and
- b. the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

Loss or alteration of any part of this report invalidates the entire report.

Arborist Disclosure Statement:

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborist cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate the trees.

9 Certification

I hereby certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Signature of Consultant



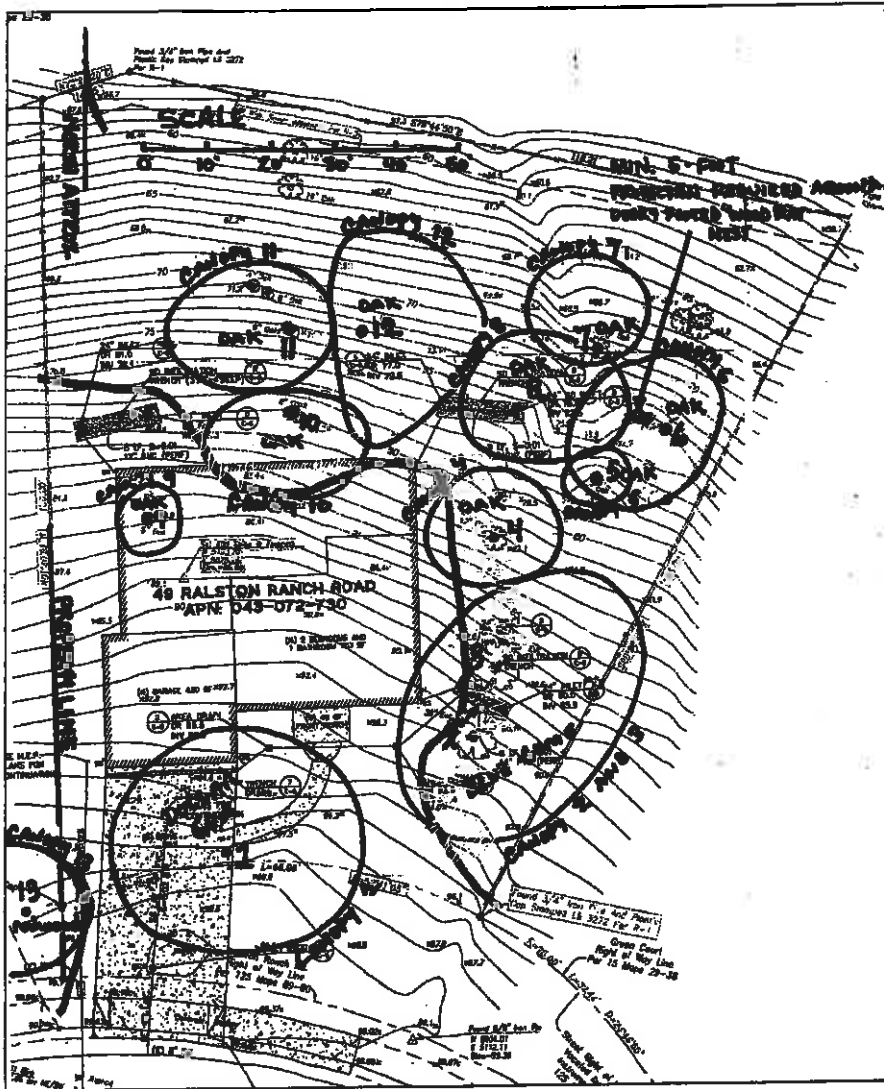
10 Approved Vendors List 2011

Service	Company	What they offer	Contact
Transplanting	Tree Movers Inc. (Mountain View)	Large specimen trees, transplant services.	650-968-6117
Pruning	Advanced Tree Care (Redwood City)	Pruning, root crown excavation, fertilization, tree installation, support systems for high risk trees, SOD phosphate sprays.	650-839-9539
	Maguire Tree Care (Half Moon Bay)	Pruning performed directly by an ISA Certified Arborist	650-245-2620
Tree Sources	Specialty Oaks, Lower Lake, CA	California native oak species	www.specialtyoaks.com
	Oracle Nursery	Various oaks and hybrid elms. Only local purveyor of hard to find Italian oak (<i>Q. frainetto</i> 'Forest Green')	www.oraclenursery.com
	Calaveras Nursery (the one in Valley Springs)	Large selection of rare and hard to find oak species for drought type situations.	1622 Hwy. 12 Valley Springs, CA 95252 Tel: 209/772-1823 Fax: 209/772-0864
	Oaktopia	Large selection of rare and hard to find oak species for drought-type situations	www.oaktopia.net




11 Tree Map Scan

 = Tree Protection Zones or "TPZ" (To be finalized during pre-con meeting)
Yellow Lines = Wood Chips



Note that the City Arborist-recommended fence routes as shown above are in direct conflict with the currently-proposed stairs, landscaping, deck, roofline, and storm drain infiltration trenches. Tree #10 will be considered a removal and fees will apply, if the proposed covered deck is built per current configuration.

12 Images

Tree Tag #		
1		





Walter Levison
CONSULTING ARBORIST



PNW-ISA Certified Tree Risk Assessor #583

ASCA Registered Consulting Arborist #401

ISA Certified Arborist #WC-3172

2		
3		





Walter Levison
CONSULTING ARBORIST





PNW-ISA Certified Tree Risk Assessor #593



ASCA Registered Consulting Arborist #401

ISA Certified Arborist #WC-3172




4		
5		



6		
7		

8		
9		



10		
10, 11, 12		Shown are trees #10, 11, 12 (L to R), looking west.
		Protected woodrat nest between trees #6 and #7. This a California State species of special concern, protected by law.
13	(no image of this neighbor owned redwood)	

Attached: Tree Data Charts, 3 Pages

Tree Tag #	Trunk Diameter	Trunk Diameter	Trunk Diameter	Trunk Diameter	Total Sum of Trunk	Common Name	Botanical Name	Height/Spread (ft.)	Health/Structure (0 to 100%)	Overall Condition Rating (0 to 100%)	Protected Tree	Suitability for Preservation (Preservative or construction)	Comment 1	Comment 2	Comment 3	Removal Per Site Plan	Potential Transplant Candidate	Expect Severe Site Plan Impacts	Suggested Site Plan Adjustments (Pruning, Fertilization, etc.)	Protection and Maintenance Codes	Tree Removal Fee per 2011-12 Fee Schedule	
1	31.4				31.4	oiler gum seedling	<i>Eucalyptus polyanthemos</i> (non cultivar)	40/35	90/60	70% Good	Yes	Good	Tree located in direct conflict with proposed driveway.	Good TDE	These old seedling oiler gum specimens are some of the all time best eucalyptus in the Bay Area.	X						\$ 2,484
2	28.2				28.2	Tasmanian blue gum eucalyptus	<i>Eucalyptus globulus</i>	50/30	75/60	67% Fair	Yes	Mod	Proposed residence footprint is only 10 feet or less from trunk edge, and may cause significant root loss depending on trajectory of the stem wall footings.	Tree needs deadwood removal, and probably endweight reduction pruning.	Need to adjust proposed location of irrigation trench (sheet C-6 item 6) which is between the trunks of trees #2 and #3, and reroute proposed PVC irrigation pipe trench to 1.5 feet from trunk.			X	I, D	tpz, tb, w, m	\$ 2,484	
3	33.2				33.2	Tasmanian blue gum eucalyptus	<i>Eucalyptus globulus</i>	50/30	60/60	70% Good	Yes	Mod	Same as tree #2 (likely impacted by proposed footprint at 11 feet or less from trunk with unknown distance to stem wall footings).	Recommend remove the 7" diameter codominant mahogany at 25 feet. Also perform endweight reduction pruning.	Need to adjust proposed location of irrigation trench (sheet C-6 item 6) which is between the trunks of trees #2 and #3, and reroute proposed PVC irrigation pipe trench to 1.5 feet from trunk.			X	I, D	tpz, tb, w, m	\$ 2,484	
4	9.0	8.0	6.0	5.0	28.0	coast live oak	<i>Quercus agrifolia</i>	20/20	75/60	80% Good	Yes	Good	Moderate TDE.	Tree canopy appears clear of the proposed building footprint, but there is little or no room for a construction corridor between the TPZ and the building.	Recommend install the TPZ at 10 feet out from trunk edge, which is only one to two horizontal feet from the proposed building footprint.					tpz with slit fence, tb, m, w	\$ 4,968	
5	5.5	4.8			10.3	coast live oak	<i>Quercus agrifolia</i>	15/8	15/15	15% Very Poor	Yes	Low	Tree is shaded under the canopies of larger coast live oak specimens.	Decay at 5 feet above grade on mainstem.							tpz with slit fence	\$ 2,484
6	10.5	7.5	6.8		24.6	coast live oak	<i>Quercus agrifolia</i>	25/25	75/75	75% Good	Yes	Good	Note dusky footed woodrat nest near this tree which requires protection per California State law.	Fence off at or uphill from the canopy dripline (i.e. at least 15 or 17 feet out from trunk edge).	Note that this tree was NOT plotted on the applicant's plan sheets.						tpz with slit fence	\$ 4,968

Nomenclature: Live Twig Density and Live Twig Extension = "TDE" Overall Condition Rating Range: Very Poor 0-25%, Poor 26-49%, Fair 50-69%, Good 70-90%, Excellent 90-100%

Site: 49 Ralston Ranch Road, Belmont (Vacant Lot)

Tree Tag #	Trunk Diameter	Trunk Diameter	Trunk Diameter	Trunk Diameter	Total Sum of Trunk Diameters	Scientific Name	Botanical Name	Height/Spread (ft.)	Health Structure (0 to 100%)	Overall Condition Rating (0 to 100%)	Protected Tree (Yes/No)	Suitability for Preservation (Preservative or Construction)	Comment 1	Comment 2	Comment 3	Removal Per Site Plan	Potential Transplant Candidate	Expect Severe Site Plan Impacts	Suggested Site Plan Adjustments (Pruning, (D)amage, (U)tilize, (R)emove, (C)ontact, (I)rrigation)	Maintenance and Protection Codes	Tree Removal Fee per 2011-12 Fee Schedule
7	10.3				10.3	coast live oak	<i>Quercus agrifolia</i>	23/15	75/75	75% Good	Yes	Good	Canopy bled out downhill.	Fence with chain link TPZ above the canopy of tree #8 alter adjust the location of the proposed infiltration trench.						tpz with silk fence	\$ 2,484
8	8.0	6.8	5.5	2.8	23.1	coast live oak	<i>Quercus agrifolia</i>	25/25	75/80	78% Good	Yes	Good	Good TDE. Tree not plotted on the applicant's plan sheets. Fence off at 15 feet out from trunk edge.	Tree will be negatively impacted by proposed infiltration trench which is 2 feet from trunk edge.	The only location to place this term outside oak canopy drip lines would be lighted against the northeast corner of the deck.			D	tpz with silk fence	\$ 3,725	
9	5.8	5.6			11.4	coast live oak	<i>Quercus agrifolia</i>	15/12	90/75	84% Good	Yes	Good	Tree to be removed due to direct conflict with the proposed roof-covered wood deck.	Good TDE		X					\$ 2,484
10	7.0	5.0	4.0	4.0	20.0	coast live oak	<i>Quercus agrifolia</i>	22/25	85/75	83% Good	Yes	Good	Canopy extends at least six (6) horizontal feet beyond the proposed north edge of roof over the proposed wood deck. Recommend adjust proposed roof/deck 6 to 8 feet southeast to allow tree to remain at-its.	Good TDE	Existing canopy live wood and foliage hangs down to 3 feet above natural grade. Pruning to clear the proposed roof/deck will remove at least 30 to 40% of the entire canopy which is considered severe. Again, recommend adjust deck/roof footprint to clear the tree.		X	F	tpz at 13 feet uphill from trunk edge (i.e. at south edge of canopy), with silk fencing.	\$ 3,725	
11	9.0	9.0	9.0	5.0	32.0	coast live oak	<i>Quercus agrifolia</i>	25/25	85/85	85% Good	Yes	Good	Good TDE	Use TPZ fence with silk fence at 25 feet out from trunk.						tpz	\$ 4,968

Nomenclature: Live Twig Density and Live Twig Extension = "TDE" Overall Condition Rating Range: Very Poor 0-25%, Poor 26-49%, Fair 50-69%, Good 70-89%, Excellent 90-100%

Tree Assessment Chart
Walter Lawton Consulting Arborist (WLCA)
Contract City Arborist, City of Belmont, CA
Site: 49 Ralston Ranch Road, Belmont (Vacant Lot)

Tree Tag #	Trunk Diameter	Trunk Diameter	Trunk Diameter	Trunk Diameter	Total Sum of Trunk Diameters	Common Name	Botanical Name	Height/Spread (ft.)	Health/Structure (0 to 100%)	Overall Condition Rating (0 to 100%)	Protected Tree	Suitability for Preservation (irrespective of construction)	Comment 1	Comment 2	Comment 3	Removes Per Site Plan	Potential Transplant Candidates	Expect Severe Site Plan Impacts	Suggested Site Plan Adjustments (D) Pruning, (F) Fertilization, (U) Upright, (T) Topping, (O) Other	Maintenance Codes	Tree Removal Fee per 2011-12 Fee Schedule
12	12.0	10.0	8.0	6.0	36.0	coast live oak	<i>Quercus agrifolia</i>	28/35	80/85	77% Good	Yes	Good	Good TDE	Canopy extends 20 feet out from trunk (radius), and hangs down to 5 feet above grade. Canopy lopsided uphill.	This tree was NOT plotted on applicant's plan sheets.					top with silk fence	\$ 4,988
13	10.4	0.0	0.0	10.4	10.4	coast redwood	<i>Sequoia sempervirens</i>	28/18	70/60	65% Fair	Yes	Good	This tree was NOT plotted on applicant's plan sheets.	This neighbor-owned tree with moderate TDE overhangs the property line approximately 4 to 5 horizontal feet, and may or may not be impacted by proposed driveway base excavation and compaction.	Existing fence acts as a TPZ, although canopy overhang will be damaged and may require radical pruning which could cause long term decline of tree.					P	\$ 2,484

Notes:

- The California native dusky footed woodrat nest between trees #6 and #7 requires 5 feet of protection around the entire nest, per requirements as a California state species of special concern. This nest is not to be disturbed.
- Trees #6, #8, and #12 were not plotted in the applicant's set of plans. Walter Lawton added these trees during the field assessment. Tree #13 was added as an overhanging neighbor tree or "protected tree" size (i.e. > 10.0" diameter).
- Additional native coast live oak specimens are located downhill (i.e. north of) the set of twelve (12) trees included in this partial site survey. If protection for trees is not performed per the City Arborist report recommendations, these additional unassessed trees may be negatively impacted by proposed site plan work.
- Impacts from proposed residence footprint are somewhat unclear, and depend on the exact location of the apparently east-west oriented stem wall footings shown on applicant's sheet A3.1 (section "E"). Impacts from the proposed north edge of roof which overhangs 2+ feet beyond the north edge of the "wood deck" will be severe for oak #13 in terms of canopy loss.

Protection and Maintenance Codes per Contract City Arborist (WLCA):

- TPZ: Tree protection fence, chain link, with 2" diameter iron posts driven 24" into the ground, 6 to 8 feet on center max. spacing, with TENAX silk fence installed on uphill side of fence and zip-tied to the chain link.
- RB: Root buffer consisting of wood chip mulch laid over existing soil as a 12 inch thick layer, overlain with 1 inch or greater plywood strapped together with metal plates. This root buffer or soil buffer should be placed over the entire width of the construction corridor between tree trunks and construction.
- TB: Trunk buffer constructed as indicated above in the tree charts, consisting of either a straw wattle wrapped around the trunk, or 10-20 wraps of orange plastic snow fencing to create a 2 inch thick buffer over the lowest 8 feet of tree trunk. Secure buffer using duct tape (not wires).
- F: Fertilization with Greenbelt 22-14-14 tree formula.
- M: 4 inch thick layer of wood chip mulch (Dynaglo, ask pickup).
- W: Irrigate using various methods to be determined through discussion between City Arborist and General Contractor. Irrigation frequency and duration to be determined through discussion. Permanent irrigation must be over-grade only, with no pipe trenching deeper than 4 inches below grade. Maintain professional grade emitter line is the preferred alternative "branchless" drip irrigation product.
- P: Pruning per specifications noted elsewhere. All pruning must be performed only under direct site supervision of an ISA Certified Arborist, or performed directly by an ISA Certified Arborist.
- MON: Requires that Contract City Arborist (CCA) be present to monitor branching/excavation within 20 feet of tree.
- RCE: Root crown excavation by an ISA Certified Arborist, using dull rounded hand tools to reestablish original grade elevations around the trunk base such that buttress root "flares" are visible.
- RF: Remove fill soil by hand using shovels and wheelbarrows to reestablish original grade and increase aerobic function of tree root zone area under canopy drip-line.

Memorandum: Live Twig Density and Live Twig Extension = "TDE" Overall Condition Rating Range: Very Poor 0-25%, Poor 26-49%, Fair 50-69%, Good 70-89%, Excellent 90-100%



WOOD BIOLOGICAL CONSULTING

65 Alta Hill Way
Walnut Creek, CA 94595
Tel: (925) 899-1282
Fax: (925) 939-4026
e-mail: mike@wood-biological.com

March 13, 2012

Mr. Slim Lu
Slim Lu Construction
520 N. Whisman Road
Mountain View, CA 94043

RE: Biological Evaluation, 49 Ralston Ranch Road, Belmont

Dear Mr. Lu,

At your request, I conducted a biological evaluation of your property located at 49 Ralston Ranch Road (APN 043-072-730) in the City of Belmont, San Mateo County. The objective of this evaluation is to address issues raised by the City in their letter to you dated February 15, 2012. Specifically, the City noted that the special-status species San Francisco dusky-footed woodrat may inhabit your parcel. This memorandum is provided in satisfaction of the City's requirement.

Methods and Limitations

This evaluation is based on a single reconnaissance-level survey by biologist Michael Wood. The survey was performed on March 11, 2012 between the hours of 1130 and 1330. The weather was cool (55°F) and overcast, with winds around 8-10 mph. The objectives of this survey were to characterize habitats on site and determine if a woodrat nest is present. No focused wildlife or plant surveys were conducted.

Characterization of the Site

The subject parcel is situated in a residential neighborhood built along minor side ridges and upper canyon slopes of the San Juan Hills. The property is part of a narrow tract of homes directly above San Juan Canyon and is contiguous with the City of San Mateo's

Sugar Loaf Mountain Open Space Preserve and Laurelwood Park. The wedge-shaped parcel is on the upper north-facing slope of an undeveloped canyon (see Figure C-3, attached). Existing single-family residences are located to the east, west and south.

The uppermost portion of the parcel, closest to Ralston Ranch Road, supports ruderal vegetation dominated by a relatively sparse covering of non-native annual grasses and forbs. Characteristic species include ripgut brome (*Bromus diandrus*), bristly ox-tongue (*Picris echioides*), cut-leaved geranium (*Geranium dissectum*), Italian thistle (*Carduus pycnocephalus*), wild oats (*Avena fatua*), bur-clover (*Medicago polymorpha*), and Bermuda buttercup (*Oxalis pes-caprae*). Three large non-native eucalyptus trees are rooted in or near the development footprint, including red box (*Eucalyptus polyanthemus*; tree #1[to be removed]) and Tasmanian blue gum (*E. globules*; tree #2 and 3[to be preserved]).

The lower slopes of the parcel support coast live oak woodland habitat, dominated by coast live oak trees (*Quercus agrifolia*). Other native plant species characteristic of this natural plant community include toyon (*Heteromeles arbutifolia*), manroot (*Marah fabaceus*), coyote brush (*Baccharis pilularis*), bedstraw (*Galium aparine*), California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), and snowberry (*Symphoricarpos albus* var. *laevigatus*).

Immediately downslope from the subject parcel, contiguous stands of coast live oak woodland and northern (Franciscan) coastal scrub (coyote brush phase) are present.

San Francisco Dusky-Footed Woodrat

The San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) is a State species of special concern (CDFG 2011a). It is one of eleven recognized woodrat subspecies occurring in California (Matocq 2002). The San Francisco dusky-footed woodrat inhabits oak and riparian woodlands with a well-developed understory in the San Francisco Bay Area. This subspecies is distributed through the Santa Cruz Mountains and Diablo Range from the Pajaro River north to the San Francisco Bay (Hall 1981). It is most common in riparian, oak woodland and scrub habitats, but is able to persist in semi-rural areas in proximity to houses, if patches of native habitat are present. A study of a similar subspecies *N. f. luciana* on Camp Roberts found that densities increased significantly if dense under-story was present; densities reached 46.7 animals per hectare in plots of dense vegetation (Tietje 1995).

Woodrats typically build nests of sticks and other debris on the ground, in the lower branches of trees and occasionally in human-made structures. Nests are often reused by successive generations and some can become six feet or more in height. Other atypical dens, including tree cavities, rock crevices and ground holes, are well-hidden and easily overlooked. Nests are used for rearing young, protection from predators, resting, food storage, thermal protection and social interaction (Carraway and Verts 1991). Individual

woodrats can use and maintain more than one nest and, occasionally, more than one woodrat can occupy a den (Fargo and Laudenslayer 1999). Woodrat nests are also used by a wide variety of native amphibians, small mammals, reptiles and insects (Ingles 1965; Carraway and Verts 1991). Woodrats feed on a variety of plant material, including seeds, nuts, berries and leaves, oftentimes foraging above the forest floor (Jameson and Peeters 1988). Woodrat home ranges may cover 46.2 acres, but activity may also be limited to a single tree over an individual's lifetime (Zeiner, *et al.* 1990). They are mostly nocturnal in habit and active throughout the year. Dusky-footed woodrats breed year-round and may produce up to five litters per year, with litters containing one to four young (Zeiner, *et al.* 1990). Development of oak woodlands and clearing of brushy under-story are possible threats to this species.

A single nest is present on the subject property (see the attached site plan and photographs). The nest measures approximately 8 feet long by 5 feet wide, and stands about 3 feet tall. Numerous entrances lead into the nest. Although many of the entrances are screened with spider webs, indicating that they have not been recently used, entrances on the downhill side (*i.e.*, facing away from the street) are clear, with abundant woodrat droppings just outside. The nest appears in good repair and it is most likely currently occupied. A very coarse stick nest was observed in the upper canopy of the adjacent coast live oak tree, as well as in an adjacent tree rooted on the property to the east; these nests may have been constructed by woodrats.

Although the subject property is surrounded by a 5 foot-tall chain link fence, it does not pose a barrier to the movement of woodrats to and from the adjacent woodland habitat. San Francisco dusky-footed woodrat is a relatively common inhabitant of San Juan Canyon and the hills of San Mateo County.

Conclusions and Recommendations

Based on a review of the proposed grading plan, construction-related activities are not likely to impact the existing woodrat nest on site and would not result in "take" of the species. To ensure that the woodrat nest is not accidentally impacted during construction, it is recommended that a short section (ca 20 feet long) of orange construction fencing or equivalent be erected on the uphill side of the nest, about ten feet away from the nest. No additional monitoring or mitigation measures are warranted.

In the event the project plans change, such that construction activities would directly impact the woodrat nest, there are two options for proceeding with work.

1. If feasible, site clearing should be performed during the non-breeding season for woodrats (*e.g.*, September 1 through November 30). During the non-breeding season, the nest should be disassembled by hand and the nest materials (*e.g.*, sticks) removed

and disposed of off-site. Any adult animals will be passively relocated into the adjacent woodland habitat.

2. If site clearing must proceed during the breeding season, it will be necessary to determine whether or not the nest is currently occupied. This may be done by direct observation over the course of at least two evenings no more than 48 hours prior to nest disassembly. Direct observation may consist of installation of wildlife cameras at the nest or by a biologist on the ground. If no animals are observed, the nest may be disassembled by hand. If, during the process of disassembling the nest, live animals are encountered, nest materials should be replaced on top of the nest and the effort abandoned. Nest may not be disassembled if young woodrats are present. Construction must then be postponed until the end of the breeding season.

During the course of my reconnaissance survey I also inspected all of the trees on site for the presence of bird nests, since removal the large red box is proposed. Many local passerines (perching birds) and raptors (birds-of-prey) are protected under the Migratory Bird Treaty Act (MBTA)¹; some bird species are also protected under specific sections of the California Fish and Game Code.² No nests are present in the tree to be removed or in the immediate project vicinity (*i.e.*, within 50 feet of the limits of grading). I did not observe any birds exhibiting breeding behavior or showing. Removal of the red box tree may proceed in the next 30 days, if authorized by the City.

If you or the City should have any questions regarding my observations and recommendations, please don't hesitate to contact me.

Sincerely,



Michael Wood

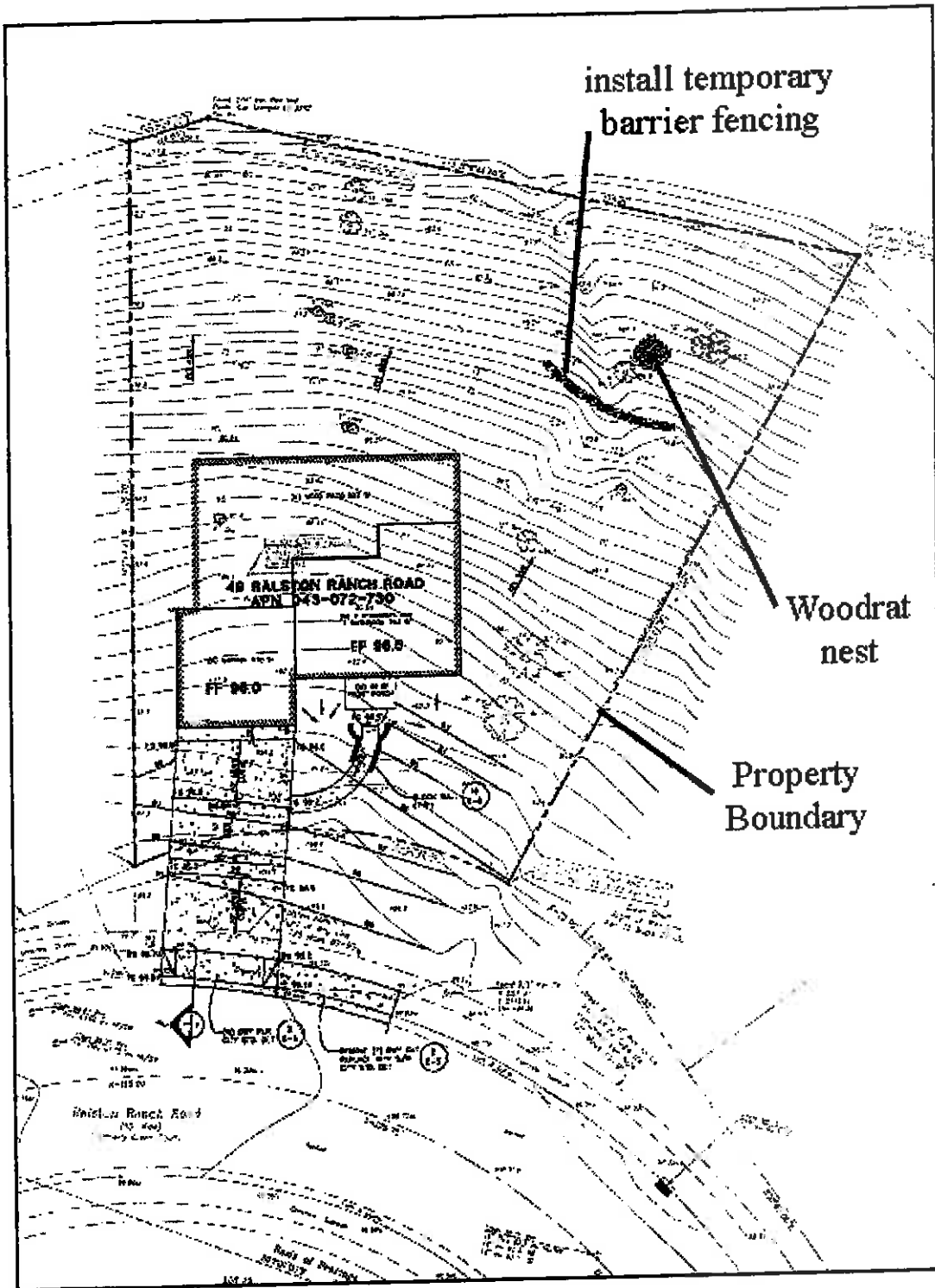
Enclosures: Literature Cited
Site plan with woodrat nest location
Site photographs

¹ 16 U.S.C. 703-711

² §3503, *et seq.*

Literature Cited

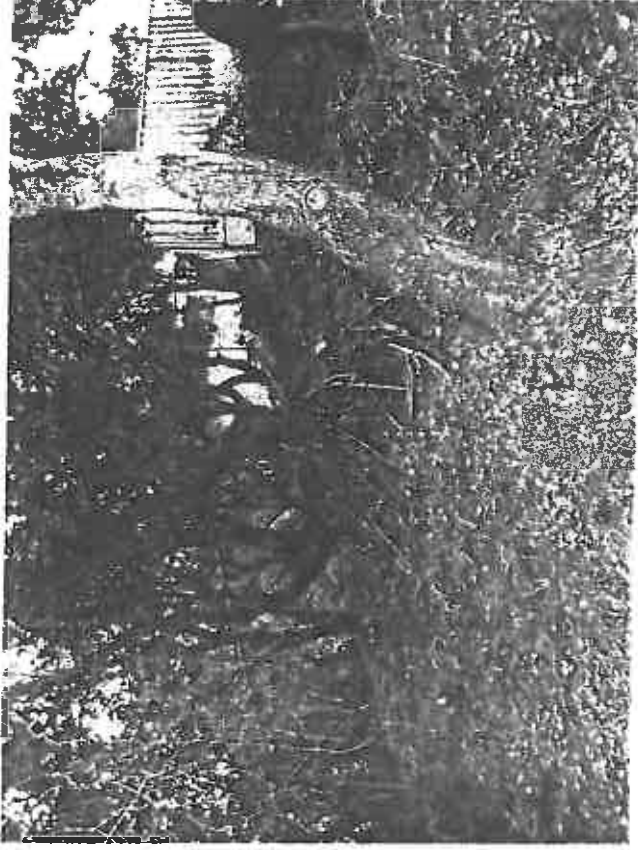
- Carraway, L.N. and B.J. Verts. 1991. *Neotoma fuscipes*. Mammalian Species, No. 386, pp. 1-10.
- Fargo, Roberta J.; Laudenslayer, William F., Jr. 1999. *Are House Counts Reliable Estimators of Dusky-footed Woodrat Population Size?* Transactions of The Western Section of The Wildlife Society 35: 71-75.
- Ingles, L. 1965. *Mammals of the Pacific States*. Stanford, California: Stanford University Press. 506 PP.
- Jameson, E.W. Jr. and H.J. Peeters. 2004. *Mammals of California*. Revised Edition. University of California Press. Berkeley, California. 429 pp.
- Tietje, W. 1995. *Woodrat Abundance and Habitat Measurements in Oak Woodland at Camp Roberts, California: Preliminary Results*. In Transactions of the Western Section of the Wildlife Society 31:53-57.
- Zeiner, D., W. Laudenslayer, K. Mayer, and M. White, eds. 1988-1990. *California's Wildlife Volume I. Amphibians and Reptiles. Volume II. Birds. Volume III. Mammals*. California Statewide Wildlife Habitat Relationships System. State of California, The Resources Agency, Dept. of Fish and Game, Sacramento, Calif.



Source: Michael Coughlin, PE

Figure 1. Location of Woodrat Nest

Alternative view of woodrat nest, looking east.



Close-up view of woodrat nest, looking east



Recent woodrat droppings at nest entrance





View of upper portion of property, looking north



View of woodrat nest in relation to east fenceline, looking north

MEETING OF MAY 1, 2012

AGENDA ITEM NO. 5A



Application I.D.: 2011-0055
Application Type: Single Family Design Review
Location: 49 Ralston Ranch Road
Applicant/Owner: Slim Lu
APN: 043-072-740
Zoning: HRO-2 (Hillside Residential & Open Space)
General Plan Designation: HROP – Hillside Residential & Open Space
Environmental Determination: Categorically Exempt, Section 15303, Class 3(a)

PROJECT DESCRIPTION

The applicant requests Single Family Design Review approval to construct a new 1,120 square foot single-family residence that is below the zoning district permitted 1,140 square feet for this site.

RECOMMENDATION

Staff recommends that the Planning Commission **approve** the Single Family Design Review subject to the conditions of approval contained in the attached draft resolution¹.

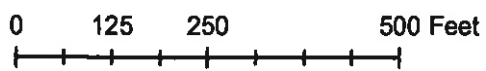
ZONING/GENERAL PLAN DESIGNATION

The subject property is located in the HRO-2 zoning district, subdivided Hillside Residential and Open Space. The General Plan Designation is HROP, Hillside Residential Open Space, in the San Juan Hills Area Plan.

PRIOR ACTIONS

The subject property consists of lot 115 and a portion of lot 116, originally established in 1927 as part of the Belmont Country Club Subdivision No. 10. At that time, the right-of-way fronting the subject site was delineated as Green Court.

¹ Please note: This recommendation is made in advance of public testimony or Commission discussion of the project. At the public hearing, these two factors, in conjunction with the staff analysis, will be considered by the Commission in rendering a decision on the project.



Other key actions affecting the subject site are as follows:

- September 1995 – Hillside Roadway Improvement Plan & 20-lot subdivision approved showing Ralston Ranch Road as the new right-of-way fronting the subject property.
- August 2001 – Zone Text Amendment adopted by the City Council removing the Floor Area Exception process (BZO Section 4.2.10) for all properties zoned HRO-1, HRO-2, and HRO-3, and requiring all exceptions to floor area standards be subject to the Variance provisions of Section 14.
- January 2003 – City Council adopts a Zone Text Amendment amending the HRO-2 Floor Area Ratio Table and creating a “sliding scale” minimum for lots at 31% - 45% and larger slope. The resulting action mandates a maximum permitted dwelling size for the subject site of 1,140 sq ft. (based upon the 33% slope of the property).
- September 2004 – The City Council adopts a Resolution approving a summary vacation of a portion of right-of-way directly adjacent to the subject site. The additional right-of-way area vacated expanded the lot to its current size.
- October 4, 2005 – A requested Floor Area Variance and Single Family Design Review was denied by the Planning Commission. On January 24, 2006, the City Council upheld the Planning Commission decision.

SITE CONDITIONS

The 13,130 square foot irregularly-shaped interior lot is situated on the northern downslope section of Ralston Ranch Road and has an average slope of 33%. The lot has a gradually descending downslope from the front (south) of the property to the rear (north). The City's Ground Movement Potential and Geologic Hazard Policy Map of the San Juan Hills Study Area designates the subject site as being in a Ps (potential shallow landslide failure) zone which allows development and roadway expansion on a conditionally permitted basis. A geotechnical study has been prepared for the proposed dwelling and is further discussed in the Project Analysis section of this report.

The lot is covered in native grasses and shrubs, and is studded with a significant number of mature eucalyptus and oak trees throughout the site. Thirteen mature trees within or adjacent to the proposed dwelling development area were surveyed by the City Arborist; the treatment of these trees is also discussed in the Project Analysis section of this report.

PROJECT ANALYSIS

The proposed new two-story (one level of occupancy), 1,120 square foot single-family residence consists of the following:

Floor Plan

The 690 square foot living area consists of living and kitchen areas, two bedrooms, and two bathrooms. The project design includes a covered front entry porch and a rear covered deck which are both open in design and are not included in the floor area calculations. The residence also includes a 430 square foot two-car garage with a 20' x 20' interior dimension and an understory/crawl space area.

Dwelling Area Summary	
Proposed Square Footage	
Main Living Area:	690 Sq. Ft.
Garage:	430 Sq. Ft.
Total for dwelling:	1,120 Sq. Ft.

Exterior Materials/Colors

The proposed dwelling would have a stucco exterior finish with tile roofing. Architectural design features include a wood framed and bay window design, arched stucco columns incorporated into the front entry, and wood railings enclosing the rear deck. The color palette is earth tones: dark gray for the stucco finish, and light gray for the window and door trim. The building colors and materials are illustrated on the attached sample sheet (See Attachment VII).

Landscaping and Groundwork

The City Arborist surveyed thirteen mature trees within the project scope and prepared a report (dated February 28, 2012) (Attachment VII) that lists tree protection measures. The City requires mitigation plantings for removal of a protected tree at a 3:1 ratio using 15-gallon or 24-inch box size trees or an in-lieu fee. The applicant proposes to plant three 15-gallon size trees (two Japanese maples and one Liquidambar) as mitigation plantings for the removal of one protected size tree. In addition, the applicant shall be required to pay in-lieu fees for the removal of the other protected size trees as conditioned.

The applicant proposes a landscape plan for the site that will include new shrub plantings of five to one-gallon size, three 15-gallon size trees and ground cover. Other exterior site improvements will consist of three-foot tall block walls, an on-grade walkway and a two-car driveway.

A large ground-based twig nest of dusky footed woodrat(s) was located between the trunks of oaks #6 and #7 (see tree location map in Arborist report). The dusky footed woodrat is considered a California species of special concern. A biologist report (prepared by Wood Biological Consulting, dated March 13, 2012) (Attachment VIII) was submitted by the applicant that addresses the site and construction boundaries and limitations.

Groundwork and Geotechnical Recommendations

Estimated earthwork quantities for the project include 62 cubic yards (CY) of cut and 62 CY of fill, resulting in a net of 0 CY of fill to be imported to the site. American Soil Testing, Inc. performed a geotechnical investigation (report dated November 21, 2011) for the subject site. The report was peer-reviewed by the City's Consulting Geologist, Cotton, Shires & Associates (CSA), in a letter dated January 17, 2012. A copy of the letters/peer review is included in Attachment VI. CSA has concluded that a residential structure is geotechnically feasible for the site with utilization of appropriate geotechnical design criteria. The City Geologist's recommendations for plan review and construction inspections are included in the conditions of project approval (Attachment III). Should the project be approved, the City Geologist will evaluate the proposed grading quantities and design layout in conjunction with the building permit submittal when the construction drawings, including those for the foundation, are available.

PROJECT DATA

Criteria	Existing	Proposed	Required or Max. Allowed
Lot Size	13,130 sq. ft.	No Change	No Change
Slope	33%	No Change	No Change
FAR	NA	0.085	0.087
Square Footage	NA	1,120 sq. ft.	1,140 sq. ft. max. per BZO 4.7.11(c)
Parking	NA	Two-car garage (20' x 20') Two uncovered	Two-car garage Two uncovered
Setbacks:			
Front (south)	NA	18 ft.	15 ft.
Side (right)	NA	28 ft.	7 ft.
Side (left)	NA	7 ft.	7 ft.
Rear (north)	NA	Approx. 50 ft.	15 ft.
Driveway length	NA	18 ft.	18 ft.
Height	NA	27 ft.	28 ft.

GENERAL PLAN CONFORMANCE

The proposed new single-family residence does not change the intended land use of the site. The residence is in conformance with the Hillside Residential Open Space general plan designation.

ZONING CONFORMANCE

1. The project plans indicate the proposed crawl space/understory area for the dwelling will include a floor to ceiling height of 6' 5". Thus, this crawl space/understory area will not result in additional floor area for the site¹.

A Condition of Approval has also been included requiring following:

During the course of construction, the crawl space/understory beneath the living area shall be subject to inspection by City's Building Department to ensure that this area has a floor to ceiling height less than 6'6".

2. Current Zoning Ordinance regulations require that no primary dwelling within a single family zoning district shall exceed 28-feet in height². The proposed dwelling (27-feet in height) complies with this section of the BZO.

A Condition of Approval has also been included requiring following:

Building plans shall be submitted that reflect that no part of the residence shall exceed the 28-foot height limit as measured from the finished grade to the uppermost point of the residence immediately above. A California licensed surveyor or civil engineer shall provide a wet-stamped certification that the home conforms with the 28-foot height limit prior to the roof diaphragm inspection.

The proposed new residence and site improvements meet all setbacks, height, FAR, and permitted use regulations of the HRO-2 zoning district.

NEIGHBORHOOD OUTREACH

The applicant performed neighborhood outreach as detailed in the Neighborhood Outreach Strategy and letter attached to this report. The property owner reported sending a letter with attached plans to all neighbors within 300 feet of the vacant property on March 22, 2012 informing them of the project and requesting any comments. The applicant has reported no objections to the project. Staff has not received any public comments regarding this project as of the writing of this report. The applicant appears to have achieved the outreach strategy tasks.

ENVIRONMENTAL CLEARANCE (CEQA)

The proposed new single-family home is categorically exempt from the provisions of the California Environmental Quality Act by provision of Section 15303, Class 3(a):

"Class 3 consists of construction and location of limited numbers of new, small facilities or structures...Examples of this exemption include but are not limited to:

¹2.60 FLOOR AREA, GROSS – "The sum of all finished and un-finished framed-in floor surfaces with an interior vertical height of six and one-half feet (6' 6") or more from floor to ceiling, capable of accommodating living space..."

² 4.2.5 HEIGHT (e) No dwelling or other primary structure shall have a height in excess of twenty-eight (28) feet.

- (a) One single-family residence, or a second dwelling unit in a residential zone. In urbanized areas, up to three single-family residences may be constructed or converted under this exemption."*

The proposed residence meets the above requirements for CEQA exemption.

SINGLE FAMILY DESIGN REVIEW EVALUATION

The Belmont Zoning Ordinance establishes the following findings for the review of single-family residential projects (Section 13A.5 (A-H)). Each finding is listed below with staff's analysis of whether this project meets each finding in the affirmative.

- A. The buildings and structures shown on the site plan are located to be consistent with the character of existing development on the site and in the neighborhood, as defined; minimize disruptions of existing public views; protect the profile of prominent ridgelines.*

The proposed new residence would be situated on the portion of the lot closest to the street and would be set back 18' from the street to provide the required driveway length. The low profile of the house from the street and side yard setbacks that meet or exceed required setbacks would not disrupt public views from Ralston Ranch Road. Staff believes this finding can be made in the affirmative.

- B. The overall site and building plans achieve an acceptable balance among the following factors:*
- (1) building bulk*
 - (2) grading, including*
 - (a) disturbed surface area and*
 - (b) total cubic yards, cut and fill*
 - (3) hardscape, and*
 - (4) tree removal*

Building bulk

The lot size, 13,130 square feet, is sufficient to support the proposed 1,120 square foot dwelling (maximum permitted size house is 1,140 square feet for this location). The residential structure has been designed with varying roof lines that help break up the bulk and mass of the two story structure. The architectural style of the residence is generally well designed to compliment the site and compatible with adjoining developed properties. Architectural design features include arched stucco columns incorporated into front entry, wood railings enclosing the rear deck, a wood framed and bay window design, tile roofing, a complimentary palette of earth tone colors, and an extensively landscaped front yard. The architectural details appear to moderate the building bulk and are appropriate for this structure and the neighborhood.

Grading/Hardscape

Estimated earthwork quantities for the project include 62 cubic yards (CY) of cut and 62 CY of fill, resulting in a net of 0 CY of fill to be imported to the site. The driveway is not excessive in size and meets the minimal parking requirements for the site. The only other hardscape is a paved

walkway to the front entrance. The hardscape elements do not appear to be excessive for development of a new single family home and are appropriate in the neighborhood context. Most of the site would remain in native vegetation.

Tree Removal

The City Arborist surveyed thirteen mature trees within the project scope. Two protected size trees (#1 and #9) are proposed for removal and one protected size tree (#10) is considered a removal due to a direct conflict with the proposed deck and roof structure. As conditioned, the applicant shall be required to plant mitigation plantings (15-gallon size) for the loss/damage of the protected trees and pay an in-lieu fee to the City's tree fund.

All four factors (building bulk, grading, hardscape, and tree removal) appear to have been appropriately addressed in the building design and site/groundwork that result in breaking up the vertical mass and lines of the structure, ensuring soil stability and suitable construction techniques and limiting the hardscape. An overall balance appears to be achieved with the proposed design and this finding can be made in the affirmative.

C. All accessways shown on the site plan and on the topographic map are arranged to provide safe vehicular and pedestrian access to all buildings and structures.

The driveway is of adequate width, length and slope to provide a safe backup space and to park two cars. The front entrance is accessed by a level, paved walkway from the driveway that is safe for pedestrian usage. This finding can be made in the affirmative.

D. All proposed grading and site preparation have been adequately reviewed to protect against site stability and ground movement hazards, erosion and flooding potential, and habitat and stream degradation.

Estimated earthwork quantities for the project include 62 cubic yards (CY) of cut and 62 CY of fill, resulting in a net of 0 CY of fill to be imported to the site. A Geotechnical Investigation, prepared by American Soil Testing, Inc. and reviewed by the City Geologist (Cotton, Shires & Associates), concludes that the proposed dwelling can be feasibly built on the site. The design will keep the front exterior walkway on grade and there will be no retaining walls over six feet in height. The reports do not contain any recommendations for reducing the site grading. Should the project be approved, the City Geologist will evaluate the proposed grading quantities and design layout in conjunction with the building permit submittal when the construction drawings, including those for the foundation, are available. This finding can be made in the affirmative.

E. All accessory and support features, including driveway and parking surfaces, underfloor areas, retaining walls, utility services and other accessory structures are integrated into the overall project design.

The driveway meets the BZO criteria for adequate backup space and parking for two cars. The front entrance is easily accessible from the proposed walkway on the level portion of the site. Staff believes the site improvement features are well integrated into the overall project design. This finding can be made in the affirmative.

- F. *The landscape plan incorporates:*
- (1) *Native plants appropriate to the site's environmental setting and microclimate, and,*
 - (2) *Appropriate landscape screening of accessory and support structures, and,*
 - (3) *Replacement trees in sufficient quantity to comply with the standards of Section 25 (Trees) of the Belmont City Code.*

The site is currently covered in native grasses and with several protected/mature trees. The City Arborist surveyed thirteen mature trees within the project scope. Of the thirteen trees surveyed, three protected trees are proposed to be removed. As mentioned earlier, removal/damage to these trees shall require mitigation plantings and in-lieu fees paid to the City's tree fund. Tree protection measures as recommended by the City Arborist have been included as part of the project conditions of approval. The new landscaping includes three additional trees (15-gallon size), shrubs (1 and 5 gallon size), and ground cover plantings within the front and side yard areas. The rear lot area will remain in native vegetation. This finding can be made in the affirmative.

- G. *Adequate measures have been developed for construction-related impacts, such as haul routes, material storage, erosion control, tree protection, waste recycling and disposal, and other potential hazards.*

Review of staging areas, recycling and disposal procedures and adequacy of erosion control measures would be reviewed by the Building Division as part of the structural plan check. The City Geologist has reviewed and approved the geotechnical recommendations for site construction and erosion control, and these recommendations are included in the conditions of project approval. All construction would be completed in compliance with the California Building Code and NPDES standards as administered by the City of Belmont. This finding can be made in the affirmative.

- H. *Structural encroachments into the public right-of-way associated with the project comply with the standards of Section 22, Article 1 (Encroachments) of the Belmont City Code.*

Other than a standard driveway approach which requires Temporary Encroachment Permit approval as administered by the Public Works Department, the proposal includes no encroachments into the public right-of-way. This finding can be made in the affirmative.

CONCLUSION AND RECOMMENDATION

Based on the foregoing analysis, staff recommends approval of the Single Family Design Review application subject to the Conditions of Approval in Attachment III.

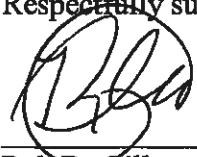
ACTION ALTERNATIVES

1. Continue the application for redesign.
2. Deny the Single-Family Design Review. The Commission will identify specific facts to support a denial, and a resolution would be returned to the Commission for final action.

ATTACHMENTS

- I. 300/500 foot radius map of project site
- II. Resolution approving the Single Family Design Review
- III. Conditions of Approval
- IV. Neighborhood Outreach Materials
- V. Geotechnical Site Investigation, American Soil Testing, Inc., November 21, 2011 (Commission only)
- VI. Geotechnical Review, Cotton, Shires & Associates, January 17, 2012 (Commission only)
- VII. Arborist Report, February 28, 2012 (Commission only)
- VIII. Biologist Report, Wood Biological Consulting, March 13, 2012 (Commission only)
- IX. Applicant's plans, materials board, and photos (Commission only)

Respectfully submitted,



Rob D. Gill
Assistant Planner



Carlos de Melo
Community Development Director

CC: Applicant/Owner