STAFF REPORT
Zoning Administration
February 6, 2020

Item #2

Staff Contact: Lara Tran, Associate Planner
(408) 299-5797, lara.tran@pln.sccgov.org

File: PLN19-0079
Building Site Approval on slope greater than 30% (BA) and Grading Approval for a new single-family residence

Summary: Building Site Approval on a slope greater than 30% (BA) and Grading Approval for a new 9,608 square foot single-family residence with a 2,626 square foot detached garage. The average slope of the proposed developed area is approximately 39.18%. Associated site improvements include an access driveway with retaining walls and a bridge located off from the subject property. Estimated grading quantities are approximately 5,535 cubic yards of cut and 680 cubic yards of fill.

Owner: Robert Waterman and Ramsay Waterman
Applicant: Charles Zaffaroni
Lot Size: 7.1 acres
APN: 182-36-043
Supervisorial District: #5
HCP: Not a covered HCP project

Gen. Plan Designation: Hillsides
Zoning: HS
Address: Alpine Road, Portola Valley
Present Land Use: Vacant
Approved Building Site: No

RECOMMENDED ACTIONS
A. Accept a Categorical Exemption, under Section 15303(a) of the CEQA Guidelines, Attachment A
B. Grant Building Site Approval and Grading Approval, subject to Conditions outlined in Attachment B.

ATTACHMENTS INCLUDED
Attachment A – Proposed CEQA Determination
Attachment B – Proposed Conditions of Approval
Attachment C – Location & Vicinity Map
PROJECT DESCRIPTION

The proposed project is a request to construct a new 9,608 square foot, three-story, 25 feet tall, single-family residence with a basement, a pool, and a 2,626 square foot detached garage. The new residence is proposed to be constructed where the slope of the developed area is approximately 39.18%. The location of the detached garage/accessory structure is proposed more than 75 feet from the existing property line.

The proposed grading is associated with the construction of the building pads for the residence and detached garage, geo-technical site stabilization, along with grading necessary for ancillary site improvements, including retaining walls, driveway access, and a fire truck turnaround area. A total of 6,215 cubic yards is proposed, with 5,535 cubic yards of cut and 680 cubic yards of fill necessary to complete the project. A total of forty-one (41) trees, including thirty-one (31) oak trees, are proposed for removal, as the majority of the trees are dead or diseased, are located within the areas of improvement for driveway access, or are within the proposed building footprint of the residence and detached accessory structure. The applicant is proposing trees replacement with a total of fifty-three (53) oak trees and tree preservation for existing trees in proximity to the development and improvement areas.

Setting/Location Information
The subject parcel is approximately 7.1 acre in size, with Los Trancos Creek located to the northeast of the property. Access to subject property is via a private road, Alpine Road, that is within the County of San Mateo. The property is north of Santa Clara County, adjacent to the City of Palo Alto, but outside of the City of Palo Alto’s urban service area. The property is also adjacent to the County of San Mateo and the Town of Portola Valley to the west and north. The neighborhood character consists of similarly sized lots, developed with large estate homes built between the 1980’s to 2000, and a country club to the northwest.

The subject property is covered with dense trees (of which most are oak trees) and shrub vegetation to the north, with a clearing in the southeast and additional dense trees in the center and west. The property is steep, with an average slope of 37.37% (entire property), and slopes upward from west to east. There is an existing dirt road that provides access to the northwest portion of the lot. The proposed site location (referred to as Area No. 3, “the Bench” on the plans) is the most feasible area on the property that allows for a stable foundation with minimal amounts of grading required, and with the least amount of disturbance to the existing landscape. Staff did require a feasibility analysis to be conducted to determine the highest and best alternative for development on the subject property. Additional analysis for alternative site feasibility can be found in Attachments E and G.

REASONS FOR RECOMMENDATIONS
A. Environmental Review and Determination (CEQA)
   The proposed project qualifies for a Categorical Exemption, Section 15303 (Class 3a) for one single-family residence in a residential zone.

B. Project/Proposal
   1. General Plan: The project is a single-family residence within the HS zoning district, located outside of the City of Palo Alto Urban Service Area. The General Plan land use designation for the subject parcel is Hillsides and allows for single-family residential use.

   2. Zoning Standards. The proposed project satisfies the required development standards for a single-family residence in the HS (Hillsides) zoning district as summarized below:

      - Front Setback: 30 feet
      - Side Setbacks: 30 feet
      - Rear Setback: 30 feet
      - Height: 35 feet
      - Stories: 3 stories

   3. Building Site Approval: The County discourages development on slopes of 30 percent or more due to additional site constraints and challenges typically occurs in such hillside environments, including but not limited to, steep terrain, geologic and seismic hazards, difficulties in designing and constructing safe and sustainable onsite wastewater systems, meeting access standards for regular emergency vehicles, potentially significant tree removal, and the need for significant grading. Consequently, building site approval on slopes 30 percent or more shall only be granted where the parcel has no feasible alternative location for development on slopes less than 30 percent, all necessary health and safety issues are adequately addressed, and the resulting visual impacts of such development are addressed with appropriate conditions of approval.

      Per Section Sec. C12-350.5 of the County Ordinance Code, the Zoning Administration Hearing Officer may grant Building Site Approval for development on slopes of 30 percent or greater if all required findings are made. The required findings are listed below in **bold**, and an explanation of how the project complies with each finding follows in plain text.

      A. The project meets or exceeds the requirements of any applicable County agency or other affected public agency and conforms to all applicable development standards.

      The proposed project has been reviewed by all applicable County agencies, including Land Development Engineering, Department of Environmental Health, Fire Marshal’s Office, Geology, Planning Division, and applicable public agencies, including San Mateo County and the Town of Portola Valley. All
agencies and County Divisions have determined that the proposed project conforms to all applicable development standards. Those agencies have also, where necessary and appropriate, provided conditions of approval to ensure that the proposed residence and the infrastructure needed to support the residence meet all applicable development standards. Additionally, all agencies have conditioned the project conform to the County General Plan and Ordinance Code, demonstrating the maximum health and safety protection, and ensuring that the project would not result in unsafe or unsustainable conditions. As such, this finding can be made.

B. The project integrates design solutions to all site or development constraints satisfying the requirements and standards for all reviewing and responsible agencies.

Much of the property is steeply sloped with significant topographic and geologic constraints that create challenges to site design. The project was analyzed for a total of four (4) potential building site locations (Attachment E) on the property prior to determining the current location (Area No. 3, “the Bench”) as the most feasible location area for development. Given the developmental constraints of the property, the project is designed to minimize the amount of earth movement as much as possible, while conforming to the standards and regulations by various agencies within the County of Santa Clara. The proposed driveway, for example, follows the existing on-site dirt road to minimize disturbance of the natural hillside as much as possible. The length of the driveway utilized a 15% slope for most of the driveway with segments sloped at 20% to reduce the retaining wall heights, grading volumes, and necessary amount of tree removals. Retaining walls are utilized to minimize the horizontal land disturbance and keep the development area in its existing natural condition. The residence is proposed to be located on the most feasible area of the property (Area No. 3, “the Bench”, Attachment E). Although the location of the residence is not closest to the access road, the proposed area location is the most suitable as the site was previously graded as part of an old farm road system and storage area many decades ago. Area No. 3 is suitable for a building site as it utilizes the least amount of earth work required (compare to other alternative development areas – see Site Comparison Table) where the grading is concentrated in a previously disturbed area with man-made slopes, rather than in areas that are natural. The total grading quantities have been minimized to 5,535 cubic yards of cut and 680 cubic yards of fill to achieve a shorter driveway and the overall design of the residence is tiered and stepped into the hillside to reduce bulk and massing that is consistent with the County’s adopted “Guidelines for Grading and Hillsides Development,” and the County’s General Plan (R-GD27 and R-GD32). As stated above, the proposed project has been reviewed by all applicable public agencies, and those agencies have determined that the project satisfies all required standards. As such, this finding can be made.

C. The project cannot be located on portions of the lot with less than 30% slope.
The project was analyzed for a total of four (4) potential building site locations (Attachment E) on the property prior to determining the current location (Area No. 3, “the Bench”) as the most feasible location area for development. Although Area No. 3 has the highest average slope for the development site at 39%, the slope that exists in Area No. 3 is man-made and resulting from on-site grading from years prior. Compared to all the other alternative sites, Area No.3 shows the most potential for development, as the grading quantities are significantly lower for the development area, and as it would not require as much geotechnical remediation as the other locations. Furthermore, and disturbance to the natural landscape is significantly reduced due to a shorter driveway and tiered design of the residence (see Site Comparison Table).

**Table 1: Site Comparison of Grading Quantities, Average Slope of Development Area, and Tree Removal for Four (4) Alternative Building Site Analyses (Feasibility Analysis)**

<table>
<thead>
<tr>
<th>Area Name on Site Plan</th>
<th>Area 1 “Clearing”</th>
<th>Area 2 “Bowl”</th>
<th>Area 3 “Bench”</th>
<th>Area 4 “Garden”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut/Fill</td>
<td>Cut</td>
<td>Fill</td>
<td>Cut</td>
<td>Fill</td>
</tr>
<tr>
<td>Grading Quantities</td>
<td>5,500</td>
<td>8,800</td>
<td>14,000</td>
<td>12,000</td>
</tr>
<tr>
<td>(cubic yards)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Grading Quantities</td>
<td>14,300</td>
<td>26,000</td>
<td>6,215</td>
<td>19,975</td>
</tr>
<tr>
<td>(cubic yards)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg. Slope of Development Area (%)</td>
<td>36</td>
<td>38</td>
<td>39</td>
<td>25</td>
</tr>
<tr>
<td>No. of Trees Removed</td>
<td>34</td>
<td>25</td>
<td>41</td>
<td>36</td>
</tr>
</tbody>
</table>

As seen in Table 1 above, Area No. 2 (the “Bowl”) requires the largest quantity of grading due to significant geotechnical remediation required for the site from underlain debris flow deposits. The long driveway to Area No. 2 would create a visual scar on the overall landscape of the property and would not be a better alternative site compared to Area No. 3. Although Area No. 1 (the “Clearing”) does not require as much geotechnical remediation to stabilize the foundation, the excessively long driveway to access the development area would create a significant and visual scar on the existing natural landscape, and would not be the minimum amount of grading necessary to establish the primary use (residence). In addition, the overall siting of Area No. 1 and Area No. 2 are not consistent with the County’s “Guidelines for Grading and Hillsides Development,” and the County’s General Plan (R-GD24) of discouraging unnecessary long driveways into the hillsides. Although Area No. 4 (the “Garden”) has a lower slope (25%), due to significant geological constraints, approximately 20,000 cubic yards of grading would be required to stabilize the foundation as well as site improvements.
such as driveways and retaining wall that are required for the development area, as Area No. 4 has significant deep debris flow identified from the Geotechnical Report by C2Earth with deep debris flow (dated April 17, 2019). As such, Area No. 4 would result in significantly more grading due to geotechnical remediation for the development site and could potentially cause man-made landslide due to large amount of soil movement in an area that was identified from the Geotechnical Report by C2Earth with deep debris flow (dated April 17, 2019). Aside from the significant grading that would incur on Area No. 4, the proposed residence would not meet the minimum 30-foot residential setbacks (front, side, and rear) for the HS zoning district, as the area would be too small for the location of the primary residence. In addition, the proposed residence in Area No. 4 would be located much closer to the Los Trancos Creek, which traverses near the northwest portion of the property and is not desirable due to creek and creek bank disturbance.

For the reasons stated above, and as identified in the record, by factoring the significant topographical and geological constraints on the property, Area No. 3 is the most feasible development. Area No. 3 requires the least amount of grading (see Table 1), minimizes the necessity for a long driveway, and the overall site allows for a tiered and stepped design of the residence into the hillside to reduce massing and bulk, and create a conformity to the natural landscape. Additionally, siting the residence at Area No. 3 minimizes disturbance to the natural landscape, as the site was previously graded as part of an old farm road system and storage area many decades ago, and therefore, reduces the need for additional grading. The proposed development at Area No. 3 would include grading for the driveway on a previously graded area, rather than on sites that are still natural.

For the reasons stated above, the proposed project cannot be sited on property in areas less than 30%, and the proposed site location, Area No. 3 – the “Bench” – is the best location to issue Building Site Approval. As such, this finding can be made.

D. The overall site design, including but not limited to access roads and driveways, retaining walls, architectural quality, landscaping, tree preservation, grading and erosion control, and landscaping, is in harmony with the natural landscape and environment and topography, demonstrates efficiency in terms of the extent and nature of proposed access or other improvements, minimizes overall grading and terrain alteration, and reasonably mitigates the visual impacts of development.

Summary
Locating the proposed residence at Area No. 3 reduces the need for a long driveway and significantly minimizes grading as compared to other site alternatives. The grading proposed would be necessary for the establishment of the residence and does not create a visual scar on the property. The proposed driveway, for example, follows the existing on-site dirt roads to minimize any
disturbance of the natural hillside. The length of the driveway utilized a 15% slope for most of the driveway, with segments sloped at 20% to reduce the retaining wall heights, grading volumes, and necessary amount of tree removals. Retaining walls are utilized to minimize the horizontal land disturbance and keep the development area in its existing natural condition. The residence is tiered and stepped into the hillside to balance the amounts of cut and fill as well as to reduce massing and visual bulk. The design of the residence includes steps in the building foundations and varied roof heights and planes to break the overall massing of the building.

*Oak Woodland*

A total of forty-one (41) trees (with thirty-one (31) oak trees) are proposed for removal. According to the arborist report prepared by Matthew Fried, Heartwood Consulting Arborists (dated November 9, 2019), the proposed amount trees removed is necessary, as many of the trees recommended for removal are dead or diseased, or are located within the areas of improvement for driveway access and proposed building footprint of the residence and detached accessory structure. The arborist report also concluded there would not be an impact on oak woodland as the project is below the threshold of ½ an acre of impact. The applicant is proposing replacement with a 2:1 ratio of oak trees and tree preservation of the existing trees in proximity to the development and improvement areas.

*Nesting Raptures*

According to County records for California Natural Diversity Database (CNDDB), there are no special status plants or animals found on the property, or within proximity to the property. As such, the federal Migratory Bird Treaty Act (MBTA) would not apply for the site.

As mentioned in Findings A, B, and C above, locating the residence at Area No. 3 minimizes the grading quantities to 5,535 cubic yards of cut and 680 cubic yards of fill to achieve a shorter driveway and the overall design that is consistent with the County’s “Guidelines for Grading and Hillsides Development,” and the County’s General Plan (R-GD24, R-GD27, and R-GD32). As such, this finding can be made.

6. **Grading Approval:** Pursuant to Section C12-433, all Grading Approvals are subject to specific findings. In the following discussion, the scope of review findings are listed in **bold**, and an explanation of how the project meets the required standard is in plain text below.

   A. **The amount, design, location, and the nature of any proposed grading is necessary to establish or maintain a use presently permitted by law on the property.**

   The project’s grading quantities are 5,535 cubic yards of cut and 680 cubic yards of fill. The proposed grading would be necessary to stabilize the existing foundation, establish the building pads, and make improvements to the driveway,
which are allowable uses for the underlying zoning district. Consequently, the
amount, design, location and the nature of the proposed grading is necessary and
appropriate to establish the single-family residential use, which is a permissible
use in the HS zoning district. As such, this finding can be made. The breakdown
of grading is quantified below.

<table>
<thead>
<tr>
<th>Type</th>
<th>Cut (CY)</th>
<th>Fill (CY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Pads</td>
<td>2,500</td>
<td>0</td>
</tr>
<tr>
<td>Driveway</td>
<td>1,915</td>
<td>260</td>
</tr>
<tr>
<td>Site</td>
<td>1,100</td>
<td>340</td>
</tr>
<tr>
<td>Bridge (off-site)</td>
<td>20</td>
<td>80</td>
</tr>
<tr>
<td>Total</td>
<td>5,535</td>
<td>680</td>
</tr>
</tbody>
</table>

B. **The grading will not endanger public and/or private property, endanger public health and safety, will not result in excessive deposition of debris or soil sediments on any public right-of-way, or impair any spring or existing watercourse.**

The proposed grading will not endanger public or private property. As evaluated and proposed within the Supplemental Geology Feasibility Evaluation for “Bench” Building Site (Dated July 11, 2019) by C2Earth, Area No. 3 will require landslide hazard mitigation that consists of double row of stitch piers, with a minimum diameter of 2 ½ feet and a depth of about 80 feet for the downhill side of the development area. The grading is kept to the minimum necessary to establish a single-family residential use on the property that will provide a safe and stable foundation. All export will be deposited at an approved site. The Conditions of Approval of final grading plans will ensure that grading around the building pads and driveway will not result in slope instability or erosion. Land Development Engineering has specific erosion control standards to be implemented as part of the driveway and grading design. As such, this finding can be made.

C. **Grading will minimize impacts to the natural landscape, scenic, biological and aquatic resources, and minimize erosion impacts.**

The proposed grading has been designed to contour to the natural topography to the maximum extent possible and the overall design the residence is tiered and stepped into the hillside to minimize disturbance to the natural landscape. Retaining walls for the driveway are proposed to limit the grading and disturbance to the native hillside as much as possible. Although a total of forty one (41) trees are proposed for removal as part of the project, the applicant will replace with a 2:1 ratio of oak trees as part of their tree replacement/preservation plan and landscaping plan. All new grading will utilize temporary erosion control measures during construction that will be replaced with long-term permanent erosion control measures in the form of natural landscaping. As such, this finding can be made.
D. For grading associated with a new building or development site, the subject site shall be one that minimizes grading in comparison with other available development sites, taking into consideration other development constraints and regulations applicable to the project.

As noted in the Building Site Approval Findings section of this report, the project was analyzed for a total of four (4) potential building site locations (Attachment E) on the property prior to determining the current location (Area No. 3) as the most feasible location area for development. The proposed location (Area No. 3) is suitable for a building site, as it utilizes the least amount of grading required. The total grading quantities have been minimized to 5,535 cubic yards of cut and 680 cubic yards of fill to achieve a shorter driveway and the overall design of the residence is tiered and stepped into the hillside to reduce bulk and massing, also reduces grading, which is consistent with the County’s “Guidelines for Grading and Hillsides Development,” and the County’s General Plan (R-GD27 and R-GD32). In addition, the grading is designed to follow the natural contours to the maximum extent possible. The proposed building site is the most suitable, as it minimizes the grading necessary for establishment of the single-family residence. As such, this finding can be made.

E. Grading and associated improvements will conform with the natural terrain and existing topography of the site as much as possible, and should not create a significant visual scar.

As previously mentioned, the access driveway for the proposed residence uses the existing on-site dirt roads to minimize any disturbance of the natural hillside and will not create any visual scar. Additionally, the residence and detached accessory structure are tiered and stepped into the hillside to blend in with the natural terrain. Although the property is not visible from the valley floor, the development area is screened with proposed landscaping which consists of mature oak trees and native and drought tolerant plans. As such, this finding can be made.

F. Grading conforms with any applicable general plan or specific plan; and

The proposed grading is in conformance with specific findings and policies identified in the County General Plan. For example, the total grading quantities have been minimized to achieve a shorter driveway and the overall design of the residence is tiered and stepped into the hillside to reduce bulk and massing that is consistent with the County’s General Plan R-GD27 and R-GD32. As such, this finding can be made.
G. Grading substantially conforms with the adopted "Guidelines for Grading and Hillside Development" and other applicable guidelines adopted by the County.

The proposed grading is in conformance with the adopted “Guidelines for Grading and Hillside Development,” in particular, the specific guidelines for siting, road design, building form, and design. The access driveway for the proposed residence uses the existing on-site dirt roads to minimize any disturbance of the natural hillside and will not create any visual scar. Additionally, the residence and detached accessory structure is tiered and stepped into the hillside to blend in with the natural terrain. Although the property is not visible from the valley floor, the development area is screened with proposed landscaping which consists of mature oak trees and native and drought tolerant plans. Erosion control is conditioned with the County requirements of Land Development Engineering with final erosion control plans to be implemented with the final grading permit. As such, this finding can be made.

ADDITIONAL INFORMATION

Off-Site Bridge for Access
There is an existing bridge located off from Creek Park Drive within the jurisdiction of the Town of Portola Valley. The bridge will need to be improved in order meet Fire vehicle standards and for structural stability. The Town of Portola Valley confirmed (Attachment I) that the proposed improvement to the bridge would require ministerial building permit by the Town of Portola Valley and is not aware of any issues with improvement of the bridge.

BACKGROUND

On November 21, 2018, a pre-application for Building Site Approval on slopes more than 30% slope (BA) was applied by Mr. Charles Zaffaroni and his consultant, Ms. Sylvia Wise-Ornelas of Wise Consultants Group, LLC. A pre-application meeting with Planning Staff and other county agencies was held on December 21, 2018 and a formal letter was provided to the applicant summarizing staff’s comments on January 25, 2019. At the pre-application meeting, and as outlined in a follow-up letter, staff relayed concerns with the applicant regarding

On April 17, 2019, the applicant applied for Building Site Approval on slopes more 30%. (BA) and Grading Approval. The application was deemed incomplete on May 16, 2019, as information necessary to deem the application complete for processing were missing. In the letter, Staff also relayed “issues of concern,” as the proposed location, grading, and overall design of the project, at that time, were inconsistent with the County’s Grading Ordinance, Guidelines for Grading and Hillsides Development, and General Plan. Staff and the Zoning Administrator met with the owner on several occasions to discuss comments and County policies that are applicable to the project following the issuance of the incomplete letter. In response to Staff’s concerns, the applicant revised the project based on staff’s initial feedback and met with Planning Staff a few additional times to discuss subsequent conceptual revisions to the project. The applicant resubmitted on July 18, 2019, and the application was deemed incomplete by the Fire Marshal’s
Office, Land Development Engineering (LDE), and Planning. As a courtesy, staff requested subsequent meetings between Planning Staff and the applicant to further clarify design guidelines, grading ordinance, and conformance to the County’s General Plan and development on hillsides and emphasize staff’s abilities to recommend approval of the project as it was originally proposed. At that time, the applicant wished to further redesign the project.

On November 12, 2019, the applicant submitted final, revised plans and project design, and the application with a revised project design was deemed complete on December 11, 2019. On January 27, 2020, a public notice was mailed to all property owners within a 300-foot radius and published in the Post Record on January 27, 2020.

**STAFF REPORT REVIEW**

Prepared by: Lara Tran, Associate Planner
Reviewed by: Leza Mikhail, Principal Planner/Zoning Administrator
ATTACHMENT A

STATEMENT OF EXEMPTION
from the California Environmental Quality Act (CEQA)

FILE NUMBER | APN(S) | DATE
---|---|---
PLN19-0079 | 182-36-043 | 01/21/2020

PROJECT NAME
Single-family Residence with Detached Garage;
Alpine Road, Portola Valley

APPLICATION TYPE
Building Site Approval (BA) and Grading Approval.

OWNER
Robert Waterman and Ramsay Waterman

APPLICANT
Charles Zaffaroni

PROJECT LOCATION
Alpine Road, Portola Valley

PROJECT DESCRIPTION
Building Site Approval and Grading Approval for a 9,608 square foot single-family residence (three-story) with a 2,626 square foot detached garage, where the slope of the developed area is approximately 39.18%. Associated improvements include access driveway with retaining walls and a bridge off-site. Estimated grading quantities are approximately 5,535 cubic yards of cut and 680 cubic yards of fill.

All discretionary development permits processed by the County Planning Office must be evaluated for compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended). Projects which meet criteria listed under CEQA may be deemed exempt from environmental review. The project described above has been evaluated by Planning Staff under the provisions of CEQA and has been deemed to be exempt from further environmental review per the provision(s) listed below.

CEQA (GUIDELINES) EXEMPTION SECTION
Section 15303(a) - for one single-family residence in a residential zone.

COMMENTS
Property is currently a vacant lot. As part of the project, the applicant is proposing to remove a total of forty-one (41) trees of which thirty (31) are oak trees. Tree replacement will be at a 2:1 ratio of oak trees. Proposed trees removal will not have an impact on oak woodland as it is less than ½ acre per County Guide to Evaluating Oak Woodland Impacts as indicated in arborist report by Heartwood Consulting Arborist (dated November 7, 2019).

APPROVED BY:
Lara Tran, Associate Planner

Date: 01/24/2020  Signature: _______01/24/2020______

Name/Title: Lara Tran/Associate Planner

Approved by: Leza Mikhail/ Principal Planner and Zoning Administrator
ATTACHMENT B

BUILDING SITE APPROVAL ON GREATER THAN 30% SLOPE & GRADING APPROVAL

Preliminary Conditions of Approval

Owner/Applicant: Robert and Ramsay Waterman/ Charles Zaffaroni

File Number: PLN19-0079

Location: Alpine Road, Portola Valley, CA (APN: 182-36-043)

Project Description: Building Site Approval on slope greater than 30% (BA) and Grading Approval for a three-story, 9,608 square foot single-family residence with a 2,626 square foot detached garage, where the slope of the developed area is approximately 39.18%. Associated improvements include access driveway with retaining walls and a bridge off-site. Estimated grading quantities are approximately 5,535 cubic yards of cut and 680 cubic yards of fill.

The project is not within the Santa Clara Valley Habitat Plan.

If you have any question regarding the following preliminary conditions of approval, call the person whose name is listed as the contact for that agency. He or she represents a specialty or office and can provide details about the conditions of approval.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Name</th>
<th>Phone</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Lara Tran</td>
<td>(408) 299- 5759</td>
<td><a href="mailto:lara.tran@pln.sccgov.org">lara.tran@pln.sccgov.org</a></td>
</tr>
<tr>
<td>Land Development Engineering</td>
<td>Eric Gonzales</td>
<td>(408) 299-5731</td>
<td><a href="mailto:eric.gonzales@pln.sccgov.org">eric.gonzales@pln.sccgov.org</a></td>
</tr>
<tr>
<td>Fire Marshal</td>
<td>Alex Goff</td>
<td>(408) 299-5763</td>
<td><a href="mailto:alex.goff@sccfd.org">alex.goff@sccfd.org</a></td>
</tr>
<tr>
<td>Environmental Health</td>
<td>Darrin Lee</td>
<td>(408) 299-5748</td>
<td><a href="mailto:darrin.lee@cep.sccgov.org">darrin.lee@cep.sccgov.org</a></td>
</tr>
<tr>
<td>Geology</td>
<td>Jim Baker</td>
<td>(408) 299-5774</td>
<td><a href="mailto:jim.baker@pln.sccgov.org">jim.baker@pln.sccgov.org</a></td>
</tr>
<tr>
<td>Building Inspection</td>
<td></td>
<td>(408) 299-5700</td>
<td></td>
</tr>
</tbody>
</table>

STANDARD CONDITIONS OF APPROVAL

Building Inspection

1. For detailed information about the requirements for a Building Permit, obtain a Building Permit Application Instruction handout from the Building Inspection Office or visit the website at www.sccbuilding.org.
2. Development must take place in substantial conformance with the approved plans, submitted on November 12, 2019, and the Final Conditions of Approval (COA). Any changes to the proposed project may result in additional environmental review, pursuant to the California Environmental Quality Act, or additional Planning review and a public hearing. Approved architectural plans shall be consistent with the civil plans and vice versa.

3. Existing zoning is HS (Hillsides) zoning district. The following minimum dwelling setbacks shall be maintained for the residence and secondary dwelling unit:
   - Front: 30 ft.
   - Sides: 30 ft.
   - Rear: 30 ft.

4. Maximum height of single-family residence in the HS zoning district is 35 feet and not more than 3 stories.

5. Grading Approval is for 5,535 cubic yards of cut and 680 cubic yards of fill (6,215 cubic yards combined). Grading plans submitted for Grading Permit shall be in substantial conformance with the approved plans submitted on November 12, 2019 by Lea & Braze Engineering. Any increase in grading quantities, or modification to the grading design, is subject to further review.

6. All excess fill shall be taken off-site to an approved disposal location. A note of this requirement shall be incorporated into the grading plan.

7. A minimum of two (2) off-street parking spaces shall be provided to accommodate the residence and at least one (1) space must be covered. In addition to the two (2) required spaces for the primary residence, one (1) additional parking space shall be provided for a secondary unit. Off-street parking shall be identified on plans submitted for a building permit.

8. All accessory structures shall be in the rear half of the lot, or at least 75 ft. from the front property line or edge of right-of-way, per Sections 4.20.020(D). Rear yard coverage of cumulative detached accessory structures shall not be more than 30%.

9. Driveways and parking areas shall not be wider than 40% of the width of the lot's frontage along the street, measured where the driveway(s) crosses the edge of the right-of-way. Driveways and parking areas shall not cumulatively cover more than 40% of the land area of the front yard (as defined in Santa Clara County Zoning Ordinance Section 1.30.030). These limitations shall not apply to flag lots or any lot whose street frontage is 25 feet or less.

10. If archaeological resources or human skeletal remains are discovered during construction, work shall immediately stop, and the County Coroner’s Office notified. Upon determination that the remains are Native American, no further disturbance of the site may be made except as authorized by the County Coordinator of Indian Affairs, in accordance with state law and Chapter B6-18 of the County Ordinance Code.
11. Building and Grading Permits shall be submitted to the Building Inspection Office concurrently. All building and grading plans submitted into Plan Check shall be in substantial conformance with the plans approved by Planning as part of the land-use entitlement.

12. Development must take place in substantial conformance with the approved plans, prepared by Lea & Braze Engineering, CJW Architecture, and Cleaver Design Associates (Landscape Architecture) submitted on November 12, 2019.

13. Accessory structure(s) on lot 2.5 acre or larger shall have a maximum 35 feet in height, pursuant to Zoning Ordinance Section 4.20.020(E)(1)(b).

14. Accessory structure(s) on lots 2.5 acres or larger are subject to a minimum of 30 feet of side and rear yard setbacks, pursuant to Zoning Ordinance Section 4.20.020(E)(3).

15. A minimum of 6 feet of separation between the detached accessory and a dwelling shall be maintained (exterior wall to exterior wall), per Zoning Ordinance Section 4.20.020(D)(4).

16. Subject detached garage may not be used for dwelling purposes or overnight accommodations.

17. A separate building permit for the single-family residence shall be issued before or concurrently with the building permit for the detached garage. The detached garage is not permitted to be constructed before the single-family residence.

18. Subject detached garage will not be eligible for conversion to a secondary dwelling or accessory dwelling unit (ADU), as the structure will be constructed and inspected after January 1, 2017, per Zoning Ordinance Section 4.10.340(E)(1), unless County Ordinances are amended in the future to allow conversion.

Land Development Engineering
19. Property owner is responsible for the adequacy of any drainage facilities and for the continued maintenance thereof in a manner that will preclude any hazard to life, health or damage to adjoining property.

Fire Marshal:
20. Property is located within the Santa Clara County Fire Department response area.

21. The property is in the Wildland/Urban Interface (WUI) Fire Area. All the following conditions shall apply:
   
   A. Class "A" roof assembly is required. Detail shall be included in plans submitted for building permit.

   B. Provide a ½ inch spark arrester for the chimney.
C. Remove significant combustible vegetation within 30 feet of the structure to minimize risk of wildfire casualty. Maintain appropriate separation of vegetative fuels in areas between 30 and 100 feet from the structure.

22. Fire protection water systems and equipment shall always be accessible and maintained in operable condition and shall be replaced or repaired where defective. Fire protection water shall be always be made available to the fire department.

23. Fire department access roads, driveways, turnouts, and turnarounds shall always be maintained free, clear, and accessible for fire department use. Gates shall be maintained in good working order and shall always remain in compliance with Fire Marshal Standard CFMO-A3.

Environmental Health

24. All construction activities shall be in conformance with the Santa Clara County Noise Ordinance Section B11-154 and prohibited between the hours of 7:00 p.m. and 7:00 a.m. on weekdays and Saturdays, or at any time on Sundays for the duration of construction.

CONDITIONS OF APPROVAL TO BE COMPLETED PRIOR TO GRADING PERMIT AND/OR BUILDING PERMIT ISSUANCE

Planning

25. Prior to application of any permits from the County of Santa Clara, the owner shall have building and/or grading permit issuance from the Town of Portola Valley/San Mateo County to improve the off-site bridge for access.

26. Prior to building permit issuance, record a Notice of Permit and Conditions with the County Office of Clerk-Recorder, to ensure that successor property owners are made aware that certain conditions of approval shall have enduring obligation. Evidence of such recordation shall be provided pursuant to Section 5.20.125.

27. Prior to issuance of any permits, the applicant shall pay all reasonable costs associated with the work by the Department of Planning and Development.

28. Prior to issuance of a grading permit, the applicant shall submit evidence of a contract with a qualified ornithologist to conduct the preconstruction surveys prior to issuance of final grading permits and the ornithologist must submit a report indicating the result of the survey and any designated buffer zones to the satisfaction of the Planning Office prior to the issuance of final occupancy.

Protection of Existing Trees

29. All tree protection measures shall be adhered to as stipulated in the arborist report (Attachment F) dated November 7, 2019, under “Tree Protection During Construction & Tree Protection Zone” and “Appendix C: Tree Protection Guidelines” by Matthew Fried, ASCA Registered Consulting Arborist, I.S.A. Certified Arborist, including:
A. The project arborist shall meet with the General Contractor prior to any tree removal, demolition, or construction activities to discuss a construction management plan and designate the location of any material storage, wash out, office modules, portable sanitation, and areas of vehicle.

B. Heavy equipment access and egress shall be clearly posted on site throughout the duration of the development project.

C. The contractor shall immediately notify the project arborist if roots are damaged, exposed, or trunk or branches are wounded.

D. All tree removals shall be performed by hand using light equipment without any damage to remaining trees. All stumps shall be removed by hand or using hand operated stump grinding machinery when within the Root Intrusion Zone (RIZ) of remaining trees and to a depth of no less than twelve (12) inches.

E. Following fencing installation, the project arborist shall inspect and confirm that the tree protected fencing has been installed adequately and provide a written report (with photographs) to the project planner with the County of Santa Clara.

F. The Arborist shall monitor construction activity to ensure that the tree protection measures are implemented and submit a Construction Observation Letter to the Planning Office for approval, prior to final inspection, summarizing the results of the monitoring activity and resulting health of trees designated for preservation onsite.

G. All tree protection measures as recommended by a certified Arborist shall be shown on the final grading/ construction or landscape plans and adhered to during construction. Any disturbance to the canopies and/or declines in health of protected trees shall require notification to the project Arborist and County Planning Office.

Tree Removal/Replacement

30. **Final grading construction plans** shall clearly identify the size and species of all trees proposed for removal, consistent with the arborist report, “Appendix B: Tree Assessment Table” submitted by Matthew Fried, Heartwood Consulting Arborists, I.S.A. Certified Arborist, on November 9, 2019. For each tree designated for removal, replacement shall occur at the replacement ratios stated below:

A. **Tree Removal:** Project proposes the total removal of forty-one (41) trees which includes thirty-one (31) oak trees and ten (10) non-native trees. Tree removal shall be consistent to the “Appendix B: Tree Assessment Table” submitted by Matthew Fried, Heartwood Consulting Arborists, I.S.A. Certified Arborist, on November 9, 2019 and the “Tree Removal Summary Table” on the landscape plan (Sheet L-101) submitted on November 9, 2019 by Robert Cleaver of Cleaver
Design Architects (Landscape Architects).

B. **Tree Replacement:** As specified by the Santa Clara County Guidelines for Tree Protection and Preservation for Land Use Applications, the removal requires the replacement of all oak trees. The replacement shall be 2:1, as summarized within the “Tree Removal Summary Table” on the landscape plan (Sheet L-101) submitted on November 9, 2019 by Robert Cleaver of Cleaver Design Architects (Landscape Architects).

*Note:* Tree replacement can be dependent on amount of room available on a parcel in which trees can be planted. On properties where there is limited room to plant replacement trees, fewer replacement trees may be authorized per County of Santa Clara Guidelines for Tree Protection and Preservation. An (I.S.A.) certified arborist shall provide written justification if there are fewer tree replacements on the property.

C. All proposed landscape plant materials shall be drought-tolerant and/or native species and will match existing vegetation.

D. All trees to remain shall be protected with five-foot chainlink fencing on steel posts driven into the ground to the extent possible at the dripline of the trees.

E. Arrangement of trees and other plant materials shall provide for defensible space for fire protection around proposed buildings.

**Tree Fencing**

31. Fenced enclosures for trees to be protected shall be erected at the dripline of trees or as established by the Arborist to establish the Tree Protective Zone (TPZ) in which no soil disturbance is allowed, and activities are restricted.

32. All trees to be preserved shall be protected with minimum 5-foot high fences. Fences are to be mounted on 2-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2 feet, at no more than 10-foot spacing (See detail, available at [www.sccplanning.org](http://www.sccplanning.org)). This detail shall appear on grading and building permit plans.

33. In areas where soil properties are less than conducive to hearty vegetation growth, soil augmentation shall be required, particularly in those areas surrounding tree installation pits. The extent of soil augmentation shall be based on the anticipated drip line at maturity, with a depth adequate to promote root development for structural stability and vigor.

34. All proposed trees on the property are subject (without time limitation) to the provisions of Division C16: Tree Preservation and Removal, of the County Ordinance Code and the conditions of approval for the project.
**Nesting Raptures**

35. If possible, tree removal and construction should be scheduled between September 1 and December 31 to avoid the raptor nesting season. If this is not possible, pre-construction surveys for nesting raptors shall be conducted by a qualified ornithologist to identify active raptor nests that may be disturbed during project implementation. Pre-construction surveys shall take place no more than 24 hours prior to the initiation of construction activities and tree removal.

36. If an active raptor nest is found in or close enough to the construction area to be disturbed by these activities, the ornithologist, shall contact the Planning Office and in consultation with the California Department of Fish & Game, designate a construction free buffer zone (typically 250 feet or more - varies) around the nest.

**Environmental Health**

37. The site is in a sewered area, and therefore, a sanitary sewer connection will be required. Submit a sewer connection permit from the West Bay Sanitary District at (650) 321-0384. For sewer clearance, return/upload requested sewer document to 70 W. Hedding, Permit Center, for sign-off.

38. Provide a water connection letter from the water purveyor. Return/upload requested water document to County of Santa Clara Permit Center (70 W. Hedding Street, 7th Floor) for sign-off.

**Geology**


**Land Development Engineering**

40. **Prior to building and grading permit application**, the applicant shall provide written approval from the Town of Portola Valley and/or San Mateo County approving the bridge construction prior to the County of Santa Clara acceptance of the entire project.

41. Obtain a Grading Permit from Land Development Engineering (LDE) **prior to beginning any construction activities**. Issuance of the grading permit is required **prior to LDE clearance of the building permit** (building and grading permits may be applied for concurrently). The process for obtaining a grading permit and the forms that are required can be found at the following web page:

   www.sccgov.org > I Want to... > Apply for a Permit > Grading Permit.

   Please contact LDE at (408) 299-5734 for additional information and timelines.
42. Final plans shall include a single sheet which contains the County standard notes and
certificates as shown on County Standard Cover Sheet. Plans shall be neatly and
accurately drawn, at an appropriate scale that will enable ready identification and
recognition of submitted information.

43. Final improvement plans shall be prepared by a licensed civil engineer for review and
approval by LDE and the scope of work shall be in substantial conformance with the
conditionally approved preliminary plans on file with the Planning Office. Include plan,
profile, typical sections, contour grading for all street, road, driveway, structures and
other improvements as appropriate for construction. The final design shall be in
conformance with all currently adopted standards and ordinances. The following
standards are available on-line:

- Standard Details Manual, September 1997, County of Santa Clara, Roads and
  Airports Department available at: www.sccgov.org/sites/rda > Published Standards,
  Specifications, Documents and Forms

  www.sccplanning.org > Plans & Ordinances > Land Development Standards and
  Policies

  Ordinances > Grading and Drainage Ordinance

44. Survey monuments shall be shown on the improvement plan to provide sufficient
information to locate the proposed improvements and the property lines. Existing
monuments must be exposed, verified and noted on the grading plans. Where existing
monuments are below grade, they shall be field verified by the surveyor and the grade
shall be restored and a temporary stake shall be placed identifying the location of the
found monument. If existing survey monuments are not found, temporary staking
delineating the property line may be placed prior to construction and new monuments
shall be set prior to final acceptance of the improvements. The permanent survey
monuments shall be set pursuant to the State Land Surveyor’s Act. The Land Surveyor /
Engineer in charge of the boundary survey shall file appropriate records pursuant to
Business and Professions Code Section 8762 or 8771 of the Land Surveyors Act with the
County Surveyor.

45. The improvement plans shall include an Erosion and Sediment Control Plan that outlines
seasonally appropriate erosion and sediment controls during the construction period).
Include the County’s Standard Best Management Practice Plan Sheets BMP-1 and BMP-
2 with the Plan Set.

46. All applicable easements affecting the parcel(s) with benefactors and recording
information shall be shown on the improvement plans.
**Floodplain**

47. A portion of the project is in a Special Flood Hazard Area (Zone A). All project improvements shall be in accordance with the County’s Floodplain Management Ordinance (SCC Code C12-800 to C12-826).

48. Submit a No Adverse Impact Certificate and corresponding documentation and calculations demonstrating no impact to the floodplain prepared by a licensed civil engineer. This is for the portion of bridge construction and any other work within the SFHA area only.

**Drainage**

49. Provide a drainage analysis prepared by a licensed civil engineer in accordance with criteria as designated in the 2007 County Drainage Manual (see Section 6.3.3 and Appendix L for design requirements). The on-site drainage will be controlled in such a manner as to not increase the downstream peak flow for the 10-year and 100-year storm event or cause a hazard or public nuisance. The mean annual precipitation is available on the on-line property profile.

50. All new on-site utilities, mains and services shall be placed underground and extended to serve the proposed development. All extensions shall be included in the improvement plans. Off-site work should be coordinated with any other undergrounding to serve other properties in the immediate area.

**Stormwater Treatment – SF Bay**

51. Include one of the following site design measures in the project design: (a) direct hardscape and/or roof runoff onto vegetated areas, (b) collect roof runoff in cisterns or rain barrels for reuse, or (c) construct hardscape (driveway, walkways, patios, etc.) with permeable surfaces. Though only one site design measure is required, it is encouraged to include multiple site design measures in the project design. For additional information, please refer to the C.3 Stormwater Handbook (June 2016) available at the following website: [www.scvurppp.org](http://www.scvurppp.org) > Resources > reports and work products > New Development and Redevelopment > C.3 Stormwater Handbook (June 2016)

**Soils and Geology**

52. Submit one copy of the signed and stamped of the geotechnical report for the project.

53. Submit a plan review letter by the Project Geotechnical Engineer certifying that the geotechnical recommendation in the above geotechnical report have been incorporated into the improvement plan.

**Notice of Intent**

54. Indicate on the improvement plans the land area that will be disturbed. If one acre or more of land area will be disturbed, file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) for coverage under the State General Construction Permit. The SWRCB will issue a Waste Discharge Identification number (WDID). The
WDID number shall be shown on the on the final improvement plans. The SWRCB web site is at: www.waterboards.ca.gov > Water Issues > Programs > Stormwater

55. Submit evidence of legal access to the site from the nearest publicly maintained road compiled and/or verified by a Licensed Land Surveyor or Registered Civil Engineer who is authorized to practice land surveying. Should access not exist, submit a signed, notarized, and recorded agreements to grant rights-of-ingress and egress. Applicant shall ensure that if other owners utilize the bridge to access Alpine Road, then the applicant shall provide necessary easements on their property to allow these access rights within their property. This condition will need to be verified during the plan check review prior to grading permit issuance. There is no exclusivity of designated legal access for each of the property owners along the private access road so it is assumed that the owners can also utilize the bridge as their legal access.

Agreements

56. Enter into a land development improvement agreement with the County. Submit an Engineer’s Estimate of Probable Construction Cost prepared by a registered civil engineer with the all stages of work clearly identified for all improvements and grading as proposed in this application. Post financial assurances based upon the estimate, sign the development agreement and pay necessary inspection and plan check fees, and provide County with a Certificate of Worker's Compensation Insurance. (C12-206).

Fire Marshal

57. Fire protection water system shall be installed, functioning and inspected prior to approval of the foundation. System shall be maintained in good working order and accessible throughout construction. A stop work order may be placed on the project if the required hydrant systems are not installed, accessible, and/or functioning.

58. The minimum fire-flow shall be 500 gpm at 20 psi., a reduced gpm has been applied due to the installation of fire sprinklers. Fire flow to be taken from a standard fire hydrant located between 40-600 ft. of sprinkled structure measured by path of travel. NOTE: The fire-flow may be adjusted depending upon the final size of the structure shown on the building permit set of drawings.

A. At the time of plan submittal for building permit, provide written verification from the water company that this condition can be satisfied.

B. If an existing approved water system is within 300 ft. of the property line, extension to site is required, provided it is feasible to do so (contact the local water purveyor as soon as possible). If the water company will not grant a water connection, submit official documentation from the water company to that effect.

C. If fire protection water cannot be supplied from a recognized water purveyor, fire protection water supply shall be provided by on-site aboveground storage tank(s) and wharf hydrant.
59. Construction of access roads and driveways shall use good engineering practice.

60. All required access roads, driveways, turnarounds, and turnouts shall be installed, and serviceable prior to approval of the foundation, and shall be maintained throughout construction. A stop work order may be placed on the project if required driving surfaces are not installed, accessible, and/or always maintained.

61. Access Roads (roads serving two lots or more) shall comply with the following:

   A. **Width:** Clear drivable width of 18 ft. plus a 3 ft. shoulder on each side.

   B. **Vertical Clearance:** Minimum vertical clearance of 15 ft. shall be maintained to building site (trim or remove tree limbs, electrical wires, structures, and similar improvements).

   C. **Curve Radius:** Inside turn radius for curves shall be a minimum of 42 feet.

   D. **Grade:** Maximum grade shall not exceed 15%. The Fire Marshal may permit grades up to a maximum of 20% if no other method is practicable and if consistent with good engineering practices, provided an approved automatic fire sprinkler system is installed throughout the all structures. In no case shall the portion exceeding 15% gradient be longer than 300 feet in length, unless there is at least 100 feet at 15% or less gradient between each 300-foot section. Grades exceeding 15% shall be paved in compliance with County Standards.

   E. **Surface:** All driving surfaces shall be all-weather and capable of sustaining 75,000-pound gross vehicle weight.

   F. **Bridges (off-site):** All bridges shall be capable of sustaining 75,000-pound gross vehicle weight and meet the latest edition of the CalTrans Standard Bridge Design Specifications. Appropriate signage, including but not limited to weight or vertical clearance limitations, or any special conditions shall be provided.

   G. **Gates and/or Traffic-Calming Devices:** Any obstruction to emergency access such as gates, speed bumps/humps, traffic circles, etc. shall require prior approval from the County.

62. Driveways (roads serving only one lot) shall comply with the following when the distance between the centerline of the access road and any portion of the structure exceeds 150 ft. (measured along the path of travel).

   A. **Width:** (Los Altos Hills) Clear width of drivable surface of 14 ft. drivable surface.
B. **Vertical Clearance:** Minimum vertical clearance of 13 ft. 6 in. shall be maintained between the access road and the building site (trim or remove tree limbs, electrical wires, structures, and similar improvements).

C. **Curve Radius:** Inside turn radius for curves shall be a minimum of 42 feet.

D. **Grade:** Maximum grade shall not exceed 15%. The Fire Marshal may permit grades up to a maximum of 20% if no other method is practicable and if consistent with good engineering practices, provided an approved automatic fire sprinkler system is installed throughout all structures. In no case shall the portion exceeding 15% gradient be longer than 300 feet in length, unless there is at least 100 feet at 15% or less gradient between each 300-foot section. Grades exceeding 15% shall be paved in compliance with County Standard SD5.

E. **Surface:** All driving surfaces shall be all-weather and capable of sustaining 75,000-pound gross vehicle weight.

F. **Turnout:** Passing turnouts in compliance with SD-16 shall be provided at every 400 ft. and wherever hydrants are placed adjacent to a driveway.

G. **Turnaround:** Turnaround shall be provided for driveways in excess of 150 ft. as measured along the path of travel from the centerline of the access road to the structure. Acceptable turnarounds shall be 40 ft. by 48 ft. pad, hammerhead, or bulb of 40 ft. radius complying with County Standard SD-16. All turnarounds shall have a slope of not more than 5% in any direction.

H. **Gates:** Gates shall not obstruct the required width or vertical clearance of the driveway and may require a Fire Department Lock Box/Gate Switch to allow for fire department access. Installation shall comply with CFMO-A3.

**CONDITIONS OF APPROVAL TO BE COMPLETED PRIOR TO OCCUPANCY OR ONE YEAR FROM THE DATE OF THE LAND DEVELOPMENT AGREEMENT, WHICHEVER COMES FIRST**

**Planning**

63. Contact Lara Tran at least one (1) week prior to verify all the landscaping and trees replacement as proposed within the final landscaping plan are installed.

**Land Development Engineering**

64. Existing and set permanent survey monuments shall be verified by inspectors prior to final acceptance of the improvements by the County. Any permanent survey monuments damaged or missing shall be reset by a licensed land surveyor or registered civil engineer authorized to practice land surveying and they shall file appropriate records pursuant to Business and Professions Code Section 8762 or 8771 of the Land Surveyors Act with the County Surveyor.
65. Construct the improvements. Construction staking is required and shall be the responsibility of the developer.

66. Applicant shall provide written approval from the Town of Portola Valley and/or San Mateo County approving the bridge construction prior to the County of Santa Clara acceptance of the entire project.

Environmental Health
67. Provide proof of garbage service at the time of final occupancy sign-off. Garbage service in the unincorporated areas of Santa Clara County is mandatory.

Geology
68. Submit a Construction Observations Letter that verifies the work was completed in accordance with the approved plans.
These plans are copyrighted and are subject to copyright protection as an "architectural work" under Sec. 102 of the Copyright Protection Act of 1990. The protection includes but is not limited to the overall form as well as the arrangement and composition of spaces and elements of the design. Under such protection, unauthorized use of these plans, work or home represented, can legally result in the cessation of construction or building being seized and/or monetary compensation to CJW Architecture.
These plans are copyrighted and are subject to copyright protection as an "architectural work" under Sec. 102 of the Copyright Act of 1990. The protection includes but is not limited to the overall form as well as the arrangement and composition of spaces and elements of the design. Under such protection, unauthorized use of these plans, work or home represented, can legally result in the cessation of construction or building being seized and/or monetary compensation to CJW Architecture.
These plans are copyrighted and are subject to copyright protection as an "architectural work" under Sec. 102 of the Copyright Act of 1976. All rights reserved. Under such protection, unauthorized use of these plans, work or home represented, can legally result in the cessation of construction or building being seized and/or monetary compensation to CJW Architecture.
These plans are copyrighted and are subject to copyright protection as an "architectural work" under Sec. 102 of the U.S. Copyright Act of 1976. The protection includes but is not limited to the overall form as well as the arrangement and composition of spaces and elements of the design. Under such protection, unauthorized use of these plans, work or home represented, can legally result in the cessation of construction or building being seized and/or monetary compensation to CJW Architecture.

View from Alpine Hills Club @ 4139 Alpine Rd.

View from Bear Gulch @ 60 Bear Gulch Rd.

View from Los Trancos @ 50 Los Trancos Rd.

View from Los Trancos @ 830 Los Trancos Rd.

Zaffaroni Residence
0 Alpine Rd.
APN: 142-36-043
Portola Valley, CA 94028

11/7/2019

Perspective Views from Off Site

REV2 Vers 21.pln 8:01 AM Tuesday, November 12, 2019

PLM160079

No Date Notes
Hydroseed Maintenance Notes

1. It is the intent of the landscape design to extend the hydroseed areas growing season for a greater period of time with supplemental water. The Environmental Stewardship Water Budget in Section 3-101, shall not be exceeded.

2. Making the hydroseed areas allow for an annual season. Making it not occur during the month of April, June and October allow the growing season to continue for the remainder of the year.

3. Irrigation scheduling shall be regulated by automatic irrigation controllers.
Prunus cerasifera
Quercus agrifolia

Site Plan

Tree Removal Summary

<table>
<thead>
<tr>
<th>Tree No.</th>
<th>Species</th>
<th>Certification Statement</th>
<th>Proposed Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>101</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>102</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>103</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>104</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>105</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>106</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>107</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>108</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>109</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>110</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>111</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>112</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>113</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>114</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>115</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>116</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>117</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>118</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>119</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>120</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>121</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>122</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>123</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
<tr>
<td>124</td>
<td>Quercus agrifolia</td>
<td>Too close to construction</td>
<td>20'</td>
</tr>
</tbody>
</table>
Techline CV End Feed layout

Techline CV Manual Line Flush Valve

Techline CV LITE ISLAND LAYOUT
REMOTE CONTROL VALVE
WITH DISC FILTER AND PRV
Techline CV DRIPLINE
Techline® START CONNECTION
ISLAND PERIMETER
MANUAL FLUSH VALVE PLUMBED TO Techline® CV (TYP)

LIMITATIONS:
ALLOWING FOR A WIDE VARIETY OF APPLICATIONS AND CONDITIONS, NETAFIM IRRIGATION INC. IS NOT RESPONSIBLE FOR CORRECTNESS OR APPLICABILITY TO PURPOSE OR COMPATIBILITY TO ANY SITE OR JOB CONDITION. WARRANTY FOR SUITABILITY IS NOT GIVEN OR IMPLIED. MODIFICATIONS FOR SPECIFIC PURPOSES MAY BE NECESSARY AND ARE THE SPECIFIERS' RESPONSIBILITY. THE USE OF THESE DETAILS SHALL NOT BE RESTRICTED AND PUBLICATION THEREOF IS NOT LIMITED TO ANY PURPOSE. REPRODUCTION, PUBLICATION AND REUSE BY ANY METHOD IN WHOLE OR PART IS FULLY AUTHORIZED. OWNERSHIP IS RETAINED BY NETAFIM IRRIGATION INC. VISUAL CONTACT WITH THESE DETAILS SHALL CONSTITUTE PRIMA FACIA EVIDENCE OF THE ACCEPTANCE OF THESE RESTRICTIONS.

PVC OR POLY SUPPLY HEADER
SEE SPECIFICATIONS FOR ROW SPACING
PERIMETER LATERALS 2" TO 4" FROM EDGE

NOTE:
1. RECOMMENDED MINIMUM FILTRATION: 120 MESH
2. PRESSURE AT FLUSH VALVE SHALL BE MIN 14.5 PSI
3. CHECK VALVE (MAX 4.6' OF WATER (ELEVATION CHANGE))
4. REFER TO MAXIMUM LENGTH OF A SINGLE LATERAL CHART

Techline CV Multiple drip ring layout

Techline CV Start Connection

Techline CV Indeterminate Areas: Odd curves

Techline CV LITE layout for Planter Islands

Legend:
1. Hunter controller (HC) per plan
2. Irrigation controller in central box and gate per local codes & electric supply contact to power source
3. Adjacent surface to install controller per plan

NOTE:
Irregular controller HC shown at outer edge of controller shall be butt joint to grouted/115 SMC power source

Legend:
1. Hunter remote control valve per plan
2. Standard valve box with 102"/real AWC 14.5 psi
3. Waterproof connectors
4. 18-24" coiled wire to controller
5. Finished grade in turf
6. Adjacent turf
7. Finished grade in planter bed
8. Schedule 80 1" copper - match size to valve and union - rough as needed
9. PVC 18" union
10. Adjacent turf
11. Supply header with disc filter and PRV
12. 2" welded gasket - 4" min.
13. Irrigation lateral
14. Handle lateral and changes

Legend:
1. Standard valve box
2. Finish grade
3. Model PGV-L101G with ACCU-SYNC
4. Waterproof connectors (2)
5. 18-24" coiled wire
6. Schedule 80 1" copper - nipple
7. PVC slip unions
8. Adjacent surface to mount controller per plan

Legend:
1. Hunter Hydrawise Irrigation Controller (HC)
2. Irrigation control wire in conduit size and type per local codes & electrical supply conduit - connect to power source
3. Adjacent surface to mount controller per plan

Legend:
1. Hunter remote control valve per plan
2. Standard valve box with 102" real AWC 14.5 psi
3. Waterproof connectors
4. 18-24" coiled wire to controller
5. Finished grade in turf
6. Adjacent turf
7. Finished grade in planter bed
8. Schedule 80 1" copper - match size to valve and union - rough as needed
9. PVC 18" union
10. Adjacent turf
11. Supply header with disc filter and PRV
12. 2" welded gasket - 4" min.
13. Irrigation lateral
14. Handle lateral and changes

Legend:
1. Standard valve box
2. Finish grade
3. Model PGV-L101G with ACCU-SYNC
4. Waterproof connectors (2)
5. 18-24" coiled wire
6. Schedule 80 1" copper - nipple
7. PVC slip unions
8. Adjacent surface to mount controller per plan

Legend:
1. Hunter controller (HC) per plan
2. Irrigation controller in central box and gate per local codes & electric supply contact to power source
3. Adjacent surface to install controller per plan

NOTE:
Irregular controller HC shown at outer edge of controller shall be butt joint to grouted/115 SMC power source

Legend:
1. Hunter controller (HC) per plan
2. Irrigation controller in central box and gate per local codes & electric supply contact to power source
3. Adjacent surface to install controller per plan

NOTE:
Irregular controller HC shown at outer edge of controller shall be butt joint to grouted/115 SMC power source
FOR CONSTRUCTION STAKING SCHEDULING OR QUOTATIONS PLEASE CONTACT ALEX ABAYA AT LEA & BRAZE ENGINEERING (510) 887-4086 EXT 116. aabaya@leabraze.com

### Tree Removal

<table>
<thead>
<tr>
<th>Type</th>
<th>Removed</th>
<th>Total Trees</th>
<th>Percent Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Trees (Live)</td>
<td>5</td>
<td>31</td>
<td>605</td>
</tr>
<tr>
<td>Oaks (Live)</td>
<td>0</td>
<td>26</td>
<td>373</td>
</tr>
<tr>
<td>Other (Live)</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Dead Trees</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Trees Removed</td>
<td>41</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Stabilized Construction Entrance/Exit

Silt Fence

3. Stabilized Construction Entrance/Exit

CARRA DAWAY TO-1

1. Silt Fence

CARRA DAWAY TO-1

2. Silt Fence

CARRA DAWAY TO-1

Standard BMP Designation

1. Silt Fence

2. Silt Fence

3. Stabilized Construction Entrance/Exit

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details

Best Management Practices and Erosion Control Details Sheet 1
County of Santa Clara

Erosion Control Details
Best Management Practices and Erosion Control Details Sheet 2
County of Santa Clara
Attachment E

AREA 1 CLEARING A
EARTHWORKS

AREA 1 CLEARING B
EARTHWORKS

AREA 2 BOWL
EARTHWORKS

AREA 3 RENCH
EARTHWORKS

AREA 4 GARDEN
EARTHWORKS

TREES REMOVED

Approximate location of debris flow deposit per findings determined by geotechnical engineer dated April 2019.

NOTE:
Feasibility areas refer to study areas specified by the owner/client. Feasibility areas shown are for discussion purposes only.
Tree Assessment and Protection

0 Alpine Road
APN: 182-36-043
Portola Valley, CA 94027

Prepared for:
Charles Zaffaroni

November 7, 2019

Prepared by:

HEARTWOOD
CONSULTING ARBORISTS

Belmont, CA
650.542.8733

ASCA - Registered Consulting Arborist ® #651
ISA - Certified Arborist® MA-4851A
# Table of Contents

SUMMARY ................................................................................................................................. 4

INTRODUCTION ............................................................................................................................ 5

  Assignment ................................................................................................................................. 5

  Limits of the Assignment ........................................................................................................... 5

  Purpose and Use of this Report ................................................................................................. 5

OBSERVATIONS ........................................................................................................................... 6

  Tree Observations .................................................................................................................... 6

  Construction, Site, and Plan Observations ................................................................................ 6

  Removals to Accommodate Construction .............................................................................. 7

ANALYSIS ...................................................................................................................................... 10

DISCUSSION ................................................................................................................................ 11

  Tree Protection During Construction ...................................................................................... 11

  Tree Protection Zone ............................................................................................................... 11

  Potential Impacts from Construction ..................................................................................... 13

CONCLUSION ............................................................................................................................... 13

RECOMMENDATIONS ................................................................................................................ 14

BIBLIOGRAPHY .......................................................................................................................... 15

APPENDIX A: TREE MAP and CANOPY CALCULATIONS .................................................... 16

  Site Plan with Tree Protection Fence Schematic ................................................................. 16

  Total Tree Canopy, all species ............................................................................................. 17

  Total Canopy Reduction ...................................................................................................... 18

APPENDIX B: TREE ASSESSMENT TABLE ............................................................................ 19
APPENDIX C: TREE PROTECTION GUIDELINES ................................................................. 28

APPENDIX D: SAMPLE TREE PROTECTION SIGN............................................................. 33

EXHIBIT 1.......................................................................................................................... 34

QUALIFICATIONS, ASSUMPTIONS, & LIMITING CONDITIONS ................................... 39

CERTIFICATION OF PERFORMANCE ............................................................................ 40
SUMMARY

Mr. Charles Zaffaroni plans to construct a new residence at 0 Alpine Road (APN 182-36-043) in Portola Valley, California. In addition to the new home, the plans include a swimming pool, a detached garage, regrading and surfacing of an existing unpaved road, a fire truck turnaround area, and landscaping.

Forty-one (41) trees are prosed for removal, including 26 Coast live oaks that are alive and 5 that are dead. Removals will reduce existing canopy by 0.24 acres, or 2.7% of the existing canopy (6.25 acres.)

This project will not have a ‘significant impact’ upon oak woodlands as defined by the Santa Clara County Planning Office Guide to Evaluating Oak Woodlands Impacts.

This report includes Tree Protection Guidelines that, if followed, will result in LOW impact to all trees scheduled for preservation.
INTRODUCTION

Assignment

1. Affix numbered aluminum ID tag to each tree (a) to be removed and/or (b) to be impacted by development (canopies overlapping development area).
2. Assess each numbered tree and record species, size (trunk diameter), and condition.
3. Provide a table identifying tree attributes listed in #2 above, whether they are to be removed or retained, and the justification for removal (if applicable).
4. Provide Tree Protection Guidelines for any trees scheduled to be retained.
5. Demonstrate not-to-scale tree protection zones on a Site Plan provided by client, if necessary.
6. Provide an Arborist Report detailing all of the above and including a summary of the project scope.

Limits of the Assignment

This report is limited to the tree and site conditions during my visit on October 26, 2019 and my review of the following documents provided by the client:

- Architectural Plan Set by CJW Architects (rev. 11/7/19)
- Landscape and Hardscape Plan Set by Cleaver Design (rev. 11/7/19)
- Civil Engineering, Grading, and Drainage Plan Set by Lea & Braze Engineering, Inc. (rev. 11/7/19)

Purpose and Use of this Report

This report is intended to identify all trees on the project site that could be impacted by the project. The report is to be used by the property owners, their agents, and the County of Santa Clara as a reference for existing tree conditions and recommended tree preservation measures.
OBSERVATIONS

Tree Observations

Please refer to the Tree Map (Appendix A) and the Tree Assessment Table (Appendix B).

I inventoried 91 trees near the proposed construction. Fifty-nine (59) Coast live oak (five are dead), 13 California bay laurel, 5 Valley oak and 14 trees of various other species.

<table>
<thead>
<tr>
<th>Species</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coast live oak</td>
<td>59</td>
</tr>
<tr>
<td>Bay Laurel</td>
<td>13</td>
</tr>
<tr>
<td>Valley oak</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
</tr>
</tbody>
</table>

I assigned an overall condition rating to each tree taking into account both health and structure. The condition rating scale is as follows:

<table>
<thead>
<tr>
<th>Rating</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Dead</td>
</tr>
<tr>
<td>1 - 20</td>
<td>Very Poor</td>
</tr>
<tr>
<td>21 - 40</td>
<td>Poor</td>
</tr>
<tr>
<td>41 - 60</td>
<td>Fair</td>
</tr>
<tr>
<td>61 - 80</td>
<td>Good</td>
</tr>
<tr>
<td>81 - 100</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Five (5) trees are dead (#815, 817, 833, 840, 841), 18 in poor or very poor condition, 54 in fair condition, and 14 in good or excellent.

Construction, Site, and Plan Observations

The project includes construction of a residence, swimming pool, road, and detached garage. The Planting Plan includes the planting of fifty-five (55) 24-inch boxed native oak trees. A retaining wall (fill) will come within one foot of the trunk of Tree #867.
Removals to Accommodate Construction

The following 41 trees are proposed for removal for one or more of the following reasons:

- Located inside building footprint (23)
- Conflicts with construction activity and is not a good candidate for preservation (11)
- Poor condition (2) / Dead (5)

<table>
<thead>
<tr>
<th>Tag #</th>
<th>Species</th>
<th>Trunk Diam.</th>
<th>Condition</th>
<th>Justification Statement</th>
<th>Size Class for Mitigation Purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>804</td>
<td>Coast live oak</td>
<td>11, 15</td>
<td>55</td>
<td>Conflicts with pool construction</td>
<td>Small</td>
</tr>
<tr>
<td></td>
<td><em>Quercus agrifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>805</td>
<td>Coast live oak</td>
<td>20</td>
<td>55</td>
<td>Conflicts with pool construction</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td><em>Quercus agrifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>806</td>
<td>Coast live oak</td>
<td>16</td>
<td>50</td>
<td>Will not survive planned grade change</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td><em>Quercus agrifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>808</td>
<td>Coast live oak</td>
<td>6, 7</td>
<td>55</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td></td>
<td><em>Quercus agrifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>809</td>
<td>Coast live oak</td>
<td>7</td>
<td>55</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td></td>
<td><em>Quercus agrifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>810</td>
<td>Coast live oak</td>
<td>6</td>
<td>55</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td></td>
<td><em>Quercus agrifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>811</td>
<td>Coast live oak</td>
<td>6</td>
<td>55</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td></td>
<td><em>Quercus agrifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>812</td>
<td>Bay Laurel</td>
<td>14</td>
<td>40</td>
<td>Too close to construction</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td><em>Umbellularia californica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>813</td>
<td>Coast live oak</td>
<td>15, 20</td>
<td>21</td>
<td>Diseased and leaning over residence</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td><em>Quercus agrifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>815</td>
<td>Coast live oak</td>
<td>7</td>
<td>0</td>
<td>Dead</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td><em>Quercus agrifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>816</td>
<td>Coast live oak</td>
<td>15</td>
<td>60</td>
<td>Inside building footprint</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td><em>Quercus agrifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>817</td>
<td>Coast live oak</td>
<td>19</td>
<td>0</td>
<td>Dead</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td><em>Quercus agrifolia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tag #</td>
<td>Species</td>
<td>Trunk Diam.</td>
<td>Condition</td>
<td>Justification Statement</td>
<td>Size Class for Mitigation Purposes</td>
</tr>
<tr>
<td>-------</td>
<td>------------------------</td>
<td>-------------</td>
<td>-----------</td>
<td>-----------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>818</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>60</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>819</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>55</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>820</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7</td>
<td>60</td>
<td>Too close to construction</td>
<td>Small</td>
</tr>
<tr>
<td>822</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>26</td>
<td>20</td>
<td>Mostly dead</td>
<td>NA</td>
</tr>
<tr>
<td>823</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>13</td>
<td>55</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>824</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>19</td>
<td>45</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>825</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>12</td>
<td>50</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>826</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>8</td>
<td>45</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>827</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>55</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>828</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>14</td>
<td>40</td>
<td>Inside building footprint</td>
<td>NA</td>
</tr>
<tr>
<td>829</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>50</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>833</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>15</td>
<td>0</td>
<td>Dead</td>
<td>NA</td>
</tr>
<tr>
<td>835</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>12</td>
<td>65</td>
<td>Inside footprint of fire truck turnaround</td>
<td>Small</td>
</tr>
<tr>
<td>836</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>50</td>
<td>Inside footprint of fire truck turnaround</td>
<td>Small</td>
</tr>
<tr>
<td>837</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>12</td>
<td>60</td>
<td>Inside footprint of fire truck turnaround</td>
<td>Small</td>
</tr>
<tr>
<td>Tag #</td>
<td>Species</td>
<td>Trunk Diam.</td>
<td>Condition</td>
<td>Justification Statement</td>
<td>Size Class for Mitigation Purposes</td>
</tr>
<tr>
<td>-------</td>
<td>---------------------------------</td>
<td>-------------</td>
<td>-----------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>838</td>
<td>Deodar cedar <em>Cedrus deodara</em></td>
<td>9</td>
<td>50</td>
<td>Inside footprint of fire truck turnaround</td>
<td>NA</td>
</tr>
<tr>
<td>840</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7</td>
<td>0</td>
<td>Dead</td>
<td>NA</td>
</tr>
<tr>
<td>841</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7</td>
<td>0</td>
<td>Dead</td>
<td>NA</td>
</tr>
<tr>
<td>848</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>13</td>
<td>45</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>849</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>12</td>
<td>50</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>850</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>6, 6</td>
<td>35</td>
<td>Too close to construction</td>
<td>NA</td>
</tr>
<tr>
<td>855</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>8, 9, 14</td>
<td>50</td>
<td>Inside building footprint</td>
<td>NA</td>
</tr>
<tr>
<td>856</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>14</td>
<td>40</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>857</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>14</td>
<td>45</td>
<td>Inside building footprint</td>
<td>Small</td>
</tr>
<tr>
<td>873</td>
<td>Purpleleaf plum <em>Prunus cerasifera</em></td>
<td>9</td>
<td>40</td>
<td>Too close to construction</td>
<td>NA</td>
</tr>
<tr>
<td>875</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>7</td>
<td>45</td>
<td>Too close to construction</td>
<td>NA</td>
</tr>
<tr>
<td>876</td>
<td>Japanese maple <em>Acer palmatum</em></td>
<td>Multistem</td>
<td>50</td>
<td>Too close to construction</td>
<td>NA</td>
</tr>
<tr>
<td>877</td>
<td>Crape myrtle <em>Lagerstroemia indica</em></td>
<td>Multistem</td>
<td>40</td>
<td>Too close to construction</td>
<td>NA</td>
</tr>
<tr>
<td>878</td>
<td>Purpleleaf plum <em>Prunus cerasifera</em></td>
<td>10</td>
<td>35</td>
<td>Too close to construction</td>
<td>NA</td>
</tr>
</tbody>
</table>
There are 21 “small” and 3 “medium” trees scheduled for removal.

**ANALYSIS**

Using Google maps aerial imagery and measurement tools I calculated the following areas:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Property</td>
<td>8.77</td>
<td>acres</td>
</tr>
<tr>
<td>Total Tree Canopy (all species)</td>
<td>6.25</td>
<td>acres</td>
</tr>
<tr>
<td>Canopy Reduction - all species</td>
<td>0.24</td>
<td>acres</td>
</tr>
<tr>
<td>Canopy Reduction - Oak only</td>
<td>0.20</td>
<td>acres</td>
</tr>
</tbody>
</table>

Current landcover at 0 Alpine Road is 71% tree canopy.

**Canopy reduction from all proposed removals is 2.7% of total canopy.**

Graphic representation of canopy calculations is located in Appendix A.
DISCUSSION

Impact on Oak Woodlands

This project will not have a ‘significant impact’ upon oak woodlands as defined by the Santa Clara County Planning Office Guide to Evaluating Oak Woodlands Impacts.

Tree Protection During Construction

The objective of tree protection is to reduce the negative impacts of construction on trees to a less than significant level. The Tree Protection Guidelines (Appendix C) in this report are designed to guide the project team and ensure that appropriate practices will be implemented in the field to eliminate undesirable consequences that may result from uninformed or careless acts.

Tree Protection Zone

A tree protection zone (TPZ) is a defined area in which certain activities are prohibited to minimize potential injury to the tree. Some municipal ordinances and general rules of thumb, suggest the ideal TPZ extends 10 times the trunk diameter in all directions. Such a conservative TPZ is both unnecessary and infeasible on this project site, as many of the trees to be preserved are growing close to the road and home site. For this project, the TPZ will consist of chain link fence flanking the new road and home site. The fence will be erected such that it comes no closer than 3 to 6 times the trunk diameter of any tree to be preserved. For example, if a tree is two feet in diameter, the TPZ distance would be six to twelve feet from the trunk on one side of the tree. The greater the distance the better, but 3 times trunk diameter is acceptable for this tree population because of the following factors:

1. Disturbance is only occurring on one side of the trees, not on all sides.

2. There is an existing, compacted dirt road in place where the majority of site disturbance will occur. Tree roots are opportunistic and develop where soil oxygen and moisture are most abundant. Given the compacted condition of the road, roots are likely to be more abundant within the TPZ where soils are undisturbed, better shaded, and of higher moisture content.

3. A review of root severance research found that trees with adequate vigor and vitality can withstand severe root pruning and that roots can usually be safely cut up to the point where their diameter begins to increase markedly near the trunk. (See Exhibit 1).
Figure 1.

Sample of TPZ fencing schematic. The red line depicts the layout of the TPZ.

A full-sized PDF schematic was delivered in conjunction with this report.

Tree #867

The grade of the road will be elevated, and a retaining wall built about one foot from the trunk of Tree #867. As such, the tree protection fencing will need to be removed for this portion of the work. The tree should not be significantly impacted, as fill soil will be placed atop already compacted road surface. No roots will be severed. To protect the trunk while once the fence is removed, straw wattle can be wrapped around the trunk of Tree #867 to a height of 10 feet. See example at right.
Pruning for Equipment Clearance

Some pruning may be necessary to allow equipment access and operation.

All tree pruning should be supervised by an ISA Certified Arborist®. Tree pruning should be specified according to ANSI A-300A pruning standards and adhere to ANSI Z133.1 safety standards.

Pruning should remove as little live foliage as necessary to achieve sufficient clearance. The objective of pruning is to proactively and professionally remove conflicting branches, so they are not broken or torn by equipment.

Pruning should occur prior to the arrival of construction equipment onsite.

Potential Impacts from Construction

If the Tree Protection Guidelines (Appendix C) are adhered to, I assess the impact to all trees to be preserved as LOW.

CONCLUSION

Forty (41) trees are prosed for removal, including 26 Coast live oaks that are alive and 5 that are dead. Removals will reduce existing canopy by 0.24 acres, or 2.7% of the existing canopy (6.25 acres.)

This project will not have a ‘significant impact’ upon oak woodlands as defined by the Santa Clara County Planning Office Guide to Evaluating Oak Woodlands Impacts.

This report includes Tree Protection Guidelines that, if followed, will result in LOW impact to all trees scheduled for preservation.
RECOMMENDATIONS

1. Insert a copy of this report into construction plan set.

2. Provide a copy of this report to all contractors and project managers, including the architect, civil engineer, and landscape designer or architect. It is the responsibility of the owner to ensure all parties are familiar with this document.

3. Consult County of Santa Clara Planning Department to determine required mitigation for proposed tree removals.

4. The Tree Protection Guidelines (Appendix C) are to be properly implemented for the entire duration of the project.

5. Arrange a pre-construction meeting with the project arborist or landscape architect to verify tree protection is in place, with the correct materials, and at the proper distances.

6. Arrange for a Certified Arborist® to monitor and document any activity within the dripline or TPS of any tree protection zone.

7. Owner responsible for obtaining tree removal permits if required by local law.

8. If an existing tree becomes damaged during construction, immediately consult the project arborist for recommended action.
BIBLIOGRAPHY

American National Standard. Tree Care Operations (ANSI 133.1) American National Standards Institute 11 West 42nd Street New York, NY 10036 c.2017

American National Standard Institute. Tree Care Operations ANSI A300 (Part 5) – Management of Trees and Shrubs During Site Planning, Site Development, and Construction; Londonderry, NH: Tree Care Industry, Inc. c.2012

American National Standard Institute. Tree Care Operations ANSI A300 (Part 8) – Root Management; Londonderry, NH: Tree Care Industry, Inc. c.2017

Costello, L.R., Hagen, B.W., Jones, K.S. Oaks in the Urban Landscape; Selection, Care and Preservation. Richmond, CA: ANR Communication Services c.2011


APPENDIX A: TREE MAP and CANOPY CALCULATIONS

Site Plan with Tree Protection Fence Schematic

A full-size PDF of the site plan below is attached to this report and was also delivered to client in a separate file along with this report.
Total Tree Canopy, all species.

Red line is property boundary. Total area is 8.77 acres.

Yellow areas are non-canopy landcover, 2.52 acres.

Canopy cover is 6.25 acres (8.77 less 2.52) or 71% of total land cover.
Total Canopy Reduction

Yellow areas are canopy of oaks proposed for removal, 0.2 acres.

Orange areas are canopy of non-oak species proposed for removal, 0.04 acres.

Total canopy area proposed for removal (all species) is 0.24 acres, or 2.7% of total tree canopy.
## APPENDIX B: TREE ASSESSMENT TABLE

<table>
<thead>
<tr>
<th>Tag #</th>
<th>Species</th>
<th>Trunk Diam. (in.)</th>
<th>Condition</th>
<th>Remove?</th>
<th>Comments / Justification Statement</th>
<th>MINIMUM 3x CRZ (feet)</th>
<th>IDEAL 6x CRZ (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>801</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>19</td>
<td>55</td>
<td></td>
<td>Barbed wire embedded in trunk</td>
<td>4.75</td>
<td>9.5</td>
</tr>
<tr>
<td>802</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>24</td>
<td>55</td>
<td></td>
<td></td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>803</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>11</td>
<td>50</td>
<td></td>
<td></td>
<td>2.75</td>
<td>5.5</td>
</tr>
<tr>
<td>804</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>11, 15</td>
<td>55</td>
<td>Remove</td>
<td>Conflicts with pool construction</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>805</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>20</td>
<td>55</td>
<td>Remove</td>
<td>Conflicts with pool construction</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>806</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>16</td>
<td>50</td>
<td>Remove</td>
<td>Will not survivie planned grade change</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>807</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>28</td>
<td>60</td>
<td></td>
<td></td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>808</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6, 7</td>
<td>55</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>809</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7</td>
<td>55</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>810</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>55</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>811</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>55</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Tag #</td>
<td>Species</td>
<td>Trunk Diam. (in.)</td>
<td>Condition</td>
<td>Remove?</td>
<td>Comments / Justification Statement</td>
<td>MINIMUM 3x CRZ (feet)</td>
<td>IDEAL 6x CRZ (feet)</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>---------</td>
<td>------------------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>812</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>14</td>
<td>40</td>
<td>Remove</td>
<td>Too close to construction</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>813</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>15, 20</td>
<td>21</td>
<td>Remove</td>
<td>Diseased and leaning over residence</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>814</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>21</td>
<td>45</td>
<td></td>
<td></td>
<td>5.25</td>
<td>10.5</td>
</tr>
<tr>
<td>815</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7</td>
<td>0</td>
<td>Remove</td>
<td>Dead</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>816</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>15</td>
<td>60</td>
<td>Remove</td>
<td></td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>817</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>19</td>
<td>0</td>
<td>Remove</td>
<td>Dead</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>818</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>60</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>819</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>55</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>820</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7</td>
<td>60</td>
<td>Remove</td>
<td>Too close to construction</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>821</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>6, 7</td>
<td>60</td>
<td></td>
<td></td>
<td>2.5</td>
<td>5</td>
</tr>
<tr>
<td>822</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>26</td>
<td>20</td>
<td>Remove</td>
<td>Mostly dead</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Tag #</td>
<td>Species</td>
<td>Trunk Diam. (in.)</td>
<td>Condition</td>
<td>Remove?</td>
<td>Comments / Justification Statement</td>
<td>MINIMUM 3x CRZ (feet)</td>
<td>IDEAL 6x CRZ (feet)</td>
</tr>
<tr>
<td>-------</td>
<td>------------------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>---------</td>
<td>-------------------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>823</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>13</td>
<td>55</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>824</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>19</td>
<td>45</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>825</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>12</td>
<td>50</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>826</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>8</td>
<td>45</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>827</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>55</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>828</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>14</td>
<td>40</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>829</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>50</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>830</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>50</td>
<td></td>
<td></td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>831</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7</td>
<td>60</td>
<td></td>
<td></td>
<td>1.75</td>
<td>3.5</td>
</tr>
<tr>
<td>832</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7, 7</td>
<td>50</td>
<td></td>
<td></td>
<td>2.5</td>
<td>5</td>
</tr>
<tr>
<td>833</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>15</td>
<td>0</td>
<td>Remove</td>
<td>Dead</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Tag #</td>
<td>Species</td>
<td>Trunk Diam. (in.)</td>
<td>Condition</td>
<td>Remove?</td>
<td>Comments / Justification Statement</td>
<td>MINIMUM 3x CRZ (feet)</td>
<td>IDEAL 6x CRZ (feet)</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>---------</td>
<td>------------------------------------</td>
<td>-----------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>834</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>20</td>
<td>60</td>
<td></td>
<td>Leans away from project site; no overhanging canopy</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>835</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>12</td>
<td>65</td>
<td>Remove</td>
<td>Inside footprint of fire truck turnaround</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>836</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>50</td>
<td>Remove</td>
<td>Inside footprint of fire truck turnaround</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>837</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>12</td>
<td>60</td>
<td>Remove</td>
<td>Inside footprint of fire truck turnaround</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>838</td>
<td>Deodar cedar <em>Cedrus deodara</em></td>
<td>9</td>
<td>50</td>
<td>Remove</td>
<td>Inside footprint of fire truck turnaround</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>839</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7</td>
<td>58</td>
<td></td>
<td></td>
<td>1.75</td>
<td>3.5</td>
</tr>
<tr>
<td>840</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7</td>
<td>0</td>
<td>Remove</td>
<td>Dead</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>841</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7</td>
<td>0</td>
<td>Remove</td>
<td>Dead</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>842</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>11</td>
<td>35</td>
<td></td>
<td></td>
<td>2.75</td>
<td>5.5</td>
</tr>
<tr>
<td>Tag #</td>
<td>Species</td>
<td>Trunk Diam. (in.)</td>
<td>Condition</td>
<td>Remove?</td>
<td>Comments / Justification Statement</td>
<td>MINIMUM 3x CRZ (feet)</td>
<td>IDEAL 6x CRZ (feet)</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>---------</td>
<td>------------------------------------</td>
<td>----------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>843</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>10</td>
<td>50</td>
<td></td>
<td></td>
<td>2.5</td>
<td>5</td>
</tr>
<tr>
<td>844</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>8, 14</td>
<td>45</td>
<td></td>
<td></td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>845</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>30</td>
<td>62</td>
<td></td>
<td></td>
<td>7.5</td>
<td>15</td>
</tr>
<tr>
<td>846</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>8</td>
<td>50</td>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>847</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>6</td>
<td>45</td>
<td></td>
<td></td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>848</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>13</td>
<td>45</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>849</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>12</td>
<td>50</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>850</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>6, 6</td>
<td>35</td>
<td>Remove</td>
<td>Too close to construction</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>851</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>11, 12</td>
<td>40</td>
<td></td>
<td>Canopies lean over road. Good because all support roots are uphill and won't be disturbed</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Tag #</td>
<td>Species</td>
<td>Trunk Diam. (in.)</td>
<td>Condition</td>
<td>Remove?</td>
<td>Comments / Justification Statement</td>
<td>MINIMUM 3x CRZ (feet)</td>
<td>IDEAL 6x CRZ (feet)</td>
</tr>
<tr>
<td>------</td>
<td>------------------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>---------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>852</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>6, 12</td>
<td>40</td>
<td></td>
<td>Canopies lean over road. Good because all support roots are uphill and won't be disturbed</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>853</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>34</td>
<td>50</td>
<td></td>
<td>Canopies lean over road. Good because all support roots are uphill and won't be disturbed</td>
<td>8.5</td>
<td>17</td>
</tr>
<tr>
<td>854</td>
<td>Madrone <em>Arbutus menziesii</em></td>
<td>12</td>
<td>65</td>
<td></td>
<td></td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>855</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>8, 9, 14</td>
<td>50</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>856</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>14</td>
<td>40</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>857</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>14</td>
<td>45</td>
<td>Remove</td>
<td>Inside building footprint</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>858</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>32</td>
<td>60</td>
<td></td>
<td>Crown reduce, especially on limbs extending over garage</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Tag #</td>
<td>Species</td>
<td>Trunk Diam. (in.)</td>
<td>Condition</td>
<td>Remove?</td>
<td>Comments / Justification Statement</td>
<td>MINIMUM 3x CRZ (feet)</td>
<td>IDEAL 6x CRZ (feet)</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>---------</td>
<td>------------------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>859</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>18</td>
<td>55</td>
<td></td>
<td></td>
<td>4.5</td>
<td>9</td>
</tr>
<tr>
<td>860</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>16</td>
<td>50</td>
<td></td>
<td></td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>861</td>
<td>Valley oak <em>Quercus lobata</em></td>
<td>13</td>
<td>35</td>
<td></td>
<td></td>
<td>3.25</td>
<td>6.5</td>
</tr>
<tr>
<td>862</td>
<td>Valley oak <em>Quercus lobata</em></td>
<td>18</td>
<td>55</td>
<td></td>
<td></td>
<td>4.5</td>
<td>9</td>
</tr>
<tr>
<td>863</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>20, 26</td>
<td>58</td>
<td></td>
<td></td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>864</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>32</td>
<td>68</td>
<td></td>
<td></td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>865</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>24</td>
<td>48</td>
<td></td>
<td></td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>866</td>
<td>Valley oak <em>Quercus lobata</em></td>
<td>23</td>
<td>48</td>
<td></td>
<td></td>
<td>5.75</td>
<td>11.5</td>
</tr>
<tr>
<td>867</td>
<td>Valley oak <em>Quercus lobata</em></td>
<td>22</td>
<td>50</td>
<td></td>
<td></td>
<td>5.5</td>
<td>11</td>
</tr>
<tr>
<td>868</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>14, 14</td>
<td>40</td>
<td></td>
<td></td>
<td>4.5</td>
<td>9</td>
</tr>
<tr>
<td>869</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>6, 7</td>
<td>58</td>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>870</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>7</td>
<td>50</td>
<td></td>
<td></td>
<td>1.75</td>
<td>3.5</td>
</tr>
<tr>
<td>Tag #</td>
<td>Species</td>
<td>Trunk Diam. (in.)</td>
<td>Condition</td>
<td>Remove?</td>
<td>Comments / Justification Statement</td>
<td>MINIMUM 3x CRZ (feet)</td>
<td>IDEAL 6x CRZ (feet)</td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>---------</td>
<td>-----------------------------------</td>
<td>-----------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>871</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>9, 10, 12, 14</td>
<td>48</td>
<td></td>
<td></td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>872</td>
<td>Valley oak <em>Quercus lobata</em></td>
<td>20</td>
<td>42</td>
<td></td>
<td></td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>873</td>
<td>Purpleleaf plum <em>Prunus cerasifera</em></td>
<td>9</td>
<td>40</td>
<td>Remove</td>
<td>Too close to construction</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>874</td>
<td>Purpleleaf plum <em>Prunus cerasifera</em></td>
<td>8</td>
<td>50</td>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>875</td>
<td>Bay Laurel <em>Umbellularia californica</em></td>
<td>7</td>
<td>45</td>
<td>Remove</td>
<td>Too close to construction</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>876</td>
<td>Japanese maple <em>Acer palmatum</em></td>
<td>Multistem</td>
<td>50</td>
<td>Remove</td>
<td>Too close to construction</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>877</td>
<td>Crape myrtle <em>Lagerstroemia indica</em></td>
<td>Multistem</td>
<td>40</td>
<td>Remove</td>
<td>Too close to construction</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>878</td>
<td>Purpleleaf plum <em>Prunus cerasifera</em></td>
<td>10</td>
<td>35</td>
<td>Remove</td>
<td>Too close to construction</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>879</td>
<td>Goldenrain tree * Koelreuteria sp.*</td>
<td>10</td>
<td>40</td>
<td></td>
<td></td>
<td>2.5</td>
<td>5</td>
</tr>
<tr>
<td>880</td>
<td>Coast live oak <em>Quercus agrifolia</em></td>
<td>28</td>
<td>50</td>
<td></td>
<td></td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Tag #</td>
<td>Species</td>
<td>Trunk Diam. (in.)</td>
<td>Condition</td>
<td>Remove?</td>
<td>Comments / Justification Statement</td>
<td>MINIMUM 3x CRZ (feet)</td>
<td>IDEAL 6x CRZ (feet)</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>---------</td>
<td>------------------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>881</td>
<td>Coast live oak</td>
<td>32</td>
<td>45</td>
<td></td>
<td></td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>882</td>
<td>Coast live oak</td>
<td>28</td>
<td>45</td>
<td></td>
<td></td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>883</td>
<td>Crape myrtle</td>
<td>6</td>
<td>50</td>
<td></td>
<td></td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>884</td>
<td>Walnut</td>
<td>6, 6, 7</td>
<td>55</td>
<td></td>
<td></td>
<td>2.5</td>
<td>5</td>
</tr>
<tr>
<td>885</td>
<td>Cherry</td>
<td>6</td>
<td>45</td>
<td></td>
<td></td>
<td>1.5</td>
<td>3</td>
</tr>
<tr>
<td>886</td>
<td>Purpleleaf plum</td>
<td>12</td>
<td>35</td>
<td></td>
<td></td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>887</td>
<td>Maple</td>
<td>17</td>
<td>52</td>
<td></td>
<td></td>
<td>4.25</td>
<td>8.5</td>
</tr>
<tr>
<td>888</td>
<td>Pear, Ornamental</td>
<td>8</td>
<td>35</td>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>889</td>
<td>Bay Laurel</td>
<td>8</td>
<td>35</td>
<td></td>
<td></td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>890</td>
<td>Coast live oak</td>
<td>32</td>
<td>80</td>
<td></td>
<td></td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>891</td>
<td>Coast live oak</td>
<td>30</td>
<td>58</td>
<td></td>
<td></td>
<td>7.5</td>
<td>15</td>
</tr>
</tbody>
</table>
APPENDIX C: TREE PROTECTION GUIDELINES

Project Arborist

1. A Registered Consulting Arborist® or Certified Arborist® is to be retained to act as the Project Arborist to monitor any construction activates that may impact the health of protected trees.

Preconstruction Meeting with Project Arborist

2. Prior to beginning work, all contractors involved with the project should attend a pre-construction meeting with the Project Arborist to review the tree protection guidelines. Access routes, storage areas, and work procedures will be discussed.

Monitoring

3. Schedule for Project Arborist monitoring on a monthly basis, and when trenching near protected trees or working inside the Tree Protection Zone.
Tree Protection Zone (TPZ)

See Site Plan with Tree Protection Fencing (Appendix A)

4. Tree protection locations should be marked before any fencing contractor arrives.

5. Prior to the arrival of construction equipment or materials on site, six-foot high chain link fence mounted on 8-feet tall, 2-inch diameter metal posts, driven 2 feet into the ground and spaced no more than 10 feet apart shall be erected at the limits of each Tree Protection Zone (TPZ)

6. Once established, the fence must remain undisturbed and be maintained throughout the construction process until final inspection. The fence should be maintained throughout the site during the construction period and should be inspected periodically for damage and proper function.

7. Laminated warning signs, minimum size 8.5” x 11”, stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited are to be attached. Signs should be spaced no more than 10 feet apart. Text on the signs should be in both English and Spanish (Appendix E).

8. The area within the fencing is the Tree Protection Zone (TPZ)

9. TPZ fencing may only be only be moved, crossed or altered with permission of the Project Arborist.

10. Tree Protection Zone (TPZ) Restrictions

   a. NO operation, storage, or parking of vehicles or heavy equipment.

   b. NO storage or disposal of building materials, refuse, soil, excavated spoils, or chemicals of any kind.

   c. NO cutting of tree roots by utility trenching, foundation digging, or any miscellaneous excavation without prior approval of the Project Arborist.

   d. NO use of TPZ as a rest/lunch/break area by project staff.

   e. NO grade changes of any kind, except as expressly designed or approved by the Project Arborist.
f. NO alteration or disturbance, for any duration, of the ground inside the TPZ.

11. **All work within the TPZ is to be approved by the Project Arborist prior to commencement of the task.**

**Grading Limitations**

12. Grade changes outside of the TPZ shall not significantly alter drainage to any tree.

13. Grade changes under specifically approved circumstances shall not allow more than 6-inches of fill soil added or allow more than 4-inches of existing soil to be removed from natural grade unless mitigated.

14. Grade cuts exceeding 4-inches shall incorporate retaining walls or an appropriate transition equivalent.

**Root Pruning and Trenching**

15. Roots over 1 inch in diameter should be pruned, rather than crushed or torn. Prune roots clean and square at undamaged tissue using hand pruners or a saw.

16. Roots 2 inches and greater must remain injury free.

17. If pruning of roots 2 inches or greater is unavoidable, this pruning must be monitored and documented by the Project Arborist or a qualified ISA Certified Arborist.

18. Roots should be cut beyond sinker roots or outside root branch junctions. Once severed, exposed roots and upper 3 feet of trench walls should be kept moist with several layers of burlap or backfilled within one hour.

19. Any trenching, construction or demolition that is expected to damage or encounter tree roots 2 inches or greater, or inside the TPZ, should be monitored and documented by the Project Arborist or a qualified ISA Certified Arborist.
Excavation

20. Excavation, demolition or extraction of material shall be performed by equipment sitting outside the TPZ. Other methods permitted are hand digging, hydraulic or pneumatic air excavation technology.

21. Avoid excavation within the TPZ during hot, dry weather.

22. If excavation or trenching for drainage, utilities, irrigation lines, etc., it is the duty of the contractor to tunnel under any roots 2 inches or greater in diameter.

Boring or Tunneling

23. Boring machines should be set up outside the drip line or established Tree Protection Zone. Boring may also be performed by digging a trench on both sides of the tree until roots one inch in diameter are encountered and then hand dug or excavated with an Air Spade® or similar air or water excavation tool. Bore holes should be adjacent to the trunk and never go directly under the main stem to avoid oblique (heart) roots. Bore holes should be a minimum of three feet deep.
Timing

24. If the construction is to occur during the summer months supplemental watering should be applied to help ensure survival during and after construction.

Tree Pruning and Removal Operations

25. All tree pruning or removals should be performed by a qualified arborist with a C-61/D-49 California Contractors License.

26. Tree pruning should be specified according to ANSI A-300A pruning standards and adhere to ANSI Z133.1 safety standards.

27. Trees that need to be removed or pruned should be identified in the pre-construction walk through.

Post-Construction Phase

28. Monitor the health and structure of all trees for any changes in condition.

29. Perform any other mitigation measures to help ensure long term survival.
APPENDIX D: SAMPLE TREE PROTECTION SIGN

**TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND ARE SUBJECT OF A TREE PRESERVATION ORDER (TOWN & COUNTRY PLANNING ACT 1990)
CONTRAVENTION OF TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS:-
THE PROTECTIVE FENCING MUST NOT BE REMOVED
NO PERSON SHALL ENTER THE PROTECTIVE AREA
NO MACHINE OR PLANT SHALL ENTER THE PROTECTION AREA
NO MATERIALS SHALL BE STORED IN THE PROTECTION AREA
NO SPOIL SHALL BE DEPOSITED IN THE PROTECTION AREA
NO EXCAVATION SHALL OCCUR IN THE PROTECTION AREA
ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

Laminated warning signs, minimum size 8.5” x 11”, stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited, are to be attached to TPZ fencing.

Signs should be spaced no more than 10 feet apart.

Text on the signs should be in both English and Spanish.
EXHIBIT 1

SIGNIFICANCE OF ROOT SEVERANCE ON PERFORMANCE OF ESTABLISHED TREES

by W. Douglas Hamilton

Abstract. There are many factors to consider when severing the roots of established trees. Factors governing root growth are discussed. Acceptable survival following severe root severance is interdependent with the condition of the top. It is important to know the location of various kinds of roots—large lateral, sinker, heart, non-woody. Key factors to successful results from severe root-severing include: a tree species with adequate vigor, adequate moisture in the root area, healthy carbohydrate reserves, proper timing in climates with temperature extremes and knowing how to judge a tree that should not be severely root pruned. Many landscape trees appear to have a wide tolerance to root removal.

Résumé. Il y a plusieurs facteurs à considérer lorsque les racines d'arbres à maturité doivent être endommagées. Les facteurs influençant la croissance des racines sont discutés. Une bonne survie d'une arbre après des dommages aux racines est dépendante de la condition de la clime. Il est important de connaître l'emplacement des divers types de racines - les racines primaires, secondaires et les radicelles. Les facteurs-clés afin d'avoir des résultats positifs après des dommages aux racines incluent: une espèce d'arbre avec une bonne vigueur; une humidité adequate dans la zona racinaire, de bonnes réserves d'hydrate de carbone, le choix de la période appropriée dans les climats avec des températures extrêmes et savoir reconnaître les arbres dont les racines ne devraient pas être endommagées. Plusieurs arbres normalement semblent avoir une grande tolérance à la taille des racines.

Several questions about tree roots have been dealt with in the past few years: pest problems, sidewalk-curb breaking and some relating to how and where they grow. To my knowledge, the question of severity of root removal has not been addressed. There is little question that root loss affects tree growth, appearance, and stability. But how significant are the effects and are there guidelines for management? There is a need to adjust our standards of expected performance of established trees as a result of severe root loss (greater than 50%). Root pruning has become an important arboriculture practice.

Essential root growth is a summation of casual factors:
- The type and quantity of wood formed in a root depends on the growth conditions of the stem.
- The location of the root or root part is dependent on growth of the stem. There is greater growth of roots near the base of trees than on roots further out.
- Carbohydrate (food) storage has priority over growth in roots. Root growth may not occur until a threshold of reserves has been stored in the root. Radial growth of roots begins after “food” reserves have been stored in existing woody roots.
- If there is a depletion of food reserves and a delay in their replenishment, there is a delay in recovery of root growth and a slower growth of shoots.
- Tree stress indirectly affects root growth through the adverse influence on photosynthesis. Stress reduces the amount of carbohydrates available in roots for use and storage.

It is apparent then that condition of the leaves, stems, and roots are all interdependent. Roots have a priority over top growth for the accumulation of food reserves, and that can affect the canopy. A delay in the recovery from root pruning can stress the leaf canopy. If the food-storage reserves in the roots have not been met, root enlargement is delayed. If there is a concentration of roots near the base of the tree, vigor can be retained even though root pruning may be quite close to the trunk, perhaps up to ten feet from the trunk. If carbohydrate reserves are high, chances are enhanced for acceptable recovery and general performance. It makes sense to strengthen carbohydrate reserves before root removal.

Should we thin the top when pruning roots? The purpose is to reduce demands on a damaged root system. Reducing the photosynthetic area reduces the supply of carbohydrates moving to the roots. We all have seen trees survive acceptably well when 50% of the root system has been severed, with little observed reduction in leaf sur-

The availability of carbohydrates to support new root growth is limited during active shoot growth in the spring. We should avoid root pruning during that time. The worst time to root prune is just prior to bud break. Initiation of cambial activity in roots is a continuation of that in the stem, proceeding from the trunk towards the root tip. Activation of the vascular cambium in the root depends upon the arrival of hormonal substances. One is auxin, much of which is synthesized in the buds, but may also be formed in root tips. It moves downward to the base and outward to the root tips. High concentrations of auxin are necessary for root initiation and it is important in the formation of compression wood in roots. Evidence from Japan suggests that pruning shoot tips stops or delays root growth, an interruption in the supply of auxin. Research from California casts doubt on the advisability of pruning newly planted young trees, probably for this reason. Rapid recovery following the shock of severe root removal is dependent not only on the rapid initiation of new roots, but on the initiation of cambial activity and the movement of auxin from the buds. Top pruning should be limited to removal of weak and shaded leaf surfaces on vigorous trees.

Gibberellin, another naturally occurring plant hormone, stimulates cell elongation. It is produced in roots as well as in leaves and seeds. In roots, it moves through new wood. Rapid elongation of new roots is important to shorten the period of shock after root pruning. Where rapid growth is desired after root removal such as in utility trenching, stimulation through applications of gibberellins may be desirable.

Cytokinins in high concentrations inhibit lateral root formation. Root pruning removes the root tip which contains the highest concentrations of cytokinins and allows callus tissue to close the cut. Thus, root pruning is beneficial to root branching. Nurserymen who root prune and transplant, benefit from this. To the arborist or landscaper who wants rapid branching of roots, high concentrations of cytokinins may be undesirable. Future research will bring more light on how these and perhaps other hormones influence root growth.

Tissue structure is important to root growth. In general, roots are less dense than stems. There is a high percentage of thin-walled parenchyma cells in the large and surface-growing roots. These cells store most of the food, so, removal of large lateral roots can remove large amounts of starch which puts the tree under stress, sometimes escalating to decline and death. The diameter and length of cells in vertical (sinker) and heart roots tend to be smaller than those in lateral roots at a similar distance from the tree-base. These have a high tensile strength which is important when large horizontal roots close to the trunk are cut.

The entire woody cylinder of the root transports water and nutrients, so reduction in root diameter over a long time may not be critical for survival. Some arborists shave large roots on one side to reduce the rates of radial expansion. This appears to work without significantly impairing tree performance, if the shaving is not done too close to the tree trunk.

Long-term soil moisture levels affect the distribution of roots. Some studies suggest that soil moisture has more influence on root distribution than on root size. Under drought conditions, root growth tends to shift towards the root tip rather than to increase in diameter, so severe root pruning in desert areas may be quite harmful. Infrequent irrigation produces poor root growth in surface soils, but more roots in the deeper layers. Growth of deep roots begins later than growth of surface roots. Under dry conditions, large roots may be deep and may escape pruning. Experience in the West indicates this to be true.

Root growth continues longer at the base of the trunk than further out. Cessation of cambial activity proceeds from root tip to the tree base and thence to the shoot tip. This means that most root activity is near the tree base and for a long part of the growing season.

Temperature effects are also important. There are temperature minimums for root growth which vary with the species. Warm temperatures (68 °F) on shoots can accelerate starch reduction in fibrous roots. At a cooler 50 °F, there can be an increase in soluble sugars in the larger roots. The effects of severe root pruning are probably more drastic in cool-cold climates, especially when soil temperatures are lowering or are below minimum for root growth, due to more food being stored.
and not used in growth of new roots.

After the roots have been pruned, the regeneration of roots proceeds most rapidly when top growth is least rapid. New root generation, even though rapid, does not require as much energy as is required for shoot growth. In the summer and fall assimilates from the leaves are likely to go to the roots and to the severed ends of roots.

The location of the large roots is arbitrary. They grow where their requirements for air, water, temperature, nutrition, and freedom from toxic substances are satisfied. Tree roots commonly grow outward 1 1/2 to 2 times the height of the tree, yet, arborists consider the risk small if tree roots are cut off at the drip line. If done on one tangential side, about 15% of the roots will be cut. If a single straight-line cut is made midway between the drip line and the trunk, it has been estimated that 30% of the roots will have been severed, and that trees of reasonable vitality should withstand this. In my opinion, adhering to the recommendation of not pruning closer than midway between the drip line and the trunk is, in many situations, more conservative than necessary. It is frequently violated without serious consequences. In California, mature olive trees are transported any time of the year with a 2′ x 2′ x 1 1/2′ root balls and Washington fan palms are transported during the summer with closely cropped roots. I have seen 75% to 80% of the root system of mature southern magnolias in a compacted clay soil destroyed by rototiller, yet resulting in no top thinning. After a short period of severe leaf fall, the trees returned to acceptability in a city government complex. Results of a recent controlled study in Ohio on root pruning of young apple trees indicate that vegetative growth of young apple trees can be reduced by root pruning, but root pruning must be severe and the reduction of growth is only temporary. Growth reductions are likely related to the changed moisture status of the trees. Later reductions in shoot growth, however, can be attributed to an increased allocation of photosynthates to the roots and to hormonal imbalances. Trees re-establish their root-shoot balance by enhancing root growth at the expense of shoot growth. With the development of new roots, water relations in the tree improve and photosynthesis and shoot growth rates increase.

In this apple tree study, water stress was most severe one to six hours after treatment. Leaf rolling was observed for the first seventy-two hours in severe treatments. One day after root pruning, photosynthesis was reduced 35% to 50%. Photosynthesis and transpiration generally followed similar patterns. Both started to recover after ten days. Shoot growth was reduced 25% one month after treatment on the more severe treatments and leaf area was reduced about one-third. Although significant amounts of roots were removed in pruning, no difference in root weight was observed four weeks after treatment. More new roots were produced on root-pruned trees than on trees unpruned. Similar observations have been noted for several other kinds of trees. This illustrates that the effects of severe root loss can be temporary and that root pruning can stimulate production of new roots.

Several years ago, I conducted a test to determine why 65 uniform 3-year-old iron bark eucalyptus trees (Eucalyptus sideroxylon) grew vigorously after being severely potbound in one-gallon containers. I trenched 5 feet deep and 18 inches from the trunk on one side. I then directed

Fig. 1. Trenching within two feet of this Quercus agrifolia in Berkeley, California is risky in this year of drought.

Fig. 2. A high percentage of the tree's roots are located close to the trunk even though some extend outward several times the tree height.
a water jet at 200 psi to blast the soil from the roots. Much of the root bark was removed in the process. The trees were left exposed for several weeks, until after the appearance of new-shoot growth. All the trees remained in their original position and most amazing was the rapid growth of new roots and top growth in the weeks following soil replacement.

How can landscape trees survive such a loss of roots? A very high percentage of water-absorbing roots are under and close to the tree stem. I suggest that a high percentage of water-nutrient-absorbing roots are not disturbed. Many, if not most, of the sinker roots originate from the primary roots within four feet of the trunk; these vertically descending roots are minimally disturbed. Downward-growing heart-roots also originate from the buttress of the trunk. So, many trees with adequate vigor and vitality can withstand severe root pruning. Adequate tree vigor and vitality are the key words.

Some arborists use a rule of thumb for transplanting trees which is radical root pruning: a soil ball of 12-inch diameter for each inch of trunk diameter. In practice, this appears fairly realistic for root pruning in the established landscape. When we observe practices in large-tree container-nurseries and the practices of successful tree movers, these figures appear realistic. Trees should not be moved during rapid shoot growth and tree stresses should be alleviated before severance.

The effect of root pruning on the stability of the tree is a major factor of concern. This is most important when the tree is very large, very tall, old for the species, has a dense canopy for the root volume (a low root:shoot ratio), or is wounded near the soil line. Unusually strong winds and strong winds from a non-prevailing direction are also important. This excludes small-sized trees, open and naturally grown trees, most trees having adequate vigor and vitality and trees that have been thinned to allow a body of air to blow through. It does not exclude young evergreen trees with a heavy top which are spring-planted and/or stimulated to excessive growth.

In the San Francisco Bay area of California, an informal survey of supervisors responsible for street-tree maintenance indicates that less than 1% of trees fall over as a result of root pruning, planting, being too close to buildings, or being surrounded by pavement. But even that may be unacceptable if substantial damage occurs. City Forester Gary Nauman of Palo Alto recorded the failure of 25 to 50 pink flowering locust (Robinia sp.) after root pruning. Gordon Mann in Redwood City cites several storm-damage problems to the following trees which had been root pruned: Acacia melanoxylon (black acacia), Schinus molle (California pepper), and Fraxinus velutina "Modesto" (Modesto ash). Those safe to root prune include: Cinnamomum camphora (Camphor tree), Ulmus americana (American elm), Ulmus pumila (Siberian elm), Populus sp. (poplars), Liquidambar styrictiflua (sweet gum), and Platanus acerifolia (London plane). In nearby Burlingame, the problem appears to lie with certain tree species: Acacia melanoxylon (black acacia), Ulmus sp., Juglans nigra (black walnut), and Morus alba (fruitless mulberry) in soft soils. Results from 35 locations surrounding San Francisco Bay with regards to tree failure during severe storms of November-December, 1982, indicated no failure attributed to root pruning, although many trees went down.

Plant Pathologist Terry Tatter, at the University of Massachusetts, says that the probability of tree failure increases with the amount of root system cut. Trees in exposed locations are especially at risk. He advises to remove trees that have lost 50% or more of their root system during construction.

Lee Payne, retired researcher from the Pacific Southwest Forest and Range Experiment Station,

---

**Fig. 3.** The downward growing sinker roots are important to tree survival after root severance.

HEARTWOOD CONSULTING ARBORISTS
650.542.8733 – matthew@heartwoodarborists.com
in discussing California forest campground trees, says there is an increasingly high probability of
tree failure for trees greater than 30 inches in
diameter, leaning trees, trees in winds over 30
miles per hour, and in trees with internal rot.

The root system of northern red oaks was
studied by Walter H. Lyford, Harvard University.
He notes that by the time the trees are 30 to 40
years old and 4 to 5 inches in diameter, the roots
can be divided into central and peripheral
systems. The central system at the base of the
tree extends 3½ to 7 feet and consists of main
lateral, numerous vertically and obliquely
descending woody and non-woody roots. These
provide the support and anchoring system.
Although large in diameter at the juncture with the
trunk, they taper rapidly to a small diameter of 1 to
2 inches where they lose much of their strength
and where they tend to break in storms. Also
noted was the fact that sinker roots were found
only within 3½ to 7 feet of the trunk.

In his book, Arboriculture, Richard Harris says
that "if you want to lower the soil grade near the
trunk, you will, in many cases, encounter no large
horizontal roots or sinker roots until you are within
6 to 10 feet of the trunk. For tree stability, do not
cut sinker roots unless they are a considerable
distance from the trunk. Horizontal roots can
usually be safely cut up to the point where their
caliper begins to increase markedly near the
trunk.

Severe root pruning of landscape trees does
not adversely affect the value of the tree to
the general public. Growth reduction and unaccept-
able appearance from root severance can be of a
relatively short duration if the tree has strong vigor
and vitality. Trees re-establish their root-shoot
balance by enhancing root generation at the
expense of shoot growth. With the development of
new roots, water imbalances in the tree improve
and photosynthesis and shoot growth rates in-
crease.

Literature Cited
temperature effects on carbohydrate levels during bud-
(4).
irrigation at different soil water levels on two types. J.
3. Anonymous. Causes of uprooting and breakup of
specimen giant sequoia trees. 1984. University of
California, Division of Agriculture and Natural Resources.
Bulletin 1909.
May.
5. Fayle, D.C.F. 1968. Radial growth in tree roots. Univer-
6. Geiser, D. and David C. Ferree. 1974. The influence of
root pruning on water relations, net photosynthesis and
growth of young Golden Delicious apple trees. J. Amer.
sideroxylon 1971-74. University of California, 
Cooperative Extension, Hayward. OP492.
roots. 1. why tree roots cause pavement problems. Ar-
boricultural J.; 8(3).
roots. 2. Management to minimize existing pavement
problems by tree roots. Arboricultural J.; 8(3).
Hall. pp 42-47, 177-183, 227-244.
pp 551-673.
northern red oak (Quercus rubra L.) Harvard Forest
14. Payne, L.A. 1971. Tree hazard rating field guide from ac-
cident hazard evaluation and control decisions on
forested recreation sites. Pacific Southwest Forest and
Range Experiment Station. PSW 68.
walls: truth and consequences in wound compartmen-
and D.M. Zinel 1986. Patterns of starch reserves in
healthy and diseased American elms. Canadian J. Forest
Research 16.
Hampshire pp 194-207.
Durham, New Hampshire.
four concepts of causality. J. Arboric. 14:29-35.
pruning on the root system of nursery trees. J. Arboric.
22. Watson, G.W. and E.B. Himelick 1982. Seasonal varia-
tion in root regeneration of transplanted trees. J. Arboric.
8:305-310.
23. Yelenosky, G.T. 1972. Tolerance of trees to deficien-
cies of soil aeration. Proceedings 40th International

Horticultural Consultant
38531 Acacia Street
Fremont, California 94536
QUALIFICATIONS, ASSUMPTIONS, & LIMITING CONDITIONS

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or attend meetings, hearings, conferences, mediations, arbitration, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant’s fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

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

Unless otherwise expressed: a) this report covers only examined items and their condition 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 structural problems or deficiencies of plants or property may not arise in the future.
CERTIFICATION OF PERFORMANCE

I, Matthew Fried, certify:

- That I have personally inspected the tree(s) and/or the property referred to in this report and have stated my findings accurately. The extent of the evaluation and appraisal is stated in the attached report and the Terms of Assignment;

- That I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;

- That the analysis, opinions, and conclusions stated herein are my own;

- That my analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices;

- That no one provided significant professional assistance to the consultant, except as indicated within the report;

- That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I further certify that I am Registered Consulting Arborist® #651 with the American Society of Consulting Arborists, and acknowledge, accept, and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Certified Arborist and have been involved in the practice of arboriculture and the study of trees for over twelve years.

Matthew Fried

Matthew Fried
ASCA Registered Consulting Arborist® # 651
ISA Certified Arborist® MA-4851A
ISA Tree Risk Assessor Qualified
Mr. Charles Zaffaroni  
1 La Sandra Way  
Portola Valley, CA 94028  

SUBJECT: FEASIBILITY EVALUATION  
ALTERNATE BENCH BUILDING SITE  
PROPOSED SITE DEVELOPMENT  
APN 182-36-043  
ALPINE ROAD  
SANTA CLARA COUNTY, CALIFORNIA  

Dear Mr. Zaffaroni:  

INTRODUCTION  
As requested, we have conducted further evaluation of the alternate “bench” building site to assess the feasibility of developing this area on your property, APN 182-36-043 on Alpine Road in the Portola Valley area of unincorporated Santa Clara County, California. Our Geologic and Geotechnical Study dated 9 April 2019 (Document Id. 18062C-01R1) presented our findings concerning the subject alternate building site. Subsequently, the County has requested additional information concerning the feasibility of developing the subject area. The following presents the results of our additional analysis.  

SLOPE STABILITY ANALYSES  
To further qualify the stability of the steep slopes and the existing mapped landsliding in the subject area, we modeled the proposed slope conditions and conducted a quantitative slope stability evaluation based upon the methodology presented in our Report.  
We performed the slope stability analyses utilizing the surface profile designated as Section 3 on Sheet A-1.3a, dated 9 July 2019, by CJW Architecture. The modeled surface profile represents the proposed building pad configuration and includes the proposed excavations into the hillside. We interpreted the subsurface conditions and utilized soil/rock strength parameters based upon data presented in our Report.  
The results of our analysis indicated that the slope is potentially unstable under earthquake-induced seismic shaking. Mitigation measures would be necessary to achieve an factor of safety comparable to that of the building site in the “clearing”. Because of the depth of potential landsliding and steepness of the slope, we anticipated that a below grade stitch pier retaining wall would be the most suitable system to mitigate the risk for slope instability.
Using an iterative approach, we determined that the modeled stitch piers would need to have a shear resistance of at least 65kip per linear foot and would need to extend to a depth of approximately 80 feet below the ground surface. A graphic illustration of the results of our analysis are presented on Figure 1, Slope Stability Analysis – Bench Mitigation Measures.

**FINDINGS**

While technically possible, constructing a dwelling on the “bench” site would require extensive landslide hazard mitigation measures. Given the depth and load requirements obtained from our analysis, we anticipate that a double row of stitch piers, with a minimum diameter of 2½ feet and a depth of about 80 feet, would be required along the downhill side of the development area, roughly extending more than 200 feet. With this configuration, we anticipate at least 1,200 cubic yards of concrete would be required to construct the stitch piers.

Based upon the results of our analysis, it remains our professional opinion that the bench area is subject to adverse geologic and geotechnical engineering conditions and we advise against siting the proposed dwelling in this area.

We appreciate the opportunity to continue assisting you with this project. If there are any questions, please contact our office.

Sincerely,

Upp Geotechnology
a division of C2Earth, Inc.

Kirby G. Kiefer
Senior Staff Geologist

Craig N. Reid, Principal
Certified Engineering Geologist 2471
Registered Geotechnical Engineer 3060

Distribution:  Addressee (via e-mail to charles@zaffaroni.us)
Inclusions: Figure 1, Slope Stability Analysis - Bench Mitigation Measures

*This document is protected under Federal Copyright Laws. Unauthorized use or copying of this document by anyone other than the client(s) is strictly prohibited. Contact C2Earth, Inc. for "APPLICATION TO USE."
BENCH AREA CROSS-SECTION
PSEUDO-STATIC
EVALUATION OF LANDSLIDING INITIATING
ANYWHERE UPSLOPE AND/OR BENEATH
THE PROPOSED RESIDENCE AND TOWING
OUT ANYWHERE DOWNSLOPE

EXPLANATION

 Older Landslide Deposits
 Whiskey Hill Formation

BASE: Section Through Slide;
Sheet A-1.3a; CJW Architecture;
9 July 2019

NOTE: THE TEN MOST CRITICAL POTENTIAL
SLIDE SURFACES ARE SHOWN

SLOPE STABILITY ANALYSIS - BENCH MITIGATION MEASURES

UPP GEOTECHNOLOGY
a division of C2EARTH, INC.

APN 182-36-043
Alpine Road
Santa Clara County, California

DRAFTED/REVIEWED SCALE DOCUMENT ID. DATE
KK/CR As Shown 18062C-01L2 July 2019 Figure 1
Hi Lara,

The information in my email of June 18, 2019 is still relevant and reflects the best information available to us.

Thanks,
Laura

Laura C. Russell, AICP
Planning & Building Director

Town of Portola Valley
650-851-1700 Ext. 218
www.portolavaley.net

Follow us:

---

Good afternoon Ms. Russell,

The County of Santa Clara Planning Department received the application for development of the property with APN: 182-36-043. However, in order for development to occur on the subject
property, improvement to an existing bridge off from Creek Park Drive, within the jurisdiction of the Town of Portola Valley, is required. I have an email that was received from the current property owner which indicated that improvement to the bridge would require a building permit from the Town of Portola Valley.

County Planning is ready to deem the application submittal complete and I want to confirm the information provided to the owner regarding the bridge from Portola Valley is still relevant. Attached is the email from the current owner provided to county planning staff and the civil plans for the bridge.

Please let me know if you have any questions.

Warm regards,

Lara Tran
Associate Planner
County of Santa Clara
70 W. Hedding Street, East Wing 7th Floor
San Jose, CA 95110
Phone: (408) 299-5759
lara.tran@pln.sccgov.org

Please visit our website at www.sccplanning.org
To look up unincorporated property zoning information: www.sccplanning.org/aisprofile
Questions on Plan Check Status?, please e-mail: PLN-PermitCenter@pln.sccgov.org
Let me know if there is anything that I can do before tomorrow. You should have the emails from the neighbors, Woodside Fire, and here is the Town. It will go well tomorrow I am confident.

Best regards,
Bob

Robert H. Waterman
650/619-1897
bobwaterman67@gmail.com  MY NEW EMAIL ADDRESS

---------- Forwarded message ----------
From: Laura Russell <l russell@portolavalley.net>
Date: Tue, Jun 18, 2019 at 10:31 AM
Subject: Bridge Replacement - Off Creek Park Drive
To: bobwaterman67@gmail.com  <bobwaterman67@gmail.com>
Cc: Carol Borck <CBorck@portolavalley.net>

Bob,

We understand that there are potential buyers for a property in Santa Clara County with access over a bridge off Creek Park Drive which is located in the Town of Portola Valley (APN079-112-270). The bridge is proposed to be replaced for structural reasons and to improve Fire access. The permitting authority for the bridge is Portola Valley while the permitting authority for the proposed development of the lot is Santa Clara County.

Based on the information available at this time, the Town has preliminarily determined that reconstruction of the bridge would require ministerial building permit review by the Town (discretionary review by the Architectural and Site Control Commission would most likely not be required). The project would need to meet all requirements for engineering, building, planning, geology, and Fire as well as receive permits from all the other outside agencies.

We are not aware of any issues with removing and replacing the bridge as long as the project meets the requirements of all reviewing departments/agencies.

Thanks,
Laura

Laura C. Russell, AICP
Planning & Building Director

Town of Portola Valley
650-851-1700 Ext. 218
www.portolavalley.net