SUBJECT: CONDITIONAL DEVELOPMENT PERMIT AND SETBACK VARIANCE FOR AN ADDITION AND REMOVAL OF A HERITAGE OAK TREE; LANDS OF MATHUR; 27299 BYRNE PARK LANE; FILE \#140-14-ZP-SD-CDP-VAR

FROM: Suzanne Avila, AICP, Interim Planning Director SA

RECOMMENDATION: That the Planning Commission:
Approve the requested Conditional Development Permit and Variance for a reduced side yard setback for a 1,398 square foot addition subject to the recommended conditions in Attachment 1 and findings in Attachments 2 and 3.

## BACKGROUND

The subject property is a 1.239 acre parcel located at the end of Byrne Park Lane. The existing 2,000 square foot residence with attached 501 square foot garage was constructed in 1978. Surrounding properties are developed with single-family homes. The applicant's property is wooded with a relatively small buildable area due to the presence of steep slopes to the rear of the house and the pie-shaped parcel configuration. The average slope of the property is $41.4 \%$ which results in a Lot Unit Factor (LUF) of . 40.

## CODE REQUIREMENTS

As required by Section 10-1.1007 of the Zoning Ordinance, this application for an addition has been forwarded to the Planning Commission for review and approval. A Conditional Development Permit is required when a proposed project is located on a property with a LUF of 0.50 or less. Pursuant to Section 10-1.1007 (3) of the Zoning Ordinance, in reviewing a Conditional Development Permit application the Planning Commission determines whether the proposed development meets the standards of the Town by considering evidence in support of the findings for approval (Attachment 2).

In addition, pursuant to Section 10-1.1007(2) of the Los Altos Hills Municipal Code, the Planning Commission shall act as the authority to grant setback variances when required findings can be made (Attachment 3).

## DISCUSSION

## Site Data:

Net Lot Area: $\quad 1.239$ acres
Average Slope: $\quad 41.4 \%$
Lot Unit Factor: $\quad 0.40$

## Floor Area and Development Area:

| Area (sq.ft.) | Maximum | Existing | Proposed | Increase | Remaining |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Development | 6,600 | 5,007 | 6,539 | 1,532 | 61 |
| Floor | 4,000 | 1,398 | 3,899 | 1,398 | 101 |

The applicant is requesting approval of a Conditional Development Permit to add a two-story addition totaling 1,398 square foot to the existing residence ( 633 square feet to the main floor and 731 square feet beneath). The addition will provide the applicants with a larger kitchen and additional bedroom on the main floor and a bedroom and great room on the lower floor). The maximum height of the addition will be 26 feet. Story poles have been placed on the site to show the location and height of the proposed addition.

Draft findings for approval of the Conditional Development Permit are included in Attachment 2. The applicant's findings are included in Attachment 4.

## Variance

The existing house was constructed with 20 foot setbacks on both sides. The applicant is proposing to locate the corner of the addition 20 feet from the side property line. In 1975 a lot line adjustment was approved between the subject property and an adjacent parcel. The recorded parcel map shows 20 foot side setbacks. The existing residence was built in compliance with these setbacks. However, the Town Code requires 30 foot side setbacks, and staff determined that a variance would be needed to allow new construction to occur less than 30 feet from the side property line. A portion of the addition and proposed exterior deck would extend as close as 20 feet from the property line (see sheet A1 of the development plans, Attachment 7). The development potential of the property is constrained by steep topography that encompasses about two-thirds of the parcel, and because the developable area is located in the narrower portion of the pie-shaped property. The existing residence is a modest size and with the proposed addition, the total floor area will be less than 4,000 square feet. For these reasons, staff is in support of the requested variance (see Attachment 3 for draft findings). The applicant's findings in support of the variance are included in Attachment 4.

## Outdoor Lighting

Proposed light fixtures include recessed lights and a down directed decorative fixture (see sheet A1 of the development plans). These lights comply with the Town's Outdoor Lighting Policy.

## Trees \& Landscaping

The applicant is proposing to remove one heritage oak tree. An arborist was selected by the Town to inspect the tree and provide an opinion on the health and condition of the tree. The arborist determined that the tree has a low suitability for preservation due to its condition. The tree has a large cavity in the lower portion of the larger trunk, has included bark which is a
structural defect, and a sparse canopy. There is also terminal twig dieback, several larger dead branches, and abnormalities in the lower trunk of the tree (see Arborist Report, Attachment 5). Based on the condition of the tree, staff recommends that the applicants be allowed to remove it. Condition \#4 has been included to require three new trees to be planted to replace the oak. The tree that is proposed for removal is marked with surveyor's tape around its trunk.

## Grading and Drainage

A drainage system will be installed around the addition including area drains around the foundation and an energy dissipater (see sheet C3 of the development plans). The only grading that is proposed is to install the foundation.

## Geotechnical Review

The applicant submitted a geotechnical investigation that was reviewed by the Town Geotechnical Consultant, Cotton Shires and Associates. Conditions of approval have been included requiring the project consultant to review construction plans for compliance with geotechnical recommendations, to conduct required inspections during construction, and to submit a final plan review letter to the Town prior to final inspection.

## Neighbor Concerns

To date, no correspondence has been received from the public.

## Committee Review

The Environmental Design and Protection Committee expressed concern about removal of the oak tree (see Attachment 6). Please refer to the earlier discussion on the removal of this tree and the Arborist Report (Attachment 5).

The Pathway Committee requested payment of a pathway in-lieu fee (see condition \#22).
The Open Space Committee recommended that an open space easement be dedicated over the steeper portion of the property starting at the 720' contour (see Attachment 7). Condition \#13 has been included to require the requested open space easement.

## CEQA STATUS

The project is categorically exempt under CEQA per Section 15303 (a).

## ATTACHMENTS

1. Recommended Conditions of Approval
2. Recommended Conditional Development Permit Findings
3. Recommended Variance Findings
4. Applicant's Variance and CDP findings
5. Arborist report dated June 27, 2014
6. Recommendations from Environmental Design and Protection Committee, received June 20, 2012
7. Recommendation from Open Space Committee, received June
8. Development plans (seven sheets)

## ATTACHMENT 1

# RECOMMENDED CONDITIONS FOR CONDITIONAL DEVELOPMENT PERMIT AND VARIANCE FOR AN ADDITION TO AN EXISTING RESIDENCE 

LANDS OF MATHUR; 27299 BYRNE PARK LANE<br>File \# 140-14-ZP-SD-CDP-VAR

## PLANNING DEPARTMENT:

1. No other modifications to the approved plans are allowed except as otherwise first reviewed and approved by the Planning Director or the Planning Commission, depending on the scope of the changes.
2. No new fencing is approved. Any new fencing or gates shall require review and approval by the Planning Department prior to installation.
3. Outdoor lighting is approved as shown on the plans. Any additional outdoor lighting shall be approved by the Planning Department prior to installation.
4. Skylights, if utilized, shall be designed and constructed to reduce emitted light (tinted or colored glass, or other material). No lighting may be placed within skylight wells.
5. Three 24-inch box oaks shall be planted to replace the oak tree that is being removed. The new trees shall be planted prior to final inspection.
6. Additional landscaping may be required. Staff will visit the site prior to final inspection to determine if any additional plantings will be needed for screening or to restore areas disturbed by grading or construction.
7. Prior to beginning any grading operation, all significant trees, particularly the heritage oak trees, are to be fenced at the drip line. The fencing shall be of a material and structure (chain-link) to clearly delineate the drip line. Town staff must inspect the fencing and the trees to be fenced prior to commencement of grading. The property owner shall call for said inspection at least three days in advance of the inspection. The fencing must remain throughout the course of construction. No storage of equipment, vehicles or debris shall be allowed within the drip lines of these trees. Existing perimeter plantings shall be fenced and retained throughout the entire construction period.
8. Prior to requesting the final inspection, a registered civil engineer or licensed land surveyor shall certify in writing and state that "the location of the addition, including roof eaves, is no less than 20 ' from the side property line." The elevation of the addition shall be similarly certified in writing to state that "the elevation of the addition matches the elevation and location shown on the Site Development plan." The applicant shall submit the stamped and signed letter(s) to the Planning Department prior to requesting a final inspection.
9. Prior to requesting the final inspection, a registered civil engineer or licensed land surveyor shall certify in writing and state that "the height of the addition complies with the 27 '-0" maximum structure height, measured as the vertical distance at any point from the bottom of the crawl space or basement ceiling if excavated below natural grade, to the highest part of the structure directly above (including roof materials)." The overall structure height shall be similarly certified in writing and state that "all points of the building (including chimneys and appurtenances) lie within a thirty-five ( $35^{\prime}$ ) foot horizontal band based, measured from the lowest visible natural or finished grade topographical elevation of the structure along the building line and the highest topographical elevation of the roof of the structure." The applicant shall submit the stamped and signed letter(s) to the Planning Department prior to requesting a final inspection.
10. The exterior color for the addition shall match the existing residence, or if the exterior color is changed, it shall have a light reflectivity value of 50 or less and roof materials shall have a light reflectivity value of 40 or less, per manufacturer specifications. All color samples shall be submitted to the Planning Department for approval prior to acceptance of plans for building plan check. All applicable structures shall be painted in conformance with the approved color(s) prior to final inspection.
11. Fire retardant roofing (Class A) is required for all new construction.
12. All properties shall pay School District fees to either the Los Altos School District or the Palo Alto Unified School District, as applicable, prior to acceptance of plans for building plan check. The applicant must take a copy of worksheet \#2 to school district offices (both elementary and high school in the Los Altos School District), pay the appropriate fees and provide the Town with a copy of the receipts
13. The property owner shall grant an Open Space Easement to the Town over the steeper portion of the property, beginning at the $720^{\prime}$ contour, extending to the rear property line. No structures are permitted and no grading or fill shall be permitted. Native vegetation may be planted within the easement but no irrigation or sprinkler systems are permitted. The property owner shall provide legal description and plat exhibits that are prepared by a licensed land surveyor and the Town shall prepare the grant document. The grant document shall be signed and notarized by the property owner and returned to the Town prior to acceptance of plans for building permit.

## ENGINEERING DEPARTMENT:

14. Peak discharge at 27299 Byrne Park Lane, as a result of Site Development Permit 140-14, shall not exceed the existing pre-development peak discharge value of the property. Detention storage must be incorporated into the project to reduce the predicted peak discharge to the pre-development value. Provide the data and peak discharge hydrologic model(s) utilized, as well as, the calculations of the peak discharge value prior and post development. Determine the design peak runoff rate for a 10 -year return period storm and provide detention storage design plans to reduce the predicted peak discharge to the predevelopment value. All documentation, calculations, and detention storage design (2 plan
copies) shall be submitted for review and approval to the satisfaction of the City Engineer prior to acceptance of plans for building plan check.
15. All public utility services serving this property shall be placed underground. The applicant should contact PG\&E immediately after issuance of building permit to start the application process for undergrounding utilities which can take up to 6-8 months.
16. The Engineer of Record shall observe the installation of the drainage system, construction of the energy dissipaters, and completion of the grading activities and state that items have been installed and constructed per the approved plans. A stamped and signed letter shall be prepared and submitted to the Town prior to final inspection.
17. All hydrant use is strictly prohibited by the Purissima Hills Water District. A permit for obtaining water for grading and construction purposes must be obtained from the Purissima Hills Water District, and submitted for approval to the Town Engineering Department prior to acceptance of plans for building check. The permit will authorize the use of water from specific on-site or off-site water sources.
18. Any, and all, changes to the approved grading and drainage plan shall be submitted as revisions from the project engineer and shall first be approved by the Town Engineering Department. No grading shall take place during the grading moratorium (October 15 to April 15) except with prior approval from the City Engineer. No grading shall take place within ten feet of any property line except to allow for the construction of the driveway access.
19. Two copies of an erosion and sediment control plan shall be submitted for review and approval by the Engineering Department prior to acceptance of plans for building plan check. The contractor and the property owner shall comply with all appropriate requirements of the Town's NPDES permit relative to grading and erosion/sediment control. The first 100 feet of the driveway shall be rocked during construction and all cut and fill slopes shall be protected from erosion. All areas on the site that have the native soil disturbed shall be protected for erosion control during the rainy season and shall be replanted prior to final inspection.
20. The property owner shall inform the Town of any damage and shall repair any damage caused by the construction of the project to pathways, private driveways, and public and private roadways, prior to final inspection and release of occupancy permits and shall provide the Town with photographs of the existing conditions of the roadways and pathways prior to acceptance of plans for building plan check.
21. Two copies of a grading and construction operation plan shall be submitted by the property owner for review and approval by the City Engineer and Planning Director prior to acceptance of plans for building plan check. The grading/construction operation plan shall address truck traffic issues regarding dust, noise, and vehicular and pedestrian traffic safety on Deerfield Drive and surrounding roadways, storage of construction materials, placement of sanitary facilities, parking for construction vehicles, clean-up area, and parking for construction personnel. A debris box (trash dumpster) shall be placed on site for collection
of construction debris. Arrangements must be made with the GreenWaste Recovery, Inc. for the debris box, since they have a franchise with the Town and no other hauler is allowed within the Town limits.
22. The property owner shall pay a pathway fee of $\$ 53.00$ per linear foot of the average width of the property prior to acceptance of plans for building plan check.
23. As recommended by Cotton, Shires \& Associates, Inc., in their report dated June 4, 2014, the applicant shall comply with the following:
a. Geotechnical Plan Review - The applicant's geotechnical consultant shall review and approve all geotechnical aspects of the project building and grading plans (i.e., site preparation and grading, site surface and subsurface drainage improvements and excavations for foundations and retaining walls) to ensure that their recommendations have been properly incorporated.

The results of the plan review shall be summarized by the geotechnical consultant in a letter and submitted to the Town Engineer for review prior to acceptance of plans for building plan check.
b. Geotechnical Construction Inspection - The geotechnical consultant shall inspect, test (as needed), and approve all geotechnical aspects of the project construction. The inspections should include, but not necessarily be limited to: site preparation and grading, site surface and subsurface drainage improvements, and excavations for foundations and retaining walls prior to the placement of steel and concrete. Encountered fault locations should be documented (and photographed) and adequate positioning of compressible materials should be confirmed.

The results of these inspections and the as-built conditions of the project shall be described by the geotechnical consultant in a letter and submitted to the Town Engineer for review prior to final inspection.

For further details on the above geotechnical requirements, please refer to the letter from Cotton, Shires \& Associates, Inc., dated June 4, 2014.

## SANTA CLARA COUNTY FIRE DEPARTMENT:

24. An automatic residential fire sprinkler system approved by the Santa Clara County Fire Department shall be included in all portions of the building. Three sets of plans prepared by a sprinkler contractor shall be submitted to the Santa Clara County Fire Department (14700 Winchester Blvd., Los Gatos, CA 95032) for review and approval. The sprinklers shall be inspected and approved by the Fire Department, prior to final inspection and occupancy of the new residence.
25. Potable water supplies shall be protected from contamination cause by fire protection water supplies. It is the responsibility of the applicant and any contractors to contact the water purveyor supplying the site of such project, and to comply with the requirements of that purveyor. Such requirements shall be incorporated into the design of any water based fire protection systems, and/or fire suppression water supply systems or storage.
26. All construction shall comply with applicable provisions of the CFC Chapter 33 and Standard Detail and Specifications SI-7.
27. Approved numbers or addresses shall be placed on all new and existing buildings in such a position that it is plainly visible and legible from the street or road fronting the property. Numbers shall be a minimum of four-inches high with a minimum stroke width of 0.5 inch $(12.7 \mathrm{~mm})$ and shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters.

CONDITION NUMBERS 9, 12, 13, 15, 19, 20, 21, 22 AND 23 SHALL BE COMPLETED AND SIGNED OFF BY THE ENGINEERING DEPARTMENT PRIOR TO ACCEPTANCE OF CONSTRUCTION PLANS FOR PLAN CHECK BY THE BUILDING DEPARTMENT.

Project approval may be appealed if done so in writing within 22 days of the date of this notice. The building permit cannot be issued until the appeal period has lapsed. The applicant may submit construction plans to the Building Department after the appeal period provided the applicant has completed all conditions of approval required prior to acceptance of plans for building plan check.

Please refer to the Conditions of Project Approval set forth herein. If you believe that these conditions impose any fees, dedications, reservation or other exactions under the California Government Code Section 66000, you are hereby notified that these conditions constitute written notice of a statement of the amount of such fees, and/or a description of the dedications, reservations, and other exactions. You are hereby further notified that the 90 -day approval period in which you may protest such fees, dedications, reservations, and other exactions, pursuant to Government Code Section 66020(a), has begun. If you fail to file a protest within this 90 -day period complying with all of the requirements of Section 66020 , you will be legally barred from later challenging such exactions.
Upon completion of the construction, a final inspection shall be required to be set with the Planning and Engineering Departments two weeks prior to final building inspection approval.

NOTE: The Site Development permit is valid for one year from the approval date (until November 6, 2015). All required building permits must be obtained within that year and work on items not requiring a building permit shall be commenced within one year and completed within two years.

## ATTACHMENT 2

# RECOMMENDED FINDINGS FOR APPROVAL OF A CONDITIONAL DEVELOPMENT PERMIT FOR EXPANSION OF AN EXISTING RESIDENCE 

LANDS OF MATHUR; 27299 BYRNE PARK LANE<br>File \# 140-14-ZP-SD-CDP-VAR

1. The site for the proposed development is adequate in size, shape and topography to accommodate the proposed intensity of development, including all structures, yards, open spaces, parking, landscaping, walls and fences, and such other features as may be required by this chapter.

The proposed addition and deck will be constructed on the flatter portion of the property and have been designed to integrate into the existing architectural design with minimal grading and impact to the site. The addition is proposed in the most appropriate location given existing development and the presence of steep slopes below the home site.
2. The size and design of the proposed structures create a proper balance, unity and harmonious appearance in relation to the size, shape and topography of the site and in relation to the surrounding neighborhood

The proposed addition is compliant with Town standards and is harmonious with the existing development on the site and will be compatible with development on surrounding properties.
3. The rural character of the site has been preserved as much as feasible by minimizing vegetation and tree removal, excessive and unsightly grading and alteration of natural land forms.

One tree that is in fair to poor condition will be removed and replacement trees will be planted. No other trees or vegetation are proposed for removal and grading will be limited to installation of the foundation.
4. The proposed development is in compliance with all regulations and policies set forth in the Site Development ordinance.

The proposed addition is in compliance with the regulations and policies set forth in the Site Development Ordinance. The proposed home size is compatible with homes on surrounding properties.

## ATTACHMENT 3

# RECOMMENDED FINDINGS FOR APPROVAL OF A VARIANCE TO ALLOW AN ADDITION WITHIN A SIDE YARD SETBACK 

LANDS OF MATHUR; 27299 BYRNE PARK LANE<br>File \# 140-14-ZP-SD-CDP-VAR

1. Because of exceptional and extraordinary circumstances applicable to the subject property, including size, shape, topography, location or surroundings, the strict application of the provisions of this Title is found to deprive such property of privileges enjoyed by other properties in the vicinity and under identical zoning classification;

The location for expansion of the existing residence is restricted by the presence of steep slopes behind and below the house and the relative narrowness of the property in the most buildable area due to the pie-shaped configuration of the parcel. The proposed addition will be located in the most appropriate location given the site constraints and location and existing development.
2. Upon the granting of the variance, the intent and purpose of the applicable sections of the Zoning Ordinance will still be served and the recipient of the variance will not be granted special privileges not enjoyed by other surrounding property owners.

The granting of a variance would not result in a special privilege to the applicant in that the existing residence was allowed to be constructed with 20 foot side yard setbacks and the addition will not encroach any closer to property lines. If the addition was required to comply with a 30 -foot setback it would impact more trees and extend onto a steeper slope.
3. The granting of such variance will not be materially detrimental to the public welfare or injurious to the property, improvements or uses within the immediate vicinity and within the same zoning district.

The addition will not be materially detrimental to the public welfare or injurious to neighboring properties in that the addition will be screened by existing trees and vegetation and will not present a visual impact or change the rural character of the area.
4. The variance will not authorize a use or activity which is not otherwise expressly authorized by the Zoning District regulations governing the parcel of property.

A single-family residence is a permitted use in the R-A (Residential Agricultural) zoning district. The addition to the residence will provide needed floor area for the applicants and the proposed home size is consistent with other homes in the neighborhood.

# RECEMED <br> SEP $2 \times 2014$ 

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Los Altos Hills Planning
26376 Fremont Road
Los Altos Hills, CA 94022
Attn.: Suzanne Avila, AICP
Re: $\begin{array}{ll}\text { Mathur Addition and Remodel } & \text { Our Job No. } 2169 \\ & 27299 \text { Byrne Park Lane } \\ & \text { File\#140-14-ZP-SD-CDP }\end{array}$
The intent of this letter is to request a variance to allow for a $20^{\prime}$ building side setback line in lieu of the current requirement of $30^{\prime}$ and to provide findings for said variance for the proposed addition and remodel to the residence of Mr. and Mrs. Mathur located at 27299 Byrne Park Lane. A Parcel Map (attached) was recorded on May 15, 1975 for this lot allowing a $20^{\prime}$ BSBL at both sides and a house was built in 1978 with a $20^{\circ}$ North side setback and a 22' South side setback.

The site is pie-shaped where the wide portion is very steep, dropping more than a hundred feet in elevation to the rear and the narrow portion of the pie-shape is gentler in slope and is therefore considered the buildable portion of the lot. The construction of the proposed addition maintains the existing $20^{\prime}$ setback. The strict application of the current regulations of a $30^{\circ}$ setback would deprive the owner of enjoying what exists and currently accepted by the other properties. If the addition was required to follow the $30^{\prime}$ setback, it would possibly disturb the lot in a negative way by requiring further grading and oak tree loss.

Granting this variance maintains the current conditions and therefore does not grant special privileges not enjoyed by other surrounding property owners. The variance does not grant what is not already currently in place.

Granting this variance will not be materially detrimental to the public welfare or injurious to the property, improvements or uses within the immediate vicinity and within the same zoning district because it does not change what currently exists.

This variance will not authorize a use or activity which is not otherwise expressly authorized by the zoning district regulations governing the parcel or property because the variance does not grant what is not already currently in place. The proposed addition will maintain the existing $20^{\circ}$ side setback line.

The site for the proposed addition and remodel is adequate in size and the MFA and MDA requirements are followed.

The size and design of the addition is in harmony with the existing house, site and surrounding neighborhood. The addition will not even be visible from the street. The rural character of the site will basically be unchanged.

The proposed development is in compliance with all the regulations and policies set forth in the Site Development Ordinance except for the requirement of 30' side setbacks.

Mr. and Mrs. Mathur purchased this lot with the desire to improve the livability of the home without negatively impacting the surrounding properties by maintaining the existing design and placing any additions within the current 20' side setbacks. Granting this requested variance has no real impacts on either the subject property or the surrounding ones and therefore is justified.

## Sincerely,


J. Steve Collom, Project Architect

Attachment
r:Imathurlmathur findings.doc


RECEIVE

TOWN OF LOS ALTOS HILLS

October 16, 2014

Los Altos Hills Planning
26376 Fremont Road
Los Altos Hills, CA 94022

Attn.: Suzanne Avila, AICP

Re: $\quad$ Mathur Addition and Remodel<br>27299 Byrne Park Lane<br>File\#140-14-ZP-SD-CDP

The intent of this letter is to provide findings for a Conditional Use Permit request in tandem with a variance request addressed in a separate letter for the proposed addition and remodel to the residence of Mr. and Mrs. Mathur located at 27299 Byrne Park Lane. A Parcel Map (attached) was recorded on May 15, 1975 for this lot allowing a 20' BSBL at both sides and a house was built in 1978 with a $20^{\prime}$ North side setback and a $22^{\prime}$ South side setback. The scope of the project is to add 1,364 square feet of living space to an existing 2,000 square feet residence located on a 1.239 acre lot.

1. The proposed and current use of the project is a single family residence located in a single family residential neighborhood and is therefore properly located in relation to the community.
2. The site for the proposed use is of a size that is consistent with the neighborhood and is adequate to accommodate the residence. The proposed addition does not encroach into the side yard any further than the existing residence and therefore does not require any additional features to assure that the addition will be reasonably compatible with the surrounding area.
3. The existing roadways will not be affected by this project as there will be no change to the existing use.
4. The proposed addition will not encroach any closer to the abutting property (or properties) than the existing house currently does, therefore it has no adverse affect on said abutting properties.

The proposed addition is in character and scale with the current house and with the surrounding houses as well. The current use of the proposed project and surrounding neighborhood is single family residential and it is intended to remain that way.

Sincerely,

J. Steve Collom, Project Architect

Attachment
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## Suzanne Avila

Los Altos Hills Community Development Department
263790 Fremont Road
Los Altos Hills, CA 94022
June 27, 2014

27299 Byrne Park Lane, condition of coast live oak tree \#8


Dear Suzanne:

You requested that I evaluate the subject coast live oak tree, because it has been scheduled for removal on the proposed construction plans for an addition near the tree. I looked at this oak yesterday. In my opinion the tree has "Fair/Poor" preservation suitability and the proposed addition is closer than advisable to the trunk. It is possible that the addition could be constructed without severe damage to the tree, if construction work is done very carefully around the oak and the tree is adequately fenced off from construction. Whether or not to save the tree however, is debatable due to its condition. I don't think it is unreasonable to remove the tree. On the other hand it would also not be unreasonable to try to save the oak if it will not incur severe construction damage.



A portion of the Site Plan in the construction plan set I received is shown above. I have highlighted the subject oak, which is labeled as tree \#8. Based upon the plans it appears that the North side of the addition is about 6 feet from the trunk, and the west portion is 8 feet. These distances are approximate however, and may actually be a bit farther because the tree is on a slope below the existing house. Excavation for the addition however, can be expected to extend a few feet beyond the actual wall of the addition. So, if the tree may remain I think it would be a good idea to actually survey the location of the addition (and also note any necessary over-excavation beyond the addition) relative to this tree.


Regarding the oak's canopy, it is already fairly high now due to past pruning for the existing house, and a general thinning of the canopy. But the new addition will be close to the tree, so if the oak does remain story posts will be helpful in understanding the actual impact on the canopy.

## DESCRIPTION OF THE TREE

Species: Quercus agrifolia
Common Name: coast live oak
Trunk diameter at 4.5 feet above the ground: 24 and 15.6 inches
Tree size (height $x$ canopy spread, estimated): 40-45 feet tall with a canopy spread of 40-45 feet Condition 1:
Vigor: 60 (Fair)
Structure: 50 (Fair/Poor)
Preservation Suitability: Fair/Poor
Expected Impact of Construction: Not sure; possibly Moderate
Action: Debatable
Reason: Overall Condition, Construction
Notes: There is a large cavity in the lower portion of the larger trunk. It looks like this cavity is the result of a previous third trunk removal long ago. The cavity is at least 14 inches deep and 12 by 8 inches wide, and there is decayed wood beyond that. On a positive note though, there is very good woundwood growth around the cavity opening (yellow arrows in photo at right), which strengthens this void in the trunk. The extent of the cavity and its impact on the structural integrity of the tree cannot be accurately assessed without additional and more detailed evaluation such as tomography or resistance drill tests. The owners may contact me if interested in this type of additional evaluation.

Another significant structural defect is included bark between the two tightly pressed together trunks, even though one trunk is quite a bit larger than the other. Canopy density is sparser than normal as if the tree is declining. There is also some terminal twig dieback and several dead branches to 3 inches in diameter.

This is definitely not a vigorous, healthy tree - although the oak does not appear to be on the brink of death either. The ground surface around the tree is beneficial for the oak - 6 inches or more of the tree's own natural leaf and twig litter and no irrigation. Although no irrigation is the preferred state for native California oaks, the past drought is causing many of these trees to decline due to lack of sufficient winter rainfall for the past 3 years. Trees on slopes generally

${ }^{1}$ Highlighted terms are explained in the Glossary on page



Service since 1984
receive less rainfall than trees in level areas, and so lack of water could be part of the reason that this oak does not appear healthy.

There are some other anomalies on the lower trunk, such as an old stump or perhaps a previous fourth small trunk which is now decayed and being engulfed by the living trunk of the tree. There is also an indentation below the cavity (blue arrow in photo on previous page) which is probably an old branch stub with seems to be connected to the cavity.


The southeast side of the tree, showing the tightly pressed trunks with included bark between them. This side of the tree is opposite the large cavity shown in the photo on the previous paae.


The west side of the oak, viewed from the existing deck. Some of the small cavities on branches are visible.

Regarding the branch structure of the oak, this tree has been lion-tail pruned in the past, which unfortunately is not unusual for oaks (and many other tree species) in this area. Long ago many flush cut wounds were created during pruning, some of which have decayed and developed into small to medium-size cavities on the branches.

I scraped away the leaf litter from the root collar of the tree and observed as well as mallet tap tested this area as well as the lower trunk. Even with the cavity the trunk seemed sound although mallet tapping is a relatively simple test that can only detect decay that is close to the surface of the wood.

## RECOMMENDATIONS:

1) Decide either to attempt to save or the tree, or to remove the tree.
2) If the tree may be saved, accurately locate improvements in the field, relative to the trunk and the canopy. Use story posts for the canopy.
a) A distance of 8 linear feet is recommended as a minimum no soil disturbance zone from the edge of the trunk of this tree. If this distance cannot be achieved, I would lean toward removing the tree. This is the $5 \times$ DBH distance for this tree, which will experience soil disturbance on two sides of its trunk. It may be possible to squeeze down over-excavation margins in order to achieve this distance, or redesign the addition to move construction slightly farther from the tree.
b) Irrigation of the tree is recommended. Because the tree is on a slope, water jet irrigation (without fertilizer added) is recommended. Water jet probe holes should be spaced 2 feet on center, underneath the uncovered soil beneath the dripline of the tree, starting 3 feet from the trunk. Have the irrigation performed as soon as possible, and also irrigate the tree monthly throughout the remainder of the normal dry season, which normally extends through Mid-October. The owner may contact me for a paper with directions for the water jetting, and also a company that will provide this service.
c) Maintain the natural leaf litter mulch beneath the tree, but keep it off the root collar of the tree. A retaining device such as a $2 \times 12^{\prime \prime}$ piece of lumber a few feet upslope of the trunk, held in place with rebar can be helpful although some hand clearing will be necessary.
d) Ihave enclosed a paper on California native oak care for the owners, Living Among the Oaks, which will help them to understand and care for this oak as well as other native oaks on their property.


## GLOSSARY:

1. Canopy density refers to the percentage of leaf cover in a tree canopy (after full leaf expansion and maturation), which varies with tree species and age. A lower than normal canopy density can indicate tree decline.
2. Condition \& Preservation Suitability Ratings: Trees are rated on their condition on a scale of zero to 100 with zero being a dead tree and 100 being a perfect or near-perfect tree (which rarely exists - like a supermodel in human terms). There are two components to tree condition - vigor and structure, and they are each rated separately. Averaging the components would not be useful because a very low rating for either component could be a good reason to remove a tree from a site -- even if the other component has a high rating. Numerically speaking, 100 is Excellent (an $\mathrm{A}^{\prime}$ academic grade), 80 is $\operatorname{Good}(\mathrm{B}), 60$ is Fair (C), 40 is Poor (D), 20 is Unacceptable (F) and 0 is Dead. A "U" rating (Uncertain) for either vigor or structure means that the tree was deciduous or just starting to leaf out when evaluated, so I could not accurately estimate its vigor based on foliage characteristics. Condition of the tree is considered relative to the tree species and present or future use of the site to obtain the tree's Preservation Suitability Rating (i.e. "Is this tree worth keeping on this site, in this location, if the tree could be provided with enough above and below ground space to survive and live a long life?"). Preservation suitability ratings are: None, Poor, Fair, Good and Excellent. Fair/Poor and Fair/Good are intermediate ratings,
3. Dieback: the abnormal and premature death of branches, usually in the upper or more terminal portions of a tree or woody plant. Generally the smaller diameter branches die first, and the dieback may extend downward and/or to larger branches. Branch dieback is generally a symptom of stress some underlying problem with the plant, such as root disease or an unfavorable environment. The plant is "downsizing" to deal with this problem.
4. Flush cut: The removal of a branch through pruning, cutting as close as possible to the trunk or parent branch. Flush cuts are no longer recommended because they are unnecessarily large and expose trunk tissue to greater possibility of decay. Instead, the cut should be made just beyond the "branch collar", but not so far outward so as to leave a "stub".
5. Included bark is bark sandwiched between adjacent branches, a branch and the trunk, or two or more trunks, often appearing as a seam. In contrast, a normal attachment will have a ridge of bark protruding upwards and a continuous wood connection between adjacent members. An included bark branch or trunk attachment is weaker than a normal attachment. As branches or trunks with included bark grow, they expand in diameter, squeezing the bark along the seam. This may kill some portion of the included bark. When this occurs, a wound response is initiated. As a consequence, cracks can be generated, leading to breakage. Such defects can often be completely removed when a tree is young (e.g. the offending members equal or less than 2 inches in diameter). Older, larger cuts (such as 6 inches in diameter or more) could cause decay to spread into the remaining member, which is undesirable. In these cases it may be best to thin one member (usually the smaller member) by $25 \%$ to slow its growth and ultimate size.
6. Lion-tail pruning removes interior branches and concentrates foliage at the ends of branches. This may result in sunburned bark tissue, watersprouts, cracks in branches, reduced branch taper, increased load on branch unions, and weakened branch structure. Lion tailing also changes the dynamics of the branch and often results in excessive branch breakage.
7. Mallet Tap Test (also called "trunk sounding"). A rubber mallet is used to tap a tree trunk or branch to look for obvious loose bark, decay, cavities or other obvious defects that can be found by this quick, simple, inexpensive but cursory method. Sound, feel and the bounce of the mallet can be used to find obvious defects, but it usually cannot detect deep interior defects which are not visible to the user.
8. Resistance drilling (for decay and cavity detection in tree wood) utilizes a specialized drill with a very small bit that has a slightly wider tip, reducing friction on the drill bit shaft. Changes in wood density as the bit progresses through the wood during drilling are detected and recorded on a graph. Information from the graphs is used by arborists to help determine the internal structure and stability of trees.


Service since 1984
9. Root collar: area at the base of the trunk (usually flared) where the roots and trunk merge; also called the root flare or root crown of the tree or shrub. Buttress roots (the main support roots of the tree) originate here and are often visible for a short distance above the ground. The root collar is critical to whole-tree health and stability.
10. Tomographic scanning (of trees): Tomography is a method of imaging the interior of an object by sending invisible waves (sound, magnetic, x-ray, etc.) through it. The changes that the waves experience as they pass through the object provide data, which through mathematical algorithms is translated into a two-dimensional color-coded image. Interpretation of the image provides information on the mechanical and sometimes chemical properties of the interior of the object. A common type of tomography used for medical imaging is the MRI scan, which uses magnetic waves. For trees, sonic (sound wave) and electric resistance tomography are used to investigate the interior of trunks and large branches. Sonic tomography measures wood density and electric resistance tomography measures hydration and other chemical properties of the wood. Sonic and electric resistance tomographies used together provide more and higher quality information than either method used alone. Deborah Ellis provides tree tomography services to clients; information on this technology is available on her web site at: http://www.decah.com/picus.html
11. Water Jet: (water probe, water needle, root feeder, hydrojet, etc.) is a hand-held metal probe, usually $1 / 2$ to $3 / 4$ of an inch in diameter, with small side holes near the pointed tip end. The device is attached to a hose and the probe end with the holes is inserted into the ground by pushing on two perpendicular side handles at the top of the instrument. Water flows out of the holes horizontally, and a hole is also made vertically into the ground by the probe. The end result is the creation of vertical and horizontal tunnels filled with water and soft soil slurry. Water jetting probably does not increase soil aeration (diffusion of air through the soil), but it can help circumvent difficult water penetration of compacted, sealed soils or soil especially on slopes. The probe creates voids in the soil that can more easily be penetrated by future irrigation and rain. The soft slurry created by the water jetting is also highly conducive to fine root growth.

I certify that the information contained in this report is correct to the best of my knowledge, and that this report was prepared in good faith. Thank you for the opportunity to provide service again. Please call me if you have questions or if I can be of further assistance.

## Sincerely,



Deborah Ellis, MS.
Consulting Arborist \& Horticulturist
Certified Professional Horticulturist \#30022
ASCA Registered Consulting Arborist \#305

I.S.A. Board Certified Master Arborist WE-457B

## Enclosure:

Living Among the Oaks - a Management Guide for Landowners. Johnson. University of California Cooperative Extension, Natural Resources Program. No date.

Please Note: The measures noted within this report are designed to assist in the protection and preservation of the subject oak tree discussed herein, should this tree remain, and to help in its short and long term health and longevity. This is not however: a guarantee that this tree may not suddenly or eventually decline, fail, or die, for whatever reason. Because a significant portion of a tree's roots are usually far beyond its dripline, even trees that are well protected during construction often decline, fail or die. Because there may be hidden defects within the root system, trunk or branches of trees, it is possible that trees with no obvious defects can be subject to failure without warning. The current state of arboricultural science does not guarantee the accurate detection and prediction of tree defects and the risks associated with trees. There will always be some level of risk associated with trees, particularly large trees. It is impossible to guarantee the safety of any tree. Trees are unpredictable.

The oak tree described in this report received a basic evaluation. Other trees on the property were not evaluated. A basic evaluation is a brief visual inspection of the tree from the ground, without climbing into the tree or performing detailed tests such as extensive digging, boring or removing samples. A basic evaluation is an initial screening of the tree after which the evaluator may recommend that additional, more detailed examination(s) be performed if deemed necessary. Note that because there may be hidden defects within the root system, trunk or branches of trees, it is possible that trees with no obvious defects can be subject to failure without warning. The current state of arboricultural science does not guarantee the accurate detection and prediction of tree defects and the risks associated with trees. There will always be some level of risk associated with trees, particularly large trees. It is impossible to guarantee the safety of any tree.

ATTACHMENT 6
27299 Brine Pat lane
ENVIRONMENTAL DESIGN and PROTECTION COMMITTEE


From: Roger Spreen [roger@spreen.com](mailto:roger@spreen.com)
Sent: Friday, June 20, 2014 4:08 PM
To:
Suzanne Avila
Cc: George Clifford; Deborah Padovan
Subject: Open Space Committee comments, 27299 Byrne Park Lane

In today's Open Space Committee meeting (Thursday June 19, 2014) the Committee recommended that as a condition of approval of the major addition to 27299 Byrne Park Lane, an open space easement should be applied to the highlysloped western portion of the property.

These slopes are in a natural state, and are well above the limit of being buildable; though a slope map is not provided, our unofficial calculations from the Topographic Map (C2) show slopes ranging from $40 \%$ to $65 \%$. Protecting this area in an easement is consistent with General Plan Policy 2.5 to protect "steep slopes, canyons and ravines generally in excess of $30 \%$ slope."

This sloped area is of significant open space value because its western border is contiguous with Byrne Preserve, clearly an area of high natural resource value. Furthermore, this slope is also continuous with its neighboring properties to the north and south, which in total form an uninterrupted, natural area framing Byrne Preserve.

The bounds of this easement area should consist of the western boundary of the parcel (consisting of a "bent" property line), and the north and south property lines up to the $720^{\prime}$ elevation point, and then the connection of those two points to enclose the area. This was chosen from the topographic map, with the intention of having no impact on the house and surrounding development areas.

Submitted by Roger Spreen
Member, Open Space Committee

