

County of Santa Clara

Department of Planning and Development
Planning Office

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70 West Hedding Street
San Jose, California 95110-1705
(408) 299-5770 FAX (408) 288-9198
www.sccplanning.org



STAFF REPORT
Zoning Administration
December 7, 2018
Item #3

Staff Contact: Lara Tran
(408) 299-5759, lara.tran@pln.sccgov.org

File: 10693-18GA-18DR **Design Review and Grading Abatement for a new retaining wall.**

Summary: Design Review and Grading Abatement for a new retaining wall exceeding five (5) vertical feet that extends more than 80 horizontal feet. Proposed grading is 250 cubic yards (c.y.) of cut and 250 cubic yards (c.y.) of fill.

Owner: Mirjana Vajdic

Applicant: Mirjana Vajdic

Lot Size: 1.3 acres

APN: 510-30-040

Supervisory District: 1

Gen. Plan Designation: Hillside

Zoning: HS-d1

Address: 16330 Matilija Drive, Los Gatos

Present Land Use: Residential

Approved Building Site: Yes

RECOMMENDED ACTIONS

- A.** Accept a Categorical Exemption, under Section 15304 (Class 4 – grading) and Section 15303 (Class 3 – retaining wall) of the CEQA Guidelines, Attachment A.
- B.** Grant Design Review and Grading Abatement, 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

Attachment D – Proposed Plans

Attachment E – Arborist Report Prepared by Kurt Fouts (dated June 27, 2018).

PROJECT DESCRIPTION

The proposed project includes construction of a future retaining wall ranging from a minimum of 2.7 feet in height to a maximum of 8.7 feet in height. The retaining wall is proposed to be 123 feet in length, extending from the northwest corner of the property to the southwest portion of the lot. The Design Review approval for the retaining wall is associated with a grading violation for unpermitted cut and fill to widen an existing driveway, and to allow the owner access around the property to connect two driveways into one circular driveway. As such, the applicant is also requesting approval of a Grading Abatement application to abate the existing grading violation. There are three (3) oak trees and two (2) California Bay Laurel proposed for protection, and one (1) unidentified tree, 15 inches in diameter, proposed for removal.

The lot is a 1.3 gross-acre parcel at the southwest corner of Matilija Drive and Los Sereños Robles of Los Gatos, in the unincorporated area of Santa Clara County.

Setting/Location Information

The subject property is in the southwestern portion of the unincorporated area of Santa Clara County, approximately 2,000 feet west from the City of Monte Sereno. The neighborhood character consists of new estate homes ranging from approximately 6,000 to 10,000 square feet in size. The property is located 0.3 miles south from Hwy. 9 and more than 1.5 miles west from Hwy. 17. The property is connected to a sewer system and water service is provided by San Jose Water Company.

The site is not located within the Santa Clara Valley Habitat Plan Area and, therefore, is not a covered project. Based on County GIS data, the property consists of coast Live Oak Forest and Woodland. Based on County GIS data, the slope of the area of grading ranges from approximately 5% to 10%.

REASONS FOR RECOMMENDATIONS

A. Environmental Review and Determination (CEQA)

The proposed project qualifies for a Categorical Exemption via Section 15303(e) for a retaining wall and 15304 (a) for grading on a slope less than 10%.

B. Project/Proposal

1. **General Plan:** Hillsides
2. **Zoning Standards.** Per Zoning Ordinance Section 4.20.020(B)(2), retaining walls are exempt from accessory structure development standards. As such, the project is only for Design Review of a retaining wall exceeding five (5) vertical feet that extends more than 80 horizontal feet in the HS-d1 (Hillsides with Design Review) combined zoning district and a Grading Abatement to abate a grading violation (County Code Div. 12, Chapter III, Article 5).

C. Design Review Findings:

Per Section §5.50.040 of the County Zoning Ordinance, all Design Review applications are subject to the stated scope of review. The overall purpose of design review is to encourage quality design and mitigate potential adverse visual impacts of development. In the following discussion, the scope of review findings is listed in **bold**, and an explanation of how the project meets the required standard is in plain text below.

1. Mitigation of any adverse visual impacts from proposed structures, grading, vegetation removal and landscaping;

The proposed retaining wall is designed to soften the appearance of the wall as seen from the street by incorporating varied wall heights that measure from a minimum of 2.7 feet to a maximum of 8.7 feet in height. The wall is located along the side of the driveway whereby portions of the wall are visible from the street right-of-way, beyond the front of the existing garage. The materials proposed on the wall include natural stone facades, with an LRV value less than 45 to soften and blend the retaining with the existing natural topography.

The retaining wall includes grading that follows the existing contours of the site of 250 c.y. of cut and 250 c.y. of fill.

As part of the mitigation to alleviate potential visual impacts, the applicant has proposed landscaping in front of and behind the wall, for portions that are visible from the street. The Landscape Plan includes at least eight (8) Bougainvillea plants along the base of the retaining wall, with at a minimum of eight (8) Star Jasmine planted at the top of the retaining wall to cascade over the walls in order to further soften the wall's aesthetics and blend it with the natural topography. A condition of approval requiring said landscaping to be maintained in a thriving and healthy manner has been included.

As conditioned, the proposed retaining wall will not create any significant adverse visual impacts due to the quality of the overall design and limited visibility from the valley floor or street right-of-way.

2. Compatibility with the natural environment;

The proposed retaining wall is located on the most suitable area of the property in order to minimize grading and unnecessary tree removal. In addition, the proposed retaining wall is proposed to stabilize the existing grade and hillside, and landscaping will blend the retaining wall with the natural environment. Any other location would require significantly more grading, create scarring on the hillside and additional tree removals. Thus, the proposed retaining wall is designed to be compatible with the natural environment.

3. **Conformance with the “Design Review Guidelines,” adopted by the Board of Supervisors;**

The proposed retaining wall conforms to the Design Review Guidelines as the siting of the retaining wall utilizes the existing flat area and is designed to follow the natural contours in the surrounding area to minimize excessive grading. As most of the neighboring parcels are estate homes nearby with significant setbacks to the front, side, and rear, and the development area is surrounded by dense trees to the west; impacts on privacy and view of neighboring properties is minimal. The most visible area of the retaining wall is to the front of the property facing Matilija Drive where the wall has been significantly reduced to less than 5 feet in height, with planters to mitigate the height and blend the wall with the natural surroundings. The retaining wall materials are to have a Light Reflectivity Value less than or equal to 45.

4. **Compatibility with the neighborhood and adjacent development;**

The proposed retaining wall is keeping with the character of the surrounding neighborhood by blending the design with the existing natural surroundings. The proposed size of the wall, with maximum height of 8.7 ft tall and 123 feet in length, is necessary to stabilize the grading between the existing property and the neighboring hillside located on the adjacent property. The project will not be obtrusive, as it is designed to mitigate any visual impacts by incorporating varied heights of the wall and providing planters along the base and top portions of the wall, so landscape screening can be included to blend the retaining wall with the existing natural landscaping. The architectural design is composed of natural stones with an LRV of 45 or less.

5. **Compliance with applicable zoning district regulations; and**

Residential uses, including retaining walls, are allowed uses in HS hillsides zoning district, and the project complies with the HS zoning regulations. The proposed retaining wall is a component of the residential use of the property. Per Zoning Ordinance Section 4.20.020(B)(2), retaining walls are exempt from accessory structure zoning development standards. The proposed design of the retaining wall is in keeping with the –d1 design standards by incorporating planters along the base and top of wall to mitigate any visual impacts, and exterior colors are conditioned to be less than 45 in LRV.

6. **Conformance with the general plan, any applicable specific plan, other applicable guidelines.**

The proposed retaining wall is in a suitable portion of the site where the slope is modest to minimize grading and disturbance to the site. The size of the proposed retaining wall is necessary to stabilize the grading between the existing property and the neighboring hillside located on the adjacent property. The landscaping and exterior color and materials will be conditioned to have an LRV of 45 or less to

ensure compatibility with the surrounding environment. The proposed development substantially conforms with the Santa Clara County General Plan and Hillside Grading Guidelines, as the proposed retaining wall is used to protect the adjacent hillside, provide access for the property owner, and preserve the natural environment and topography (R-GD-25).

D. Grading Approval Findings:

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

1. **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 includes 250 c.y. of cut and 250 c.y. of fill to accommodate the proposed retaining wall, which is necessary to stabilize the existing grading and prevent unnecessary grading in the HS zoning district. The amount, design, location and the nature of proposed grading is necessary and appropriate to establish the circular driveway of the the existing residence for the single-family residential use, which is a permissible use in the HS zoning district.

2. **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.**

All proposed grading will be located on-site and will be engineered to ensure that the construction of the wall does not endanger public and/or private property, and will maintain the public health and safety of nearby residences and property. No excessive grading will be conducted. No unnecessary cuts or fills will occur. Standard conditions of approval and requirements of final grading plans will ensure that grading around retaining wall will not result in slope instability or erosion.

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

The proposed grading has been designed to follow contours of the natural topography to the maximum extent possible with the retaining wall sited within the area that is needed to stabilize the existing grading. The majority of the proposed grading is for the establishment of the retaining wall along the driveway and side of the existing residence. The grading will not impose any impacts to biological, aquatic resources, or cultural resources. The Arborist Report prepared by Kurt Fouts, I.S.A. Certified Arborist, dated June 27, 2018, identifies three (3) oak trees and two (2) California Bay Laurel for protection within the area of the proposed

retaining wall to prevent any impacts to existing trees. Although the arborist report identifies one (1) unidentified tree, 15 inches in diameter, proposed for removal due to poor health, tree replacement for the tree is a condition of approval.

4. **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.**

The existing property is developed with a single-family residence. The majority of the proposed grading is related to the new retaining wall that is needed to stabilize the slope adjacent to the existing residence, garage and driveway. The grading for the retaining wall is designed to follow the natural contours to the maximum extent possible. No on-site alternative location would minimize grading amounts, and the proposed wall has been designed to support the adjacent slope. Overall, the grading is designed minimally to establish the retaining wall.

5. **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.**

The proposed grading is designed to conform with natural terrain and existing topography and will not create any significant visual scar. Any other location would require significantly more grading and create scarring on the hillside. Furthermore, the applicant has provided landscape screening to avoid visual impacts of the wall as seen from the street or neighboring properties.

6. **Grading conforms with any applicable general plan or specific plan policies; and**

The proposed grading is in conformance with specific findings and policies identified in the County General Plan. The establishment of a retaining wall is designed to stabilize the slope between the existing residence and neighboring property. The wall is designed to reduce visual impacts by blending the wall with the existing natural environment in keeping with General Plan policies R-GD 25.

7. **Grading substantially conforms with the adopted "Guidelines for Grading and Hillside Development" and other applicable guidelines adopted by the County.**

The proposed retaining wall will be located along the side of the existing residence, where an existing, unprotected slope can be found. The wall is designed to match the existing terrain, utilizes materials to help blend the wall into the natural terrain, and provides landscaping to screen the wall. The grading is not excessive and the

establishment of retaining wall will create any significant visual scar or impact to the environment.

BACKGROUND

On April 28, 2018, the applicant submitted an application for a Grading Abatement to resolve unpermitted grading associated with expansion of the existing driveway and construction of a new retaining wall to stabilize the grading between the existing property and the neighboring property. The application was deemed incomplete for processing, pending the submittal an application for Design Review. On July 20, 2018, the applicant submitted an application for Design Review, which was combined with the Grading Abatement application and deemed incomplete for processing. After meeting with Staff to discuss design and visual mitigations for the retaining wall, the applicant submitted a revised design of the proposed retaining wall on October 1, 2018. The full application was deemed complete on October 30, 2018. A public notice was mailed to all property owners within a 300-foot radius on November 21, 2018 and was also published in the Post Records on November 21, 2018.

STAFF REPORT REVIEW

Prepared by: Lara Tran, Associate Planner

Reviewed by: Leza Mikhail, Zoning Administrator



ATTACHMENT A

Notice of Exemption from CEQA

To: County Clerk-Recorder
County of Santa Clara

Office of Planning & Research
P.O. Box 3044, Room 222
Sacramento, CA 95812-3044

Project Title Residence: 16330 Matilija Drive, Los Gatos	File Number (if applicable) 10693-18GA-18DR	
Project Location 16330 Matilija Drive, southwest corner of Matilija Drive and Los Sereños Robles of Los Gatos in the unincorporated area of Santa Clara County. Zoning HS-d1		
Public Agency Approving Project County of Santa	Person or Agency Carrying Out Project Lara Tran, Associate Planner	
Project Description (including purpose and beneficiaries of project) DESIGN REVIEW of a retaining wall exceeding five (5) vertical feet that extends more than 80 horizontal feet associated with a GRADING ABATEMENT. Proposed grading is 250 cubic yards (c.y.) of cut and 250 cubic yards (c.y.) of fill. There are three (3) oak trees and two (2) California Bay Laurel proposed for protection, and one (1) unidentified tree, 15 inches in diameter, proposed for removal.		
Exempt Status check one/indicate type of State CEQA Guidelines section number: <input checked="" type="checkbox"/> Categorical Exemption [CEQA Guidelines 15301-15333]: <input type="checkbox"/> Statutory Exemption [CEQA Guidelines 15260-15285]: <input type="checkbox"/> Declared Emergency [15269(a)]: <input type="checkbox"/> Emergency Project [15269(b)(c)]: <input type="checkbox"/> General Rule [CEQA Guidelines 15061(b)(3)]:		
Reasons the project is exempt: The proposed project qualifies for a Categorical Exemption, Section 15304 (Class 4) and Section 15303 (Class 3 – retaining wall). The proposed work is not grading on land with a slope of more than 10%, nor is proposed retaining wall located in any waterways, wetland, or scenic area. The project consists of filing of earth into previously excavated land with material compatible with the natural features of the site.		
County Contact Person Lara Tran	Title Associate Planner	Telephone Number (408) 299-5759

Date: 11/28/18 Signature: 

Name/Title: Lara Tran/ Associate Planner

Approved by:  _____

ATTACHMENT B

Preliminary Conditions of Approval

10693-18GA-18DR

DESIGN REVIEW and GRADING ABATEMENT CONDITIONS OF APPROVAL

Owner/Applicant: Mirjana Vajdic
File Number: 10693-18GA-18DR
Location: 16330 Matijila Drive, Los Gatos (APN: 510-30-040)
Project Description: Design Review and Grading Abatement for a new retaining wall exceeding five (5) vertical feet that extends more than 80 horizontal feet. Proposed grading is 250 cubic yards (c.y.) of cut and 250 cubic yards (c.y.) of fill.

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

Agency	Name	Phone	E-mail
Planning	Lara Tran	(408) 299- 5759	lara.tran@pln.sccgov.org
Land Development Engineering	Ed Duazo	(408) 299-5733	chris.freitas@pln.sccgov.org
Geology	Jim Baker	(408) 299-5774	jim.baker@pln.sccgov.org
Building Inspection		(408) 299-5700	

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.

Planning

2. Construction of the new retaining wall shall take place in accordance with the approved civil plans prepared by Kenneth Douglas Wilson (Licensed Land Surveyor) and Jason T. Barnum, P.E., submitted on October 1, 2018, and these conditions of approval. 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.

3. Grading Abatement approval includes a maximum of 250 cubic yards of cut and 250 cubic yards of fill (500 yards combined) and the construction of the retaining wall. Grading plans submitted for Grading Permit shall be in substantial conformance with the approved Civil Plans submitted on October 1, 2018.
4. The exterior color surfaces of the retaining wall shall be of muted colors with a light reflectivity value (LRV) of 45 or lower.

Protection of Existing Trees

5. All tree protection measures shall be adhered to as stipulated in the arborist report (Attachment D) dated June 27, 2018, under “Tree Protection Zone & Critical Root Zone” and “Tree Protection Procedures” by Kurt Foust, Arborist Consultant, 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, including protection for three (3) Oak tree canopies (identified as T1, T2, and T3 in the arborist report) and the two (2) California Bay Laurel

(identified as T4 and T5). Any disturbance to the canopies and/or decline in health of protected trees shall require notification to the project Arborist and County Planning Office.

Tree Removal/Replacement

6. Final grading construction plans shall clearly identify the size and species of all trees proposed for removal, consistent with the arborist report and “Tree Assessment Chart” submitted by Kurt Foust, Arborist Consultant, I.S.A. Certified Arborist, on June 27, 2018. For each tree designated for removal, replacement shall occur at the replacement ratios stated below:

- a. *Tree Removal:* Project proposes the removal of one (1) unidentified tree 15-inches in diameter. “Tree Assessment Chart” within the arborist report submitted by Kurt Foust, Arborist Consultant, I.S.A. Certified Arborist, on June 27, 2018 identified the tree as T6.
- 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 [2] 24” box of oak trees *or* [3] 15-gallon of oak trees.

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

7. 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.
8. 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). This detail shall appear on grading and building permit plans.

9. 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.
10. 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.

Land Development Engineering

11. 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.

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

Planning

12. **Prior to issuance of any permits**, the applicant shall pay all reasonable costs associated with the work by the Department of Planning and Development.
13. **Prior to issuance of a grading and/or building permit** a final landscape plan for the retaining wall shall be submitted and approved by the Planning Office. The landscaping plan shall include at least eight (8) planters of Bougainvillea along the base of the retaining wall with at a minimum of eight (8) Star Jasmine planters located at the top of the retaining wall.
14. The final landscaping plan shall also include location for all trees replacement of [2] 24” box of oak trees or [3] 15-gallon of oak trees. If the owner/applicant is requesting for less trees replacement, an (ISA) certified arborist shall provide written justification. Additionally, the landscape plans shall include tree protections measures as identified in Condition Nos. 5-10.
15. Pursuant to §5.20.125, 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 **prior to building permit issuance**.

Geology

16. **Prior to building permit issuance**, submit a geo-technical engineers’ Plan Review Letter that confirms the plans conform with the intent of the recommendations presented in AST’s “Soil and Foundation Investigation Report” dated January 8, 2018.

Land Development Engineering (LDE)

17. **Prior to start of any construction activities**, obtain a Grading Permit from Land Development Engineering (LDE) and a Building Permit (retaining wall) from the Building Inspection Office (BIO).
18. **Prior to LDE clearance of the building permit**, issuance of the grading permit is required (building and grading permits can be applied concurrently). The process for obtaining a Grading Permit, Building Permit, and the forms that are required can be found at the following web pages:
<https://www.sccgov.org/sites/dpd/Iwantto/Permits/Pages/GP.aspx>
<https://www.sccgov.org/sites/dpd/Iwantto/Permits/Pages/BP.aspx>

Contact LDE at (408) 299-5734 for more information and timelines.

19. Grading 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.
20. Final grading 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.

Improvement Plans

21. 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:
 - March 1981 Standards and Policies Manual, Volume 1 (Land Development) www.sccplanning.org > Plans & Ordinances > Land Development Standards and Policies
 - 2007 Santa Clara County Drainage Manual www.sccplanning.org > Plans & Ordinances > Grading and Drainage Ordinance.
22. 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.

23. Improvement plans shall show all applicable easements affecting the parcel(s) with benefactors and recording information.

Soils and Geology

24. Submit one copy of the geotechnical report for the project, prepared by a registered civil engineer, as required by the Santa Clara County Ordinance Code, to Land Development Engineering.
25. Submit a plan review letter by the Project Geotechnical Engineer certifying that the geotechnical issues identified in the above geotechnical report been mitigated on the improvement plan. This letter shall be submitted to and reviewed by Land Development Engineering.

Agreements

26. 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).

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

Planning

27. **Prior to final inspection**, contact Lara Tran, at least one (1) week in advance to schedule a site visit to verify the approved exterior colors have been installed as approved and landscaping (including tree preservation and replacement) have been installed and maintained.

Geology

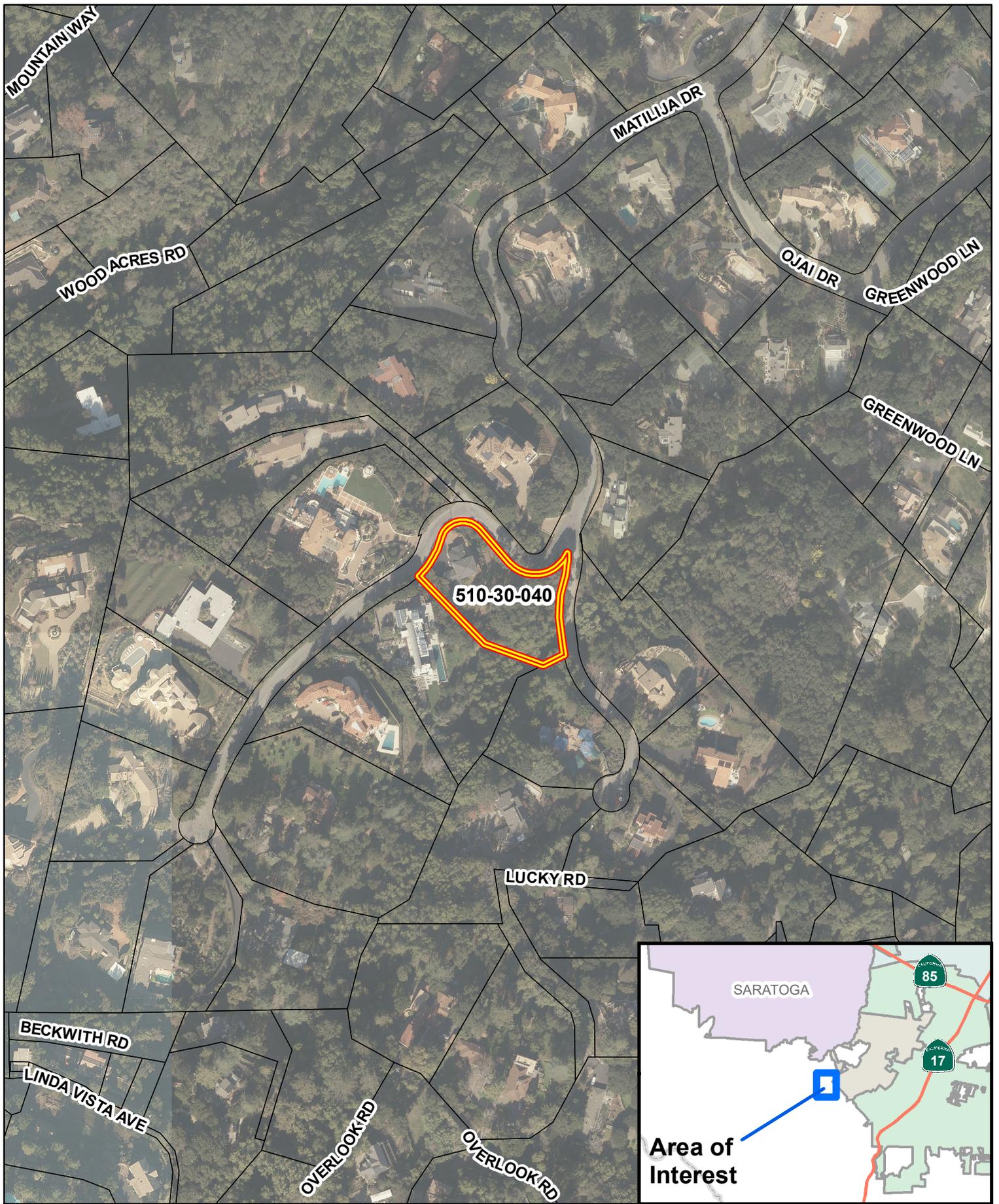
28. **Prior to final inspection**, submit a Construction Observation Letter detailing that the construction of the retaining wall is consistent with the recommendation outlined in the Soils and Foundation Report dated January 8, 2018.

Land Development Engineering

29. 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

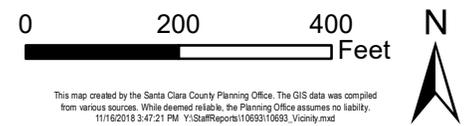
civil engineer authorized to practice land surveying and they shall file appropriate records pursuant to Business and Professions Code Section 8762 or 8771 of the Land Surveyors Act with the County Surveyor.

30. Construct all the improvements. Construction staking is required and shall be the responsibility of the developer.



File: 10693-18GA-18DR
APN: 510-30-040
16330 Matilija Dr, Los Gatos

Vicinity Map



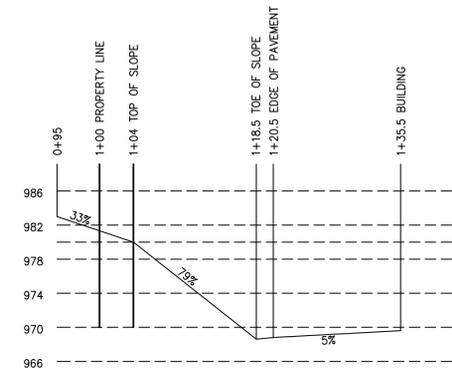
This map created by the Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
1/16/2018 3:47:21 PM Y:\GIS\Reports\1069310593_Vicinity.mxd

Attachment D

CONSTRUCTION NOTE - JUNE 15 2018

THIS MAP REPRESENTS THE CONDITIONS OF THIS SITE BEFORE ANY GRADING WAS DONE IN THE AREA TO THE WEST OF THE EXISTING RESIDENCE. CROSS SECTION A-A PROVIDES THE SLOPE AND CONDITIONS OF THE AREA IN QUESTION.

SECTION A-A
PRE-GRADING CONDITIONS



LEGEND

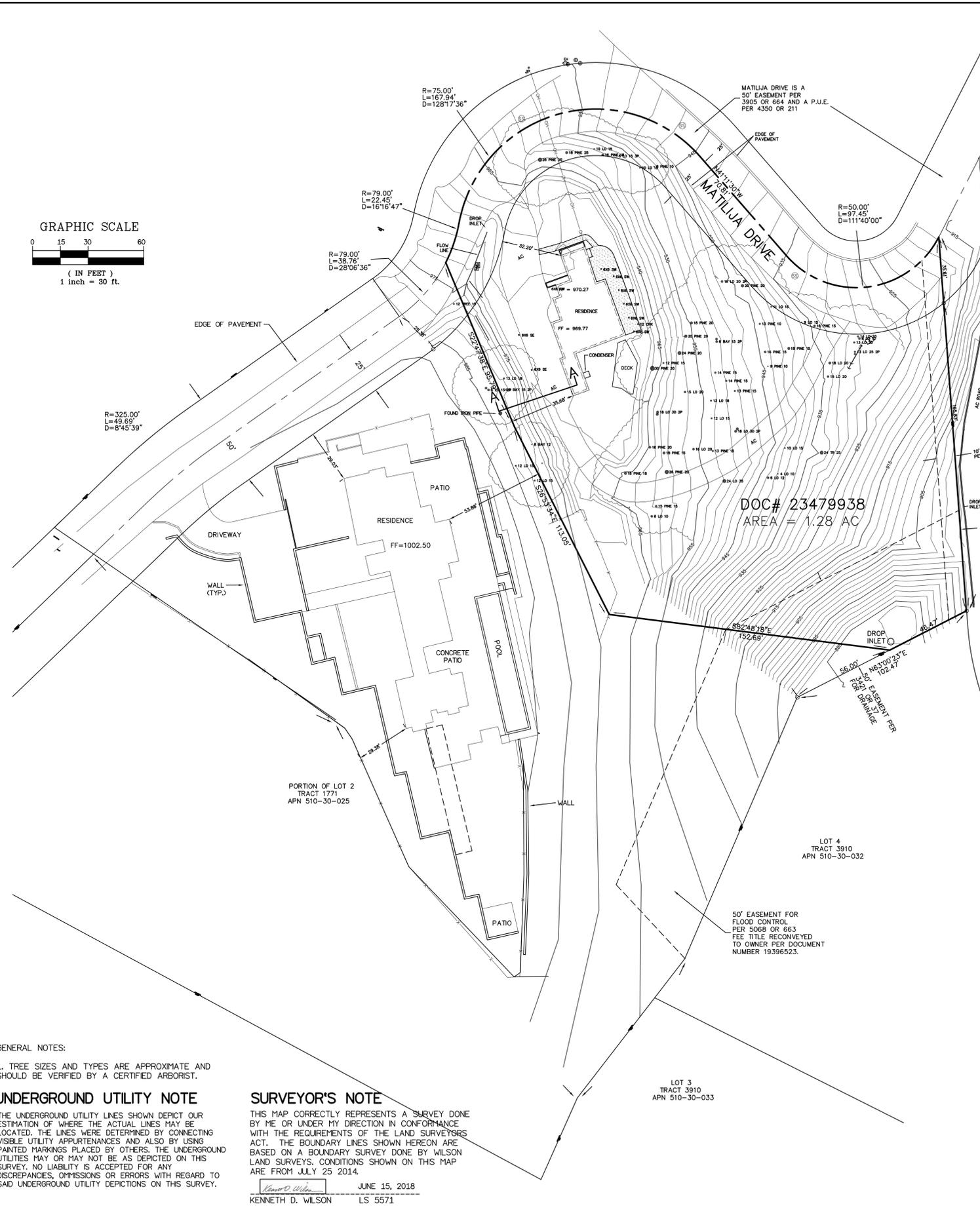
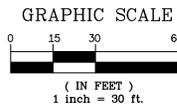
- FOUND MONUMENT AS NOTED
- SET 5/8" REBAR LS 5571 UNLESS OTHERWISE NOTED
- HOSE BB
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- JOINT POLE
- UTILITY POLE
- TELEPHONE POLE
- GUYWIRE
- W BLUE PAINT- EVIDENCE OF UG WATER LINE
- ELECTRIC METER
- GAS METER
- MONITORING WELL
- G YELLOW PAINT, EVIDENCE OF UG GAS LINE
- PHONE PEDESTAL
- PHONE BOX
- PHONE MANHOLE
- P ORANGE PAINT, EVIDENCE OF UG PHONE LINE
- TRAFFIC SIGNAL CONTROL BOX
- TRAFFIC SIGNAL
- TV BOX
- OH OVERHEAD LINE
- TV ORANGE PAINT, EVIDENCE OF UG TV LINE
- HANDICAP RAMP
- STORM DRAIN MANHOLE
- DROP INLET
- SEPTIC LID
- SEWER MANHOLE
- SEWER CLEANOUT
- PARKING METER
- SIGN
- CONTROL POINT
- LAMP POST
- ELECTRIC BOX
- WALL
- BOLLARD
- WOOD FENCE
- CONCRETE
- LO LIVE OAK
- WO WHITE OAK
- RW REDWOOD
- TYP. TYPICAL

Email: kenw@wilsonlandsurveys.com
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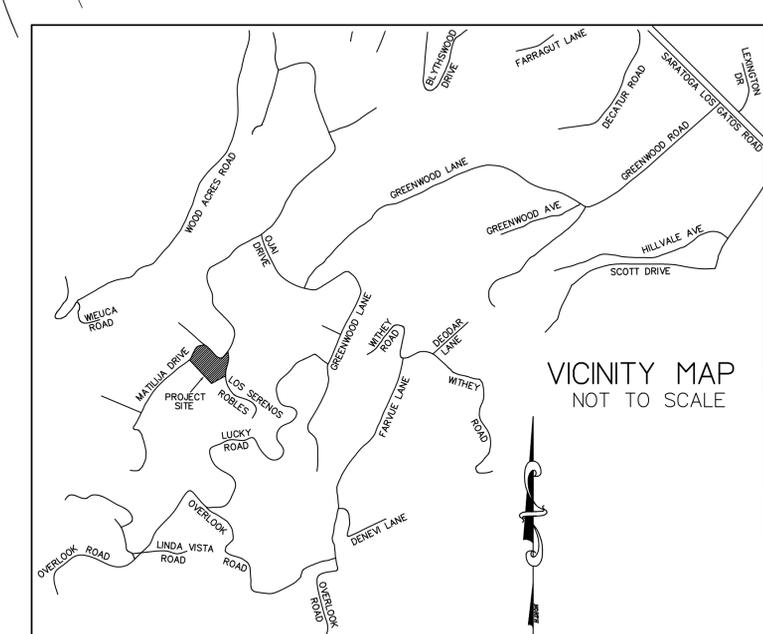
This map was prepared on an instrument of service for the preparation of plans and specifications for construction on the site shown on the map. The information shown hereon shall not be used in whole or in part for any other project without written authority of Wilson Land Surveys.
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KEN WILSON LS 5571

3001 WINCHESTER BOULEVARD, SUITE 111 CAMPBELL, CA 95008 408-540-7687



DOC# 23479938
AREA = 1.28 AC



GENERAL NOTES:
1. TREE SIZES AND TYPES ARE APPROXIMATE AND SHOULD BE VERIFIED BY A CERTIFIED ARBORIST.

UNDERGROUND UTILITY NOTE
THE UNDERGROUND UTILITY LINES SHOWN DEPICT OUR ESTIMATION OF WHERE THE ACTUAL LINES MAY BE LOCATED. THE LINES WERE DETERMINED BY CONNECTING VISIBLE UTILITY APERTURANCES AND ALSO BY USING PAINTED MARKINGS PLACED BY OTHERS. THE UNDERGROUND UTILITIES MAY OR MAY NOT BE AS DEPICTED ON THIS SURVEY. NO LIABILITY IS ACCEPTED FOR ANY DISCREPANCIES, OMISSIONS OR ERRORS WITH REGARD TO SAID UNDERGROUND UTILITY DEPICTIONS ON THIS SURVEY.

SURVEYOR'S NOTE
THIS MAP CORRECTLY REPRESENTS A SURVEY DONE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE LAND SURVEYORS ACT. THE BOUNDARY LINES SHOWN HEREON ARE BASED ON A BOUNDARY SURVEY DONE BY WILSON LAND SURVEYS. CONDITIONS SHOWN ON THIS MAP ARE FROM JULY 25 2014.

Kenneth D. Wilson
JUNE 15, 2018
KENNETH D. WILSON LS 5571

THE BENCHMARK FOR THIS SURVEY IS CITY OF MONTE SERENO BENCHMARK MS11 BEING A BRASS DISK AT THE CENTERLINE OF GREENWOOD ROAD HAVING AN ELEVATION OF 498.59 (NGVD29).



BOUNDARY AND TOPOGRAPHIC SURVEY				
AS REQUESTED BY: BRIAN VAJIC				
LEGAL DESCRIPTION: PORTIONS OF LOTS 1 AND 2 OF TRACT 1771 IN THE CITY OF LOS GATOS, COUNTY OF SANTA CLARA, CA AS RECORDED IN THE FOLLOWING DOCUMENT: DOC# 23479938.				
APN: 510-30-024,026	SCALE: 1"= 20'	PROJECT: E-062	JOB NUMBER: E-062	SHEET: 1 OF 1
DATE: JUNE 2018	DRAWN BY: KDW			
FILENAME: E-062 VAJIC TOPO				

SURVEYOR'S NOTE

THIS MAP CORRECTLY REPRESENTS A SURVEY DONE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE LAND SURVEYORS ACT. THE BOUNDARY LINES SHOWN HEREON ARE BASED ON A BOUNDARY SURVEY DONE BY WILSON LAND SURVEYS.

KENNETH D. WILSON
LS 5571
JUNE 18 2018

R=75.00'
L=167.94'
D=128°17'36"

R=79.00'
L=22.45'
D=16°16'47"

GENERAL NOTES:

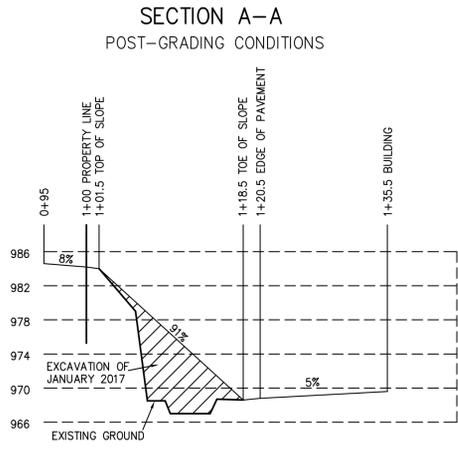
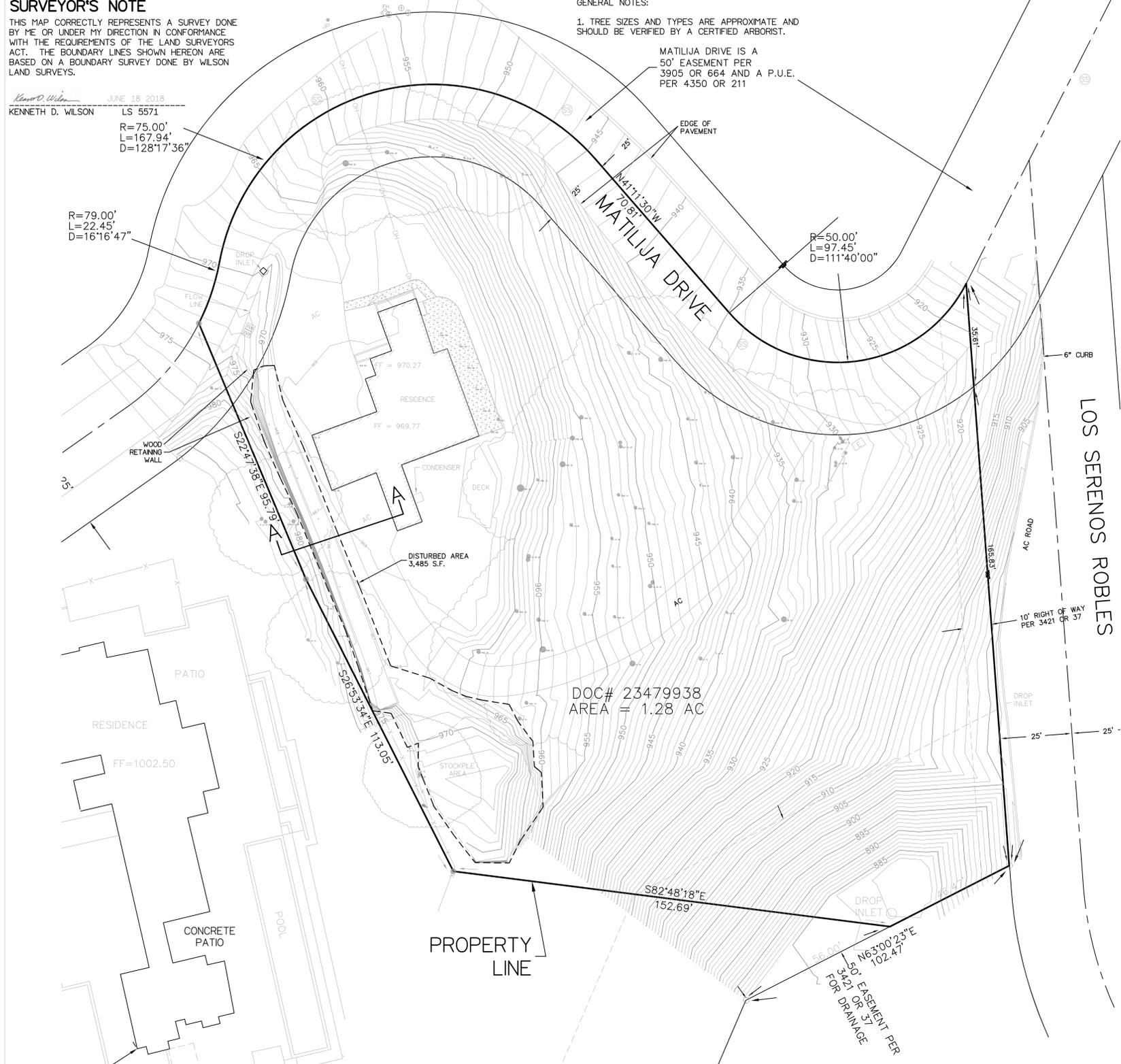
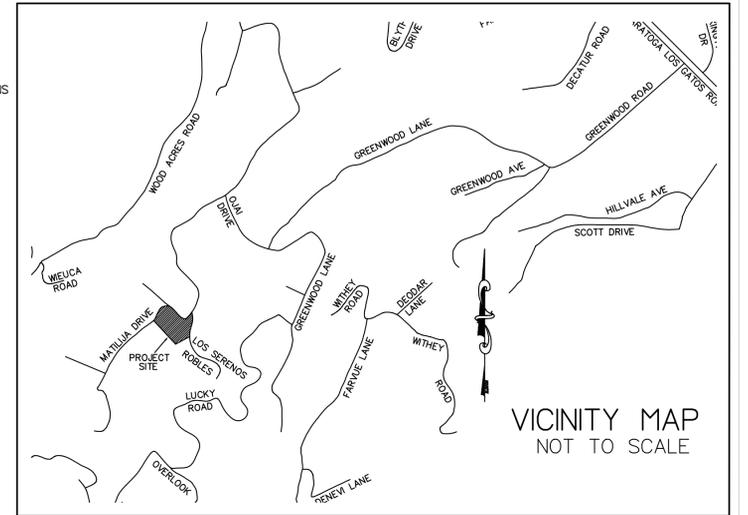
1. TREE SIZES AND TYPES ARE APPROXIMATE AND SHOULD BE VERIFIED BY A CERTIFIED ARBORIST.

MATILJA DRIVE IS A 50' EASEMENT PER 3905 OR 664 AND A P.U.E. PER 4350 OR 211

CONSTRUCTION NOTE - JUNE 15 2018

THIS MAP REPRESENTS THE CONDITIONS OF THIS SITE AFTER GRADING WAS DONE WEST OF THE EXISTING RESIDENCE. CROSS SECTION A-A PROVIDES THE CURRENT SLOPE OF THE CUT BANK WEST OF THE RESIDENCE. THE AREA LABELED STOCKPILE AREA PROVIDES THE LOCATION OF FILL PLACED ON THE SITE.

- THIS MAP REPRESENTS THE CONDITIONS OF THIS SITE AFTER GRADING WAS DONE WEST OF THE EXISTING RESIDENCE. CROSS SECTION A-A PROVIDES THE CURRENT SLOPE OF THE CUT BANK WEST OF THE RESIDENCE. THE AREA LABELED STOCKPILE AREA PROVIDES THE LOCATION OF FILL PLACED ON THE SITE.
- THE EARTHWORK ESTIMATE FOR THE GRADING WORK DONE IS AS FOLLOWS: CUT 250 YARDS FILL 250 YARDS. NET EXPORT 0 YARDS.



LEGEND

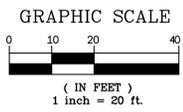
- FOUND MONUMENT AS NOTED
- SET 5/8" REBAR LS 5571 UNLESS OTHERWISE NOTED
- ⊗ HOSE BB
- ⊕ FIRE HYDRANT
- ⊕ WATER VALVE
- ⊕ WATER METER
- ⊕ JOINT POLE
- ⊕ UTILITY POLE
- ⊕ TELEPHONE POLE
- ⊕ GUYWIRE
- W — BLUE PAINT - EVIDENCE OF UG WATER LINE
- G — ELECTRIC METER
- G — GAS METER
- G — MONITORING WELL
- G — YELLOW PAINT, EVIDENCE OF UG GAS LINE
- ⊕ PHONE PEDESTAL
- ⊕ PHONE BOX
- ⊕ PHONE MANHOLE
- P — ORANGE PAINT, EVIDENCE OF UG PHONE LINE
- ⊕ TRAFFIC SIGNAL CONTROL BOX
- ⊕ TRAFFIC SIGNAL
- ⊕ TV BOX
- OH — OVERHEAD LINE
- TV — ORANGE PAINT, EVIDENCE OF UG TV LINE
- ⊕ HANDICAP RAMP
- ⊕ STORM DRAIN MANHOLE
- ⊕ DROP INLET
- ⊕ SEPTIC LID
- ⊕ SEWER MANHOLE
- ⊕ SEWER CLEANOUT
- ⊕ PARKING METER
- ⊕ SIGN
- ⊕ CONTROL POINT
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- ⊕ WOOD FENCE
- ⊕ CONCRETE
- ⊕ LIVE OAK
- ⊕ WHITE OAK
- ⊕ REDWOOD
- ⊕ TYP.

UNDERGROUND UTILITY NOTE

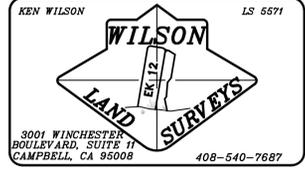
THE UNDERGROUND UTILITY LINES SHOWN DEPICT OUR ESTIMATION OF WHERE THE ACTUAL LINES MAY BE LOCATED. THE LINES WERE DETERMINED BY CONNECTING VISIBLE UTILITY APPURTENANCES AND ALSO BY USING PAINTED MARKINGS PLACED BY OTHERS. THE UNDERGROUND UTILITIES MAY OR MAY NOT BE AS DEPICTED ON THIS SURVEY. NO LIABILITY IS ACCEPTED FOR ANY DISCREPANCIES, OMISSIONS OR ERRORS WITH REGARD TO SAID UNDERGROUND UTILITY DEPICTIONS ON THIS SURVEY.

BENCHMARK NOTE

THE BENCHMARK FOR THIS SURVEY IS CITY OF MONTE SERENO BENCHMARK MS11 BEING A BRASS DISK AT THE CENTERLINE OF GREENWOOD ROAD HAVING AN ELEVATION OF 498.59 (NGVD29).



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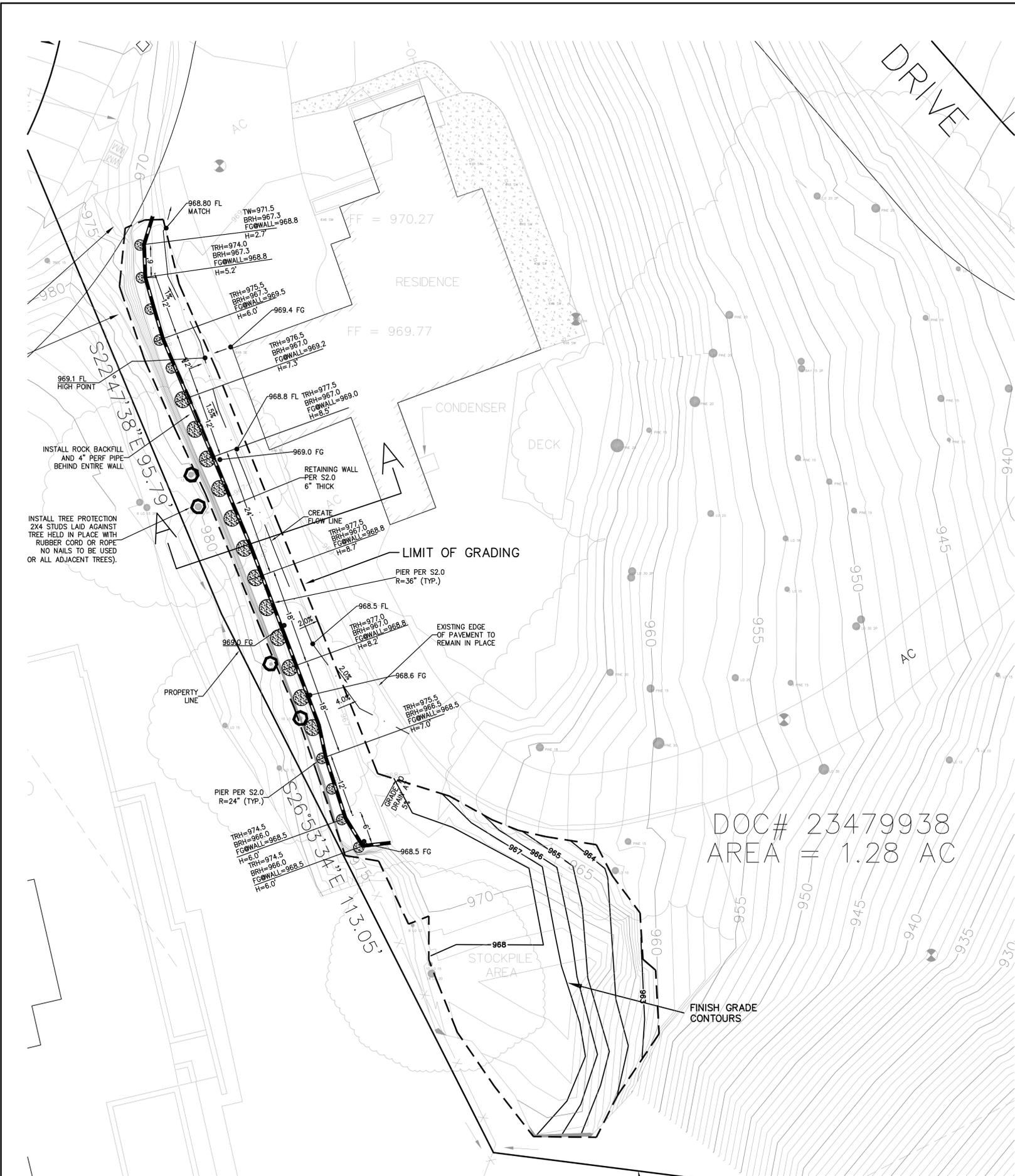
BOUNDARY AND TOPOGRAPHIC SURVEY

AS REQUESTED BY:
BRIAN VAJIC

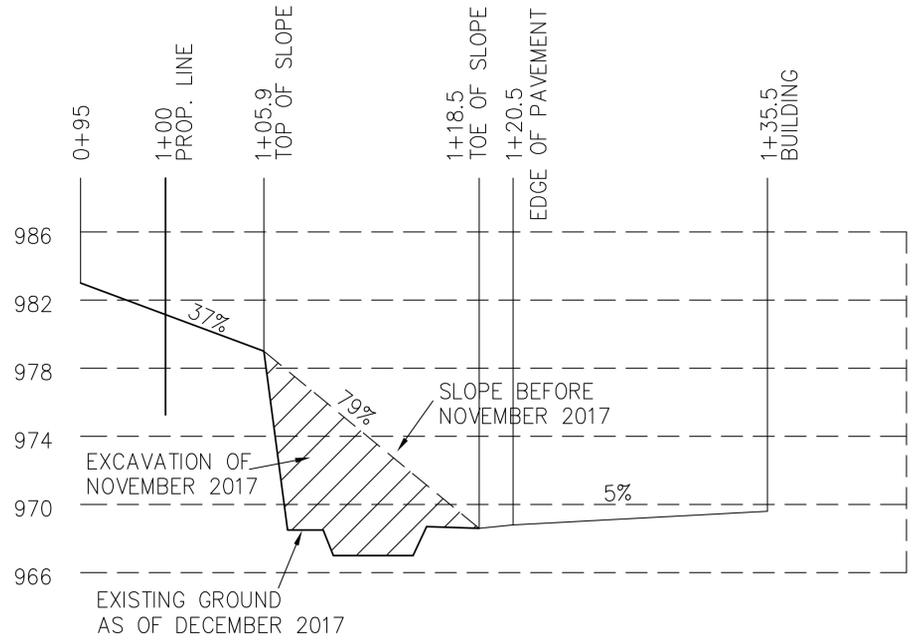
LEGAL DESCRIPTION: PORTIONS OF LOTS 1 AND 2 OF TRACT 1771 IN THE CITY OF LOS GATOS, COUNTY OF SANTA CLARA, CA AS RECORDED IN THE FOLLOWING DOCUMENT: DOC# 23479938.

APN: 510-30-026
DATE: JUNE 2018
FILENAME: E-062 VAJIC TOPO DEC 2017

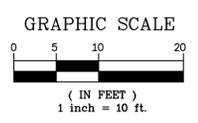
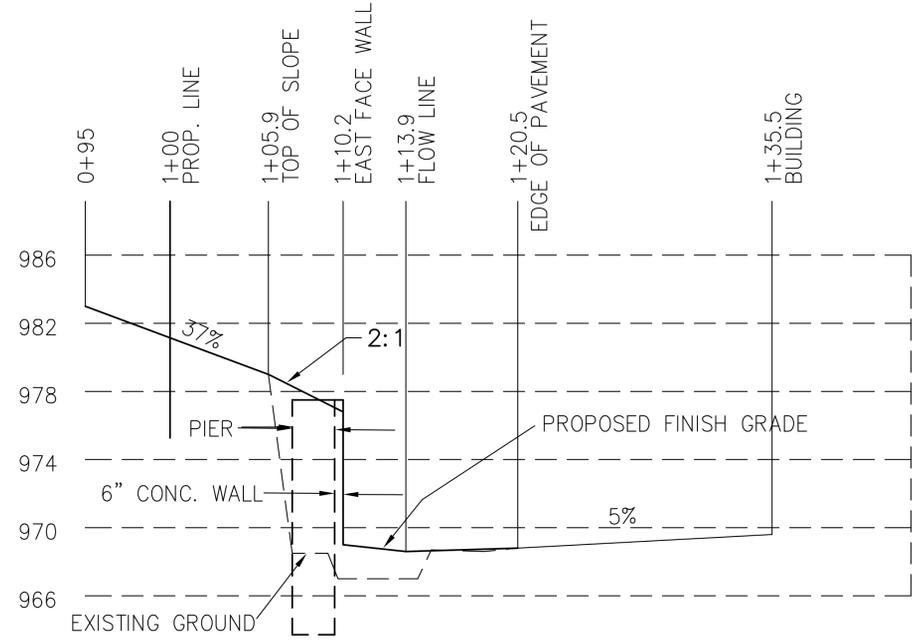
DRAWN BY:	SCALE:	PROJECT:	JOB NUMBER:	SHEET:
KDW	1"= 20'	E-062	E-062	1 OF 1



SECTION A-A
SHOWING SLOPE BEFORE AND AFTER GRADING OF NOV. 2017



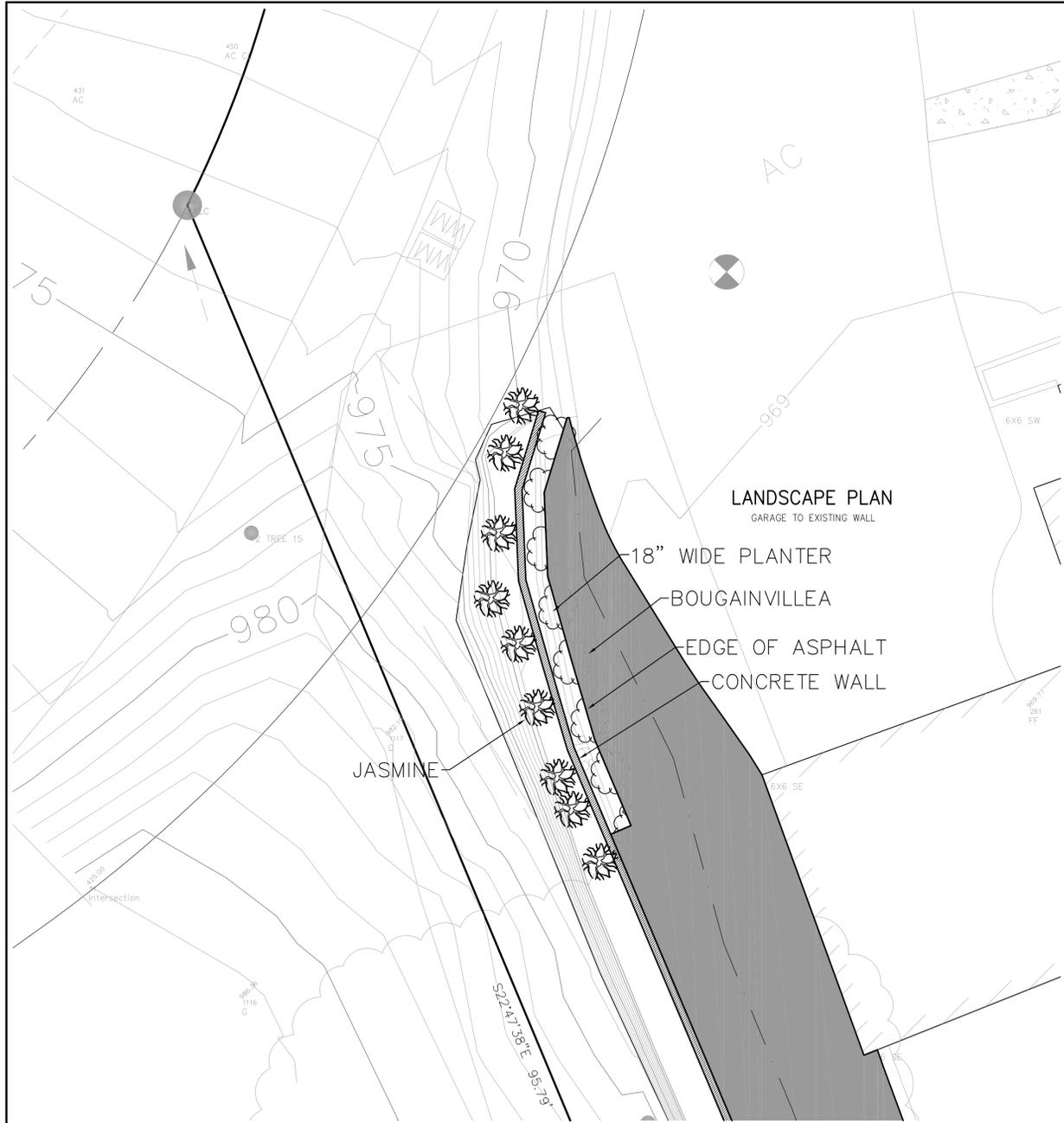
SECTION A-A
PROPOSED DESIGN



CIVIL ENGINEER
JASON T. BARNUM
2079 PARKWAY VILLAGE DR.
CHICO, CA 95928
530-518-5050

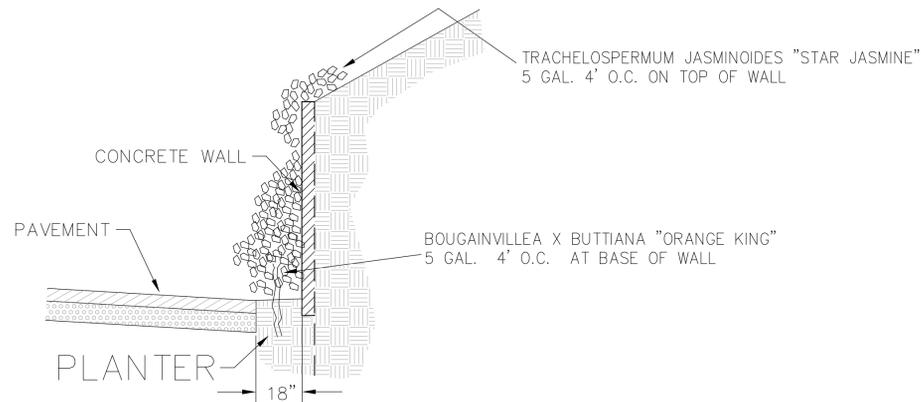


C1.0 WALL LOCATION PLAN				
AS REQUESTED BY: BRIAN VAJDIC				
LEGAL DESCRIPTION: PORTIONS OF LOTS 1 AND 2 OF TRACT 1771 IN THE CITY OF LOS GATOS, COUNTY OF SANTA CLARA, CA AS RECORDED IN THE FOLLOWING DOCUMENT: DOC# 23479938.				
APN: 510-30-026 DATE: AUGUST 2018 FILENAME: E-062 VAJDIC RETAINING WALL PLOT				
DRAWN BY: KDW	SCALE: 1" = 10'	PROJECT: E-062	JOB NUMBER: E-062	SHEET: 1 OF 1



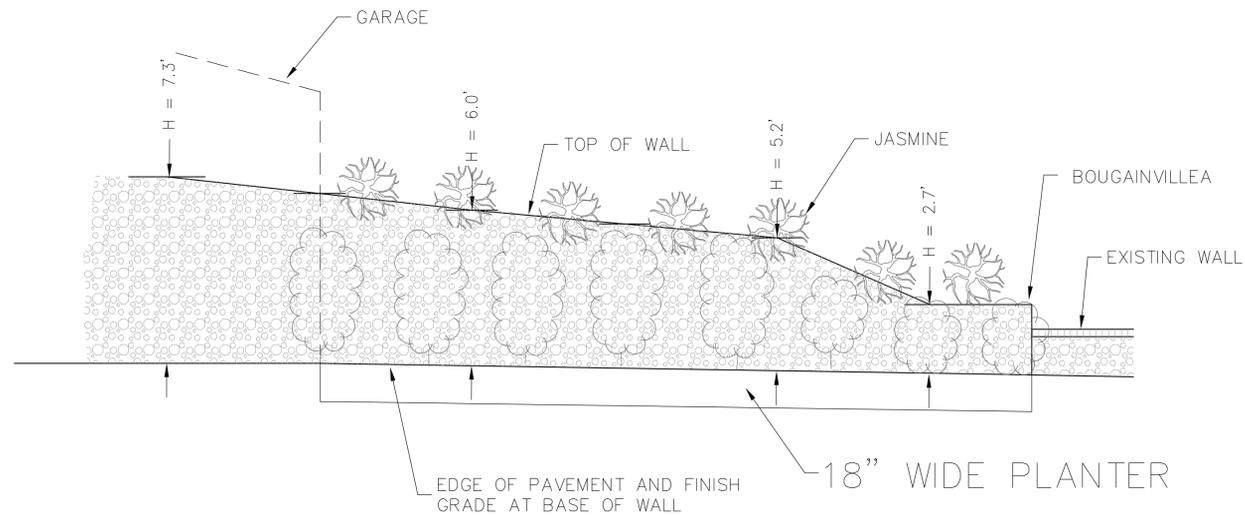
STREET VIEW

GARAGE TO EXISTING WALL



ELEVATION OF WALL

GARAGE TO EXISTING WALL

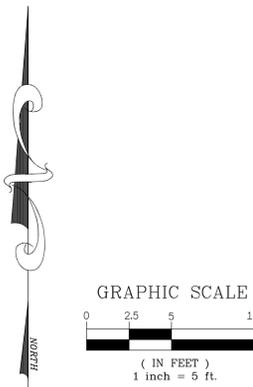


GENERAL LANDSCAPE NOTES

- REFER TO TOPOGRAPHIC SURVEY FOR GENERAL NOTES REFERENCING SURVEY INFORMATION AND DATUMS.
- STANDARDS FOR TYPE, SPREAD HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.
- NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS OTHERWISE SPECIFIED. ALL PLANTS SHALL BE SET PLUMB AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR, HABIT.
- ALL LANDSCAPE AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.
- ALL PLANTS SHALL BE WATERED THROUGHLY TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH, CONTRACTOR MAY NEED TO ADJUST QUANTITY AND FREQUENCY OF WATERING TO ENSURE PROPER ESTABLISHMENT.
- NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF 90 DAYS FOLLOWING ACCEPTANCE BY THE OWNER.
- BACKFILL MIXTURE AND SOIL MIXES TO BE INSTALLED PER SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING OF SOILS AND MAKE THE NECESSARY ADJUSTMENTS OR AMENDMENTS FOR LONG TERM PLANT HEALTH AND VITALITY.
- FOR ANY DISCREPANCIES BETWEEN THE PLANT SCHEDULE AND THE PLANTING PLAN, THE GRAPHIC QUANTITY SHOWN SHALL GOVERN.
- ALL WALL CONSTRUCTION SHALL BE COMPLETED PRIOR TO STARTING ANY LANDSCAPE PLANTING, LAWN GRASSES OR IRRIGATION WORK.
- ALL PLANT INSTALLATIONS SHALL BE COMPLETED EITHER BETWEEN APRIL 1 AND JUNE 15 OR AUGUST 15 AND NOVEMBER 1, UNLESS OTHERWISE DIRECTED BY PROJECT LANDSCAPE DESIGNER.
- EXISTING TREES WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION SPECIFIED TO REMAIN SHALL BE PROTECTED PER LOCAL REGULATORY AGENCY REGULATIONS FROM DAMAGE THAT MAY BE CAUSED BY OPERATION OF EQUIPMENT, STOCKPILING OF MATERIALS, COMPACTION OF ROOT ZONE, DRIVING OR PARKING WITHIN DRIFLINE OF TREES, OR THE SPILLAGE OF DELETERIOUS CHEMICALS, OILS, DIESEL, ETC. WITHIN THE DRIFLINE OF TREES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL STAKING OF TREES BASED ON SITE CONDITIONS AND TO PROVIDE FOR THE STABILITY OF THE TREE AND MATERIALS AND PROTECT THE HEALTH AND SAFETY OF THE PUBLIC/PROPERTY.
- INSTALL TWO SCHEDULE 40 2 INCH SLEEVES UNDER THE PROPOSED CONCRETE FOR DRIP AND IRRIGATION INSTALLATION. PIPE SHOWN ON PLAN IS DIAGRAMATIC ONLY. SLEEVE TO EXTEND PAST EDGE OF CONCRETE 6 INCHES ON EITHER SIDE.
- INSTALL A MINIMUM OF 2-SCH 40 - 2 INCH SLEEVES UNDER ANY PROPOSED CONCRETE FOR IRRIGATION, DRIP TUBING AND CONTROL WIRE INSTALLATION, ADDED SLEEVES AS NECESSARY.

PLANT SCHEDULE

-  BOUGAINVILLEA X BUTTIANA "ORANGE KING"
5 GAL. 4' O.C. AT BASE OF WALL
-  TRACHELOSPERMUM JASMINOIDES "STAR JASMINE"
5 GAL. 4' O.C. ON TOP OF WALL



CIVIL ENGINEER
JASON T. BARNUM
 2079 PARKWAY VILLAGE DR.
 CHICO, CA 95928
 530-518-5050



C2.0 LANDSCAPE PLAN				
AS REQUESTED BY: BRIAN VAJDIC				
LEGAL DESCRIPTION: PORTIONS OF LOTS 1 AND 2 OF TRACT 1771 IN THE CITY OF LOS GATOS, COUNTY OF SANTA CLARA, CA AS RECORDED IN THE FOLLOWING DOCUMENT: DOC# 23479938.				
APN: 510-30-026 DATE: AUGUST 2018 FILENAME: E-062 VAJDIC RETAINING WALL PLOT				
DRAWN BY: KDW	SCALE: 1"= 10'	PROJECT: E-062	JOB NUMBER: E-062	SHEET: 1 OF 1

Structural General Notes (Contractor Must Read):

- SMSE: Sezen and Moon Structural Engineering, Inc. (SMSE) is the Project Structural Engineer. Any structural engineering issues shall be directed to SMSE at 408-871-7273.
- 2016 California Building Code (2016 CBC): All construction work performed for this project shall comply with 2016 CBC and any local code requirements, if provided.
- CONTRACTOR'S APPROVAL:**
 - Contractor shall, prior to bidding and/or starting construction: coordinate all the construction documents of the latest revision, look for discrepancies between architectural and structural drawings, verify all the dimensions, check for conflicting requirements, check field conditions for discrepancies with drawings. It is especially important for remodels that the contractor field determine the existing foundation condition and if it matches design documents assumptions. Contractor to bid only from permitted drawings. Contractor assumes all risk associated with bidding non-permitted drawings.
 - Contractor shall not use architectural information shown on structural drawings such as floor, plate, ceiling and roof heights and/or elevations, horizontal plan dimensions, door and window locations, steps and stairways; such information is informational only and SMSE assumes no responsibility. Report all discrepancy to SMSE. Architectural information shown on structural drawings never supersede same information shown on architectural drawings unless verified in writing by SMSE and the project architect/designer.
 - Areas requiring special attention: variation caused by different architectural elevations, e.g. location changes of holdowns and post anchors due to different window sizes, location and porch layout, the existence or nonexistence of interior bearing wall and ceiling planter shelves, box columns, brick ledge, isolated post and column footings, etcetera.
- STRUCTURAL ONLY:**
 - Structural drawings are intended to cover the structural framing and the foundation elements only. Non-structural elements including decorative architectural elements, stair framing, guard rails, concrete pads, driveway, etc. may not be covered in the structural drawings. Contractors are advised to review all other plans and construction documents for non-structural items, which may be embedded in, attached to or otherwise interfering with the structural elements.
 - MARBLE/TILES:** Where marble/tiles are installed, it is the contractor's responsibility to consult with an expert for special framing advice to avoid cracking which may include upsizing the floor joists, reducing the joist span & spacing, increase the thickness of floor sheathing, etc.
 - SMSE is not responsible for the installation, including under-floor, joist and attic, nor concrete flat work including concrete driveway, walkway, door pads and other similar items. Images and/or dimensions given for the flat work are intended to be conceptual. Contractors shall follow the Architectural Plans or Owner's specifications for final location, geometry and dimensions.
 - Architect is responsible for checking structural drawings for compliance to architectural drawings.
 - NOT TO SCALE:** Drawings are not to be scaled. Use architectural drawings for dimensions.
 - TYPICAL DETAILS:** Typical and similar details shall apply where no specific details are given. Material notes and details on drawings shall take precedence over the structural notes contained herein.
- REVISIONS & MODIFICATIONS:**
 - All drawings and subsequent revisions, if any, shall be approved by SMSE prior to starting construction. No structural members shall be substituted, relocated or omitted, without prior written approval.
 - Field Modifications: When the installation of mechanical, plumbing, electrical, landscaping and other similar elements requires changes or modifications including boring, notching, or cutting made to the structural elements, contractor shall submit such changes or modification to SMSE for approval prior to installation.
 - Notching, of all framing members, from the top edge or the bottom edge is never permitted without SMSE approval. Boring is allowed only if located within the middle 1/3 span and the bore hole size shall be limited to 1/10 of member depth.
- ADDITIONAL EQUIPMENT:** Unless specified on the structural framing plans, mechanical and plumbing equipment's, e.g. spa tub, FAU, and etc., to be placed over or suspended off the structure members shall be submitted to SMSE for approval.
- CONSTRUCTION ORDER:** Contractor is responsible for the order and means of construction and all temporary shoring, bracing & erection during construction.
- SHEET-ROCK STACKING GUIDELINES:** When sheet-rock is stacked on a wood-framed floor during construction, the following guidelines shall be followed:
 - The sheet-rock shall be laid with the long direction perpendicular to the joists below.
 - Sheet-rock must not be stacked more than 2 feet high.
 - If sleepers are used beneath a stack of sheet-rock, they shall be placed at no more than 2'-0" on center.
 - The floor joists directly beneath a stack of sheet-rock shall be shored from below with 4x4 temporary beams placed PERPENDICULAR to the joists. These beams shall then be supported by 2x4 (min.) posts over 4x4 x 24" sleepers at a maximum spacing of 2'-0" on center. This shoring will be done prior to stacking the sheet-rock and shall be repeated on the floor directly below the stacked sheet-rock until a concrete slab or foundation system is reached.
- PERMIT:** Contractor and owner assume full responsibility of structural drawings when working without a permit. SMSE is not responsible for structural drawings when building permit is not obtained, regardless if plans are signed or not. Contractor and owner shall indemnify SMSE when working without a building permit.

ADDITION AND REMODELING:

- Contractor shall verify all existing field conditions and dimensions prior to starting construction, such as, but not limited to framing and foundation type and condition. Existing construction information given on drawings may not be accurate.
- SMSE is not responsible for existing framing and foundation conditions and performance. Existing foundation may not be adequate for the site and deferential settlement may occur. A soil engineer is always recommended for each job.
- DEMOLITION:**
 - Contractor shall safely shore the existing construction wherever the existing supports are removed to allow the installation of new work.
 - No existing members may be removed unless the structural plans indicated otherwise. If structural members not indicated for removal are interfering with the new work, contractor shall notify SMSE immediately.
 - Cutting, drilling, removal, etc. of the existing structures shall be performed in a great care not to damage the integrity of the existing structure.
- All locations where new structure is attached to existing structure shall be waterproof and damp proof.
- Contractor to ensure that the new alteration works shall not cause any existing mechanical, electrical, plumbing etc. systems unoperational.
- As mentioned above, it is especially important for remodels that the contractor field determine the existing foundation condition and if it matches design documents assumptions.
- New wall thickness may not match the existing due to wall sheathing and/or different sheetrocks and wall finishings. Field verify and adjust existing wall thickness to the new wall.
- Contractor is to account for and make sure existing wall thickness match throughout whenever plywood sheathing is applied to an existing wall, and/or when a new wall attaches to an existing wall.

GRADING & DRAINAGE:

- For site preparations, refer to 2016 CBC Section 1804 Excavation, Grading and Fill unless specified in soil reports.
- Site grading, sub-grade preparation, cutting slopes, excavation and placement of engineered fill material shall be performed in accordance with the Soils Report, if provided.
- For slab-on-grade construction the Soil Report shall be referenced regarding compaction, soaking, moisture barrier, sub-base, gravel, sand, etc. If soil report is not provided then the contractor is to prepare the soil to 95% minimum compaction. Site drainage requirements including final pad grading, roof drains and down spouts shall be referred to Soils Report, if provided, and Architectural/Civil Plans.
- FINISH GRADINGS:** Per Soil Report and/or Architectural/Civil Plans, otherwise, finish grading around the exterior of the foundation shall be sloped to drain away from the building and be a minimum of 8" below the sill plate. Contractor must follow the Soil Report and/or Architectural Plans for grading details.
- DRAINAGE SLOPE:** Per Soil Report and/or Architectural/Civil Plans, otherwise surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection that does not create a hazard. Lots shall be graded to drain surface water away from foundation walls. The grade shall fall a minimum of 6-inches within the first 10-feet.
- EXCEPTION:** where lot lines, walls, slopes or other physical barriers prohibit 6-inches of fall within 10-feet, drains or swales shall be constructed to ensure drainage away from structure. Impervious surfaces within 10-feet of the building foundation shall be sloped a minimum of 5% away from the building.
- No planting/sprinkler system within 10-ft of exterior foundation, unless greater distance is required by local jurisdiction.
- Roof downspouts to extend 10-ft minimum beyond exterior foundation to drainage system, unless greater distance is required by local jurisdiction.
- SMSE is not to be held responsible for above minimum grading and drainage recommendations. Contractor or person responsible for preparing grading and drainage shall indemnify SMSE.

FOUNDATION NOTES:

- A geotechnical investigation (Soil Report) is required per 2016 CBC Section 1803.5.1.1. Local building department has the prerogative to assume responsibility and waive and/or not enforce this requirement.
 - Requirements set forth by Soil Report (Last item in notes) shall take precedence over the structural notes and details. If a Soil Report is not provided, then the 2016 CBC prescriptive soil values (1500 pcf bearing for code minimum, 2016 CBC Table 1806.2) will be assumed for a standard shallow perimeter foundation. It is the duty of the Contractor, Architect/Designer and Owner to investigate the site, existing structure and/or adjacent structures for foundation type used and inform SMSE if other than standard shallow perimeter foundation type is being used. During or before foundation excavation it is the Contractor's duty to inform SMSE if the soil appears to contain clay or other non-granular and/or expansive soil.
- If a soil report is provided, the Soil Engineer shall review foundation plans, prior to submittal to insure that the recommendations of the soil report have been incorporated into design and to provide additional recommendations, if it deemed necessary.
- If a soil report is provided, the Soil Engineer shall provide a written letter stating that design meets his soil report guidelines.
- If a soil report is provided, the Soil Engineer shall observe all earthwork, grading and foundation excavations and submit written approval to the building inspector before requesting foundation inspection and pouring (concrete) of any footings.
- If a soil report is provided, the Soil Engineer shall be notified at least four (4) days in advance prior to any grading or foundation excavating to coordinate field testing and/or observation.
- Contractor is to refer to soil report prior to any site work, grading, shoring construction, lime treatment or excavation of footings and underground utilities to insure compliance with soil report recommendations and procedures.
- Contractor is to verify that existing foundation type matches new foundation type if a soil report is provided. If not provided, the contractor is to contact the architect and SMSE if the foundations do not match.
- For piping running in parallel with footing, contact project engineer for further verification and approval. For piping passing thru-footing (in perpendicular direction), see details as shown.
- IMPORTANT:** Contractor to have building inspector approve foundation trench before placing of reinforcing and/or pouring of concrete.
- Concrete footings, slabs and mats shall be stepped down a slope; contact SMSE for final details if not provided on plan.

CONCRETE:

- Minimum concrete compressive strength per CBC Table 1808.8.1, unless noted otherwise on plan:
 - Concrete for conventional shallow residential foundations shall be 3000 psi @ 28 days; special inspection not required.
 - Concrete for residential retaining walls and foundations shall be 3000 psi @ 28 days.
 - Concrete for conventional shallow agricultural building foundations shall be 2500 psi @ 28 days.
 - Concrete for residential piers and grade beams shall be 3000 psi @ 28 days; special inspection dependent on local building department.
 - Concrete for conventional shallow utility, agricultural and other miscellaneous structure (Group U) foundations shall be 2500 psi @ 28 days.
 - Concrete for residential columns, walls and raised (self-supporting) slabs shall be 3000 psi @ 28 days.
 - Concrete for shallow commercial/industrial foundations shall be 3000 psi @ 28 days.
 - Concrete for residential piers and grade beams shall be 3000 psi @ 28 days; special inspection dependent on local building department.
 - Concrete for conventional shallow utility, agricultural and other miscellaneous structure (Group U) foundations shall be 2500 psi @ 28 days.
 - Concrete for residential columns, walls and raised (self-supporting) slabs shall be 3000 psi @ 28 days.
 - Concrete for shallow commercial/industrial foundations shall be 3000 psi @ 28 days.
 - Concrete for deep (pier and grade beam) commercial foundations shall be 3000 psi @ 28 days.
 - Concrete for other commercial/industrial applications (columns, walls, slabs and etc.) shall as noted but not less than 3000 psi @ 28 days.
 - For precast concrete pile, composite cast-in-place concrete pile, structural slab and mat foundation see plans for specified concrete strength, or contact SMSE if not specified on plans.
 - Concrete in corrosive and/or high sulfate environments shall be 5000 psi (minimum) @ 28 days (See Concrete Note 3).
- Owner/Builder shall consult with a geotechnical engineer to determine if the underlying soil contains sulfate or if the building site is exposed to salt water. If sulfate and/or salt water exposure exist, 2016 CBC Section 1904 shall be followed in concrete mix design. Unless advised by soils engineer otherwise, the following recommendations shall be followed as a minimum:
 - For exposure categories and classes, see ACI Table 19.3.1.1 and for requirements for concrete by exposure class, see ACI Table 19.3.2.1.
 - Cold joints may be used only where shown. Jointing surface shall be clean, free of foreign material and intentionally roughened.
- Special inspection per 2016 CBC Table 1705.3 is required where the concrete's compressive design strength exceeds 2500 psi @ 28 days.
 - Corrosive reinforcing (ASTM A767), epoxy-coated reinforcing (ASTM A775) or epoxy-coated prefabricated reinforcing (ASTM A 934) shall be used in highly corrosive environments.
- REBARS:**
 - Unless noted otherwise, reinforcing steel shall be deformed bars of billet or axle steel per ASTM A615. Use Grade 40 for #4 and smaller reinforcing and Grade 60 for #5 and larger.
 - Use ASTM A706 for reinforcing that is to be welded.
- INSTALLATION:** Reinforcing, dowels and other embedded elements shall be in place before pouring concrete. Reinforcement shall be clean and free of oil and other foreign material.
- CLEARANCE:**
 - 3" clearance shall be provided where concrete is cast against earth.
 - 2" clearance for concrete exposed to earth or weather but cast against formwork.
 - 3/4" clearance for slabs and walls where concrete is not exposed to earth or weather.
- Fasteners embedded in the concrete/masonry such as holdown bolts, anchor bolts, and others should be attached to, or hooked around, reinforcing. Use min. continuous #4 rebars unless noted otherwise in the relevant details.
- ANCHOR BOLTS:**
 - Anchor bolts shall be 5/8" diameter (ASTM A307) with 3" square by 1/4" thick plate washer. Embedment into concrete shall be 7" minimum. For 2-pour slab-on-grade foundations, the minimum embedment shall be 7" into the 1st pour.
 - Anchor bolts default spacing shall not exceed 48" on center, unless noted otherwise on plan.
- Two bolts minimum each piece of mudsill.
 - 4" minimum but no more than 12" from each cut end of the sill plate.
 - "Simpson" Strong-Bolt 2 Wedge anchors of equal diameter may substitute anchor bolts or equivalent; installation shall follow approved ICC report ESR-3037. Minimum wedge anchor embedment shall not be less than 3-3/8".
 - Wedge anchors shall be installed minimum 7 days after the concrete is poured.
- HOLDOWNS:**
 - Holdowns shall not be scaled off of foundation plans. They shall be located by close evaluation of architectural floor plans, shear-wall plans, and the framing plans above.
 - Threaded rod and similar holdown anchors shall be ASTM A36 unless specified otherwise on plan.
 - For holdown installation, contractor shall refer to the manufacturer's specifications for embedment, edge and end distance, coverage and other requirements.
- WIRE FABRICS:**
 - Wire fabric is not recommended for slab-on-grade reinforcing.
- INDOOR CONCRETE SLAB-ON-GRADE:**
 - Unless noted otherwise on the plans, residential concrete slab-on-grade shall be 4" thick with #4 rebars at 18" on center each way at mid-depth over a sub-base per soil report. Use the following specifications if a soil report has not been provided:
 - Provide 10 mil Visqueen moisture retarder with 2" sand covering.
 - Provide 4" clean gravel (3/4" crushed rock) base below moisture barrier.
 - To reduce moisture effects on interior slab-on-grade floor, concrete should have water-to-cement ratio not greater than 0.45. In addition, fly ash or similar admixture like Xypex in slab thicker than 5" and 3,000 psi is recommended.
- COARSE AGGREGATE MAXIMUM NOMINAL SIZE:**
 - Maximum nominal coarse aggregate size shall be 3/4" unless otherwise requested by contractor, concrete supplier or soil report, provided the following constraints are not exceeded:
 - One fifth the narrowest dimension between form sides.
 - One third slab depth.
 - Three fourths minimum clear spacing between reinforcing bars, wires, bar bundles, prestressing tendons and ducts.
- CONCRETE DOWNELD TO EXISTING CONCRETE:**
 - Existing concrete surface to be cleaned of all foreign materials including, but not limited to, epoxy coating and paint.
 - Existing concrete surface to be roughened, which is to be determined by an experienced concrete contractor.

CONCRETE MASONRY:

- MATERIALS:**
 - Concrete masonry units shall be f'm = 1500 psi unless otherwise noted.
 - Concrete block shall be Grade N-1, 1900 psi units.
 - Grout shall be 3/8" pea-gravel and develop a minimum compressive strength of 2000 psi within 2 days.
 - 1/2" minimum clearance shall be provided between rebar and inside face of masonry unit.
 - Mortar shall be type S and develop a minimum compressive strength of 2000 psi within 28 days.
- All masonry cells shall be grouted solid. Reinforcing steel shall be accurately placed and positively retained in position during grouting. All horizontal reinforcing steel larger than #2 bars shall be placed in bond beam units. Reinforcing steel shall be as noted on the plans except that all openings shall be reinforced with two #5 bars along each boundary and extending 30" beyond all corners or through dowels to foundation. Construction shall conform to Chapter 21 of the 2016 CBC.
 - Low-lift Grout Constructions: Units may be laid to a height not to exceed 8 feet. If the height exceeds 4 feet, clean-outs must be provided in the bottom course of each cell.

WOOD:

- The standards of quality of all wooden material shall be complied with 2016 CBC Section 2303.
 - 2x joists and 4x beams shall be Douglas Fir Larch #2 or better. Use Douglas Fir Larch #1 for appearance.
 - Finger-jointed studs must not be used without prior approval by SMSE.
 - Unless a more stringent splice is specified all double top plate splices shall have sixteen 16d nails each side of splice. Bottom splice plate shall be 4'-0" minimum in length (24" each side of splice).
 - Top plates, sill plates, studs and posts shall be Douglas Fir Larch #2. Standard Grade or better for heights up to 10 feet and Douglas Fir Larch #2 or better for wall heights greater than 10 feet. Use Douglas Fir Larch #1 for appearance.
 - 6x & 8x framing members shall be Douglas Fir Larch #2 or better. Use Douglas Fir Larch #1 for appearance.
- Any wood framing exposed to weather shall be pressure-preservative treated Hem Fir or Douglas Fir Larch, foundation grade California redwood or foundation cedar per 2016 CBC 2304.12 or equivalent.
 - Mud sill, wood in direct contact with concrete and other members located within 8" of finish grade shall be pressure-preservative treated Douglas Fir Larch per 2016 CBC 2304.12. Contractor to contact SMSE if another wood type is desired; engineering fees will occur.
 - Alternatives to mud sill, not treated with chromated copper arsenate (CCA) preservatives may include using borate preservative treated Hem Fir or Douglas Fir Larch sole plate provided it is protected and not subject to weather exposure. With this material, normal steel anchor bolts may be used.
 - Below Base Flood Elevation (B.F.E.) as specified in the architectural drawings or by others, all material shall comply with FEMA Technical Bulletin 2-93, Flood Resistant Materials Requirements.
 - Below Base Flood Elevation (B.F.E.), use pre-treated wood framing and sheathing for floor and walls except wall studs and hot-dipped galvanized fasteners unless approved otherwise by project architect and engineer.
- Glue-Laminated Beams (GLB's): minimum.
 - Simply supported GLB's shall be 24F-V4 DF-Larch/DF-Larch.
 - Cantilevered at ends or continuously across supports shall be 24F-V8 DF-Larch/DF-Larch.
 - Arched GLB's shall be 24F-V8 DF-Larch/DF-Larch.
 - GLB's shall bear AITC certificates conforming ANSI/AITC A190-1 and submitted to the Building Official before installation.
 - Shop drawings shall be submitted to Engineer for review before fabrication.
 - GLB's may be replaced with Parallel Beams of equivalent size provided SMSE is contacted to check deflection, notch and/or allowable holes.
- All laminated veneer lumber (LVL) grade 2.0E WS, such as Microlam, all parallel strand lumber (PSL) grade 2.2E DF, such as Parallam and all laminated strand lumber (LSL) grade 1.55E, such as Timberstrand shall be manufactured by Weyerhaeuser (ICC-ES ESR-1387).
- All lumber shall have moisture content not exceeding 19% at time of fabrication, installation and during construction.
 - Moisture content of framing members shall be verified in accordance with Cal Green Building Standards Code 4.505.3.
 - Moisture content of wall and floor framing members shall be verified prior to enclosure. Framing member shall not be enclosed when moisture content exceeds 19%.
- CDX and/or OSB sheathing may be used interchangeably for roof sheathing as specified per plan. CDX shall be used for wall and floor sheathing. OSB tends to be dimensionally unstable and is unsuitable for floor sheathing. OSB is structurally acceptable to be used for wall sheathing, but SMSE is not responsible for architectural problems that may arise.
- Unless otherwise noted on plans and details, all connections shall comply with Table 2304.10.1 Fastening Schedule of 2016 CBC for conventional framing.

STRUCTURAL STEEL:

- STANDARDS:**
 - W-Shapes shall meet ASTM A992 (Fy = 50 ksi and Fu = 65 ksi).
 - M, S, HP, C, MC and L-Shapes shall meet ASTM A36 (Fy = 36 ksi and Fu = 58 ksi).
 - Rectangular and Square HSS shall meet ASTM A500, Grade B (Fy = 46 ksi and Fu = 58 ksi).
 - Round HSS shall meet ASTM A500, Grade B (Fy = 42 ksi and Fu = 58 ksi).
 - Steel Pipe shall meet ASTM A53, Grade B (Fy = 35 ksi and Fu = 60 ksi).
 - All other structural shapes and miscellaneous steel shall meet ASTM A36 (Fy = 36 ksi and Fu = 58 ksi).
 - Fabrication and assembly shall follow AISC.
 - Contractor is responsible for the full compliance of above specifications which include, but not limited to, oversized holes, hardened washers, surface treatment, fastener tension, inspection, etc.
 - Do not paint steel that is in contact with concrete.
- WELDING:**
 - All the welding shall be performed in accordance with all the applicable provisions of the AWS D1.1M by the American Welding Society except as modified by in AISC 360 Specification Section J2 by the American Institute of Steel Construction, Inc. and 2016 CBC Chapter 17.
 - Welding electrodes shall be E70XX for shield metal arc welding and ER70S-X for gas metal arc welding.
 - Flux cored arc welding is allowed. Use E7XT-X for carbon steel electrodes per AWS A5.20. Use E7XTX-X for low-alloy steel electrodes per AWS A5.29.
 - Qualified welder shall be certified in accordance with AWS D1.1, which shall include the type of welding, positions, date qualified and firm/individual certifying the qualifications tests.
 - Special inspection per 2016 CBC 1704 is required.
- HIGH STRENGTH BOLTS:**
 - All structural steel bolt connectors shall be Heavy Hex Structural bolts manufactured to ASTM A325.
 - The assembly of structural joints using ASTM A325 bolts shall conform to "Specification for Structural Joints using ASTM A325 or A490 Bolts" by AISC.
 - All steel bolted connections shall be friction type with surface condition of clean mill scale.
 - NELSON studs shall be manufactured and fabricated per "Nelson Stud Welding, Inc." requirements. Stud welding is to be done in accordance with AWS D1.1 and the stud manufacturer's recommendations.
 - Bolt holes (this includes holes for anchor bolts) shall be properly oversized per AISC specifications. Contact SMSE if the steel fabricator does not know the requirements.

ROOF FRAMING:

- DESIGN LOADS:**
 - For roof live load, refer to the 2016 CBC Table 1607.1 and Section 1607.12.
 - Architect, contractor or owner are to inform SMSE if project requires special and undefined design loads.
 - Architect, contractor or owner are to inform SMSE if project occurs in snow load area.
- ROOF SHEATHING NOTES:**
 - New roof coverings shall not be installed without first removing all existing layers of roof coverings down to the roof deck per 2016 CBC, Section 1510.3.
 - Any sheathing panels used on roof shall not be less than 24 inches wide unless all are approved by project engineer.
 - Roof sheathing shall be installed with the face grain perpendicular to framing members below, stagger the adjacent panels by 4 feet. Refer to plywood panel nailing schedule for other information not listed here.
 - The sheathing panels shall be installed such that there is a 1/8" gap maintained between all panel edges to accommodate possible swelling and/or expansion.
- PRE-FABRICATED ROOF TRUSSES NOTES:**
 - The design and fabrication of roof trusses are to be performed by a registered professional engineer, who is experienced in pre-fabricated trusses, hired by the truss manufacturer. Pre-fabricated truss design and detailing shall meet 2016 CBC requirements.
 - The truss manufacturer shall submit stamped, by a duly licensed engineer, calculations and shop drawings to SMSE for review and approval. The review is for general compliance to project. SMSE is not responsible for correctness and/or completeness of the pre-fabricated truss shop drawings or calculations.
 - Contractor shall then submit two sets of such approved copies to the building official at least two weeks prior to frame inspection. Truss calculations and drawings are to be approved by the building department prior to installation.
 - ADDITIONAL DEFLECTION CRITERIA:** The truss engineer shall design the roof trusses to also meet the following criteria:
 - Deflection of individual top chords of pre-fabricated roof trusses shall not exceed L/240 under combined dead and live loading.
 - Maximum pre-fabricated truss bottom chord deflection shall be limited to L/480 for dead + live loading, and L/720 for live loading.
 - Unless otherwise required, all trusses shall be designed as simply supported from end to end. Do not use interior walls for bearing unless approved otherwise. The truss engineer shall design the gable-end roof trusses to resist proper wind loads, per the design and fabrication of roof trusses are schematic only. It is architect and contractor's responsibility to provide proper crickel dimensions and slopes for proper roof drainage.
 - The truss engineer shall detail all required lateral bracing for the pre-fabricated trusses. In cantilever condition, truss engineer shall notify SMSE when uplift occurs at any truss support.
 - Where multiple trusses are placed together as a Girder-truss, these trusses shall be identical in their geometry and are field connected with 16d at 6" o.c. face nailing along all top chord, bottom chord and web members.
 - All illustrated roof joist are schematic only. It is architect and contractor's responsibility to provide proper crickel dimensions and slopes for proper roof drainage.
- CONVENTIONAL STICK FRAMING NOTES:**
 - Conventional light-frame construction should meet 2016 CBC Section 2308.
 - Kickers supporting purlins to be 2x6 spaced no more than 4'-0" o.c.
 - Strong-back supporting kickers to be a standing 2x4 faced nailed to a flat 2x4 with 16d at 12" o.c. Strong-backs shall be installed to have the 5" face vertically standing with the 3/2" face laid flat.
 - OPYSUM CEILING: Adjacent pieces of gypsum ceiling board shall be staggered not to occur on the same ceiling joint.

FLOOR FRAMING:

- DESIGN CRITERIA:**
 - For roof live load, refer to the 2016 CBC Table 1607.1 and Section 1607.
 - Architect, contractor or owner are to inform SMSE if project requires special and undefined design loads.
- DEFLECTION:** For pre-fabricated floor joist, the recommended deflection shall be limited to L/480 under dead + live and L/720 under live load only. However, the pre-fabricated floor joist engineer shall make the final judgment and select the proper deflecting criteria.
- TJI JOISTS:**
 - TJI joists shall be installed per manufacturer's recommendations. Contractors shall carefully read the manufacturer's product installation manual for special attentions including nailing schedule
 - RIM JOISTS: 2x minimum
- U.N.O.** All rim joists shall be (1) TimberStrand Rim Board when supporting 1-floor above, (2) TimberStrand Rim Board when supporting 2-floors above. May use Microlam in place of TimberStrand Rim Board to increase the nailing surface.
 - All rim joists, parallel to framing, shall be blocked at 24" o.c. maximum.
- BLOCKINGS:**
 - AT SUPPORTS: 2x, Microlam, or TJI blocking shall be provided between floor joists at two ends and at each supporting point such as bearing walls, structural beams, etc. Blocking may be omitted only at the ends of floor joists where they are face-nailed directly to a header, beam, or rim joist.
 - Blocking shall be nailed and/or clipped on three sides (i.e. to the framing and sheathing).
 - PERPENDICULAR WALLS: Provide solid blocking between joist for the entire upper wall.
 - PARALLEL PARTITIONS: Provide a double joist beneath the upper wall, unless noted otherwise (u.n.o.). Provide lateral blocking, on both sides, @ 48" on center.
- FLOOR SHEATHING NOTES:**
 - Roof sheathing shall be installed with face grain perpendicular to framing members below, stagger the adjacent panels by 4 feet. Floor sheathing shall be glued and nailed. Refer to the plywood panel-nailing schedule for information not stated here.
 - Panel edges shall not be less than 24 inches wide unless all edges are solidly blocked.
 - Panel edges shall have approved tongue-and-groove joints or shall be supported with blocking unless 1/4" minimum thickness underlayment or 1-1/2" thick approved cellular or lightweight concrete is placed over the subfloor, or finish floor is 3/4" wood strip.
- FLOOR HOLDOWNS:**
 - All holdowns indicated on floor framing plan shall be applied across the floor diaphragm.

WALL FRAMING:

- Minimum size, height, and spacing of wall wood studs shall be complied with 2016 CBC Table 2308.5.1. Contact SMSE when wood stud height exceeds 2016 CBC Table 2308.5.1 before ordering material.
 - All shear-walls shall be directly attached to the floor or roof above whether detailed or not. Contact SMSE for shear-wall to floor/roof shear transfer detailing when not provided for on plans.
- NOMINAL HEADER DEPTHS:** (use DF-Larch #2 or better, no snow loads)

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* Supporting:	ROOF Loads:	ROOF & FLOOR Loads:
up to 8' span	8"	8"
4' to 8' span	8"	10"
6' to 8' span	10"	12"
* Header widths to match wall depth (i.e. 4x for 2x4 wall and 6x for 2x6 wall).		

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- KING STUDS:**
 - Unless otherwise noted (u.o.n.), all window and door openings 8 ft and wider shall have full-height double king studs.
- POST CONNECTION:**
 - Unless otherwise noted (u.o.n.), freestanding beam-to-post connections shall have appropriate "Simpson" PCZ/EPGZ as required.
 - Bottom of posts shall have full bearing in a tight-fit condition to the supporting structural member below with appropriate "Simpson" BC post base or a pair of A34 clip u.n.o.
 - Where posts terminated on floor with stud walls or beams below, the space between the bottom of the post and the top of the plate or the beam shall be solidly filled with 2x blocking and the stud wall below shall have matching post at same location.
- SHEAR MATERIAL COVERAGE:** shear material shall be applied continuously from sill plate to top plate with all the panel edges solidly blocked.
- APA span rating of 24/0 or better, all panel edges blocked and nailed per Shear Wall Schedule (SWS).
 - Sheathing shall be placed on the designated side of studs as shown on plans. It may be placed on the opposite side provided there are no perpendicular walls intersecting the shear-wall. When opposite side is desired and there is intersecting wall, sheathing shall be placed to continuously pass through the perpendicular wall framing without stop.
 - Where sole or plates are cut for pipings, a metal tie, min. 16 gage and 1-1/2" wide, "Simpson" RPS/SS/HSS or equivalent, shall be fastened to each plate across and to each side of the opening with min. 6-16d nails.

HARDWARE:

- All framing anchors, straps, hangers, post caps, column bases, holdowns, hinge connectors, angles and clips shall be manufactured by "SIMPSON", "JSP" or equivalent. Nailing schedule shall be in accordance with product requirements for maximum tabulated loads. Unless noted otherwise, Simpson type N nails shall be used with the above framing connectors.
 - The contractor shall have a current copy of all pertinent "Simpson" catalogs on the job-site at all times. The catalog(s) shall include, but not be limited to, C-2015/2016.
 - U.O.N. All flush mounted single floor joists shall have appropriately sized "LUS" hangers and all flush mounted single roof ratters shall have "LUS" or "LSU" hangers.
 - U.O.N. All flush mounted sawn lumber beams or multiple joists shall have "HHUS" hangers where flush mounted.
 - All straps indicated on drawings shall be fastened with nails where bolts and nails are optional. Bolts are required only when specified. All straps shall be placed over the plywood sheathing.
 - 16d and 10d fasteners are common nails and shall be used throughout this project except all toe nailing shall be 8d nails. 10d common nails may be replaced with 16d sinkers. Box nails shall not be used unless noted otherwise.
 - All nails exposed to the weather shall be hot-dipped galvanized nails. Galvanized nails specified in Shear-wall Schedule, that are exposed to weather, shall be hot dipped, not electroplated galvanized.
 - Fasteners (anchor bolts, plate washers, nails, screws, UFP, metal connectors, etc.) in pressure-preservative treated and fire-retardant treated wood shall be of hot-dipped zinc coated galvanized in accordance with ASTM A 153, Table 1, stainless steel, silicon bronze or copper as specified in the 2016 CBC 2304.10.5.
 - The galvanization of fasteners should conform to a pressure-preservative treated manufacturer's requirements.
 - The diameter of bored holes, including machine bolts, anchor bolts, holdown bolts, shall not be larger than the specified bolt size plus 1/16th of an inch. For all bolts through wood members, use Standard Cut Washers, u.n.o. on plans.
 - Nailing shall conform to the 2016 CBC Table 2304.1.1 nailing schedule, unless noted otherwise.
 - All mechanical concrete anchors exposed to weather and/or corrosive environments shall be hot-dipped galvanized for moderate conditions and stainless steel for severe conditions.
- Actual drilled hole depths, for mechanical anchors, are deeper than the specified hole depths in the structural plans and details; refer to appropriate ICC-ES ESR report for actual required hole depths.
- UNISTRUT, Cooper B-Line or equivalent:**
 - All channel framing members shall be fabricated from structural grade steel conforming to one of the following ASTM specifications: A1011 SS GR 33, A653 GR 33.
 - Nuts and bolts have coarse screw threads. The standard framing nut is 1/2" diameter. Nut and bolts conform to ASTM A1011 SS GR 33. Screws conform to SAE J429 GR.
 - All fittings shall be fabricated from steel conforming to one of the following ASTM specifications: A575, A576, A36 or A635.
- ALUMINUM:**
 - Aluminum used for structural purposes in buildings and structures shall comply with AA ASM 35 and AA ADM 1.
 - Screws shall be:
 - Aluminum.
 - Austenitic stainless steel
 - If screws are not exposed water or humidity (near dew point) then Non-Austenitic stainless steel can be used provided either:
 - Minimum 16x chromium and Rockwell hardness less than C35.
 - Zinc coated (per ASTM A123, A641 or B633) or nickel/chromium plated (per ASTM A592).
- MISCELLANEOUS:**
 - Contractor shall provide (min.) 2016 CBC attic access to CA framed areas.
 - Prior to interior wall demolition, contractor should provide adequate temporary supporting for existing structures, roof and floor framing.
 - Architect/designer, contractor or owner shall notify SMSE of any critical roof, ceiling, floor or wall deflection criteria.

NOTES FOR SPECIAL INSPECTIONS, CONTRACTOR RESPONSIBILITY AND STRUCTURAL OBSERVATION per 2016 CBC Section 1704 and 1705:

- Refer to the 2016 CBC Chapter 17 for Structural Tests and Special Inspections and the local jurisdiction code where provided.
 - Special Inspection / Observation Items:
 - Holdown and anchor bolts to use Simpson SET-XP, which is to be installed per ICC-ES ESR-2508 specifications; periodic special inspection required.
 - Hilti HIT-RE 500-SD (ICC-ES ESR-2322) may be used as an alternative to Simpson SET-XP; periodic special inspection required.
 - Mechanical anchors to be either Hilti Kwik Bolt TZ (ICC-ES ESR-1917) or Powers Power-Bolt+ (ICC-ES ESR-3260); install anchors per corresponding ICC-ES ESR specifications. Periodic special inspection is required.
 - Refer to the Structural Tests and Inspection Schedule provided by a local jurisdiction, if provided.
 - Steel: Special inspection is required for all welding and bolting (except when ASTM A307 bolts are used) per 2016 CBC Section 1705.2.
 - Concrete (2016 CBC Section 1705.3):
 - At time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete.
 - Refer to CBC Section 1705.3 for special inspection exceptions.
 - Masonry: Special inspection is required per 2016 CBC Sections 1705.4.
 - Special inspection not required for masonry fireplaces, heaters and chimneys installed or constructed in accordance with Section 2111, 2112 or 2113 respectively.
 - Wood: Special inspection is required per 2016 CBC Section 1705.5.
 - Special inspection for wind/seismic resistance: Special inspection is required per 2016 CBC Section 1705.11 and 1705.12, respectively.
 - Cast-in-place deep foundations: Special inspection is required per 2016 CBC Section 1705.8. and Table 1705.8.
 - All inspection and observation letters should be presented to the City field inspector.



Landscape Retaining Wall
 16330 Matilija Drive, Los Gatos, CA

Owner:

Bran Vajdic
 Jack Etizen
 P.O. Box 968
 Saratoga, CA 95072
 408-656-2009

January 19, 2018

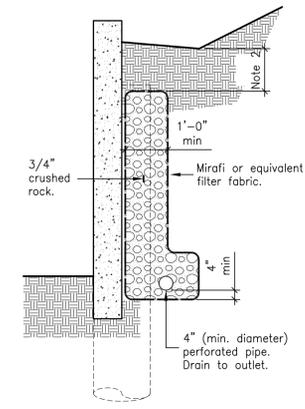
Revisions		
No.	Date	Description

Job Number: 7599-17 Drawn By: Sezen

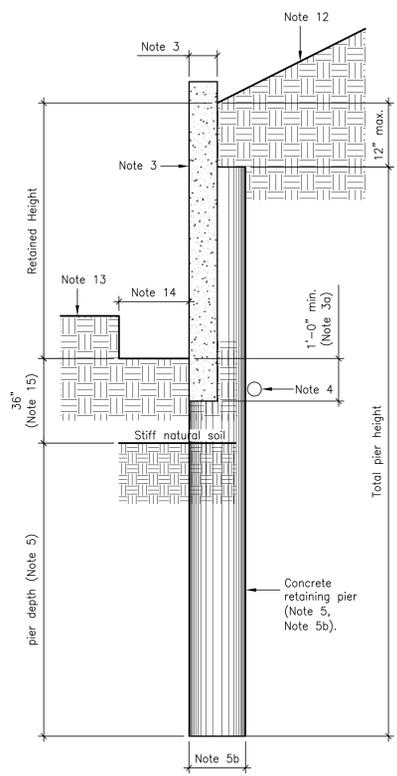
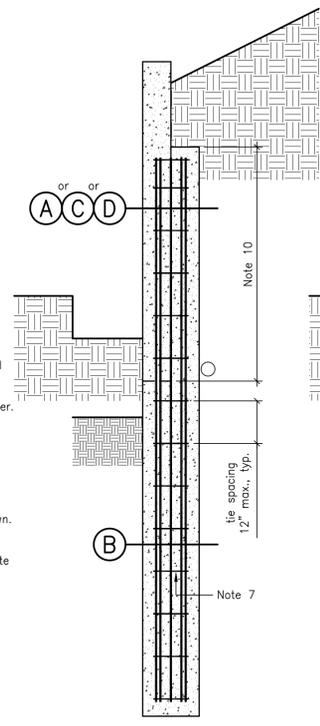
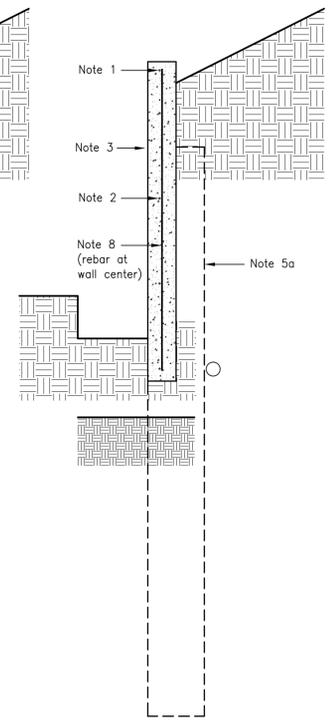
Designed By: Sezen Checked By: Moon

Sheet Title: **Details**

Sheet Number: **S2.0**



- Notes:
- Minimum drainage requirements. More stringent requirements from the soil report, if one is provided, shall supersede.
 - 18" minimum compacted clay soil.
 - Water-proofing by specialists, where required.



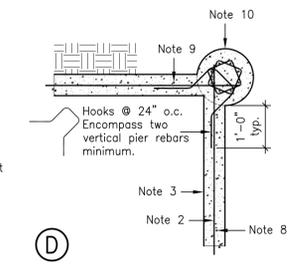
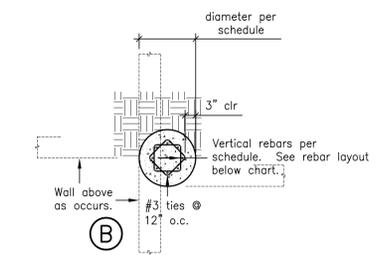
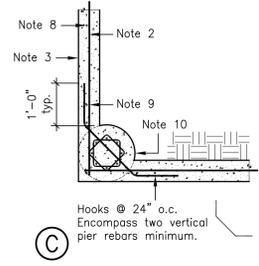
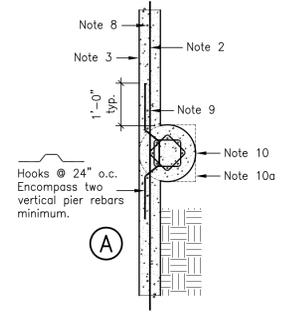
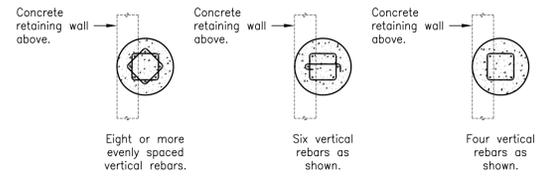
- Notes:
- Top horizontal rebar.
 - Horizontal reinforcing, centered in wall, per schedule. Horizontal reinforcing to be continuous through pier.
 - Concrete retaining wall. Wall thickness per schedule.
 - Extend wall depth into fill to be field determined by soil engineer.
 - Drainage by others and see detail 4/- u.n.o.
 - Pier depth to be field determined by soil engineer.
 - Pier beyond.
 - Pier diameter per schedule.
 - #3 hoops or ties for #9 vertical rebars and smaller, use #4 hoops or ties for #10 vertical rebars and larger. Spiral ties may be used, contact project engineer for alternative detailing.
 - #4 vertical at 18" on center.
 - Two extra #4 vertical each side of pier as shown.
 - Concrete pier to continue up through wall.
 - May have square pier above ground.
 - Provide 3" clear for all reinforcing where concrete is poured against earth.
 - Existing retained grade as occurs.
 - Finished lower grade as occurs.
 - Existing undesirable trench dug by others.
 - Upper soil structural support is to be ignored.
 - Horizontal hooks to match horizontal reinforcing size.

Design Parameters:

- 80-psf active earth pressure, unrestrained, flat backfill.
- 0-psf uniform surcharge loads.
- 250-psf passive earth pressure in stiff natural soil acting on 2.0x pier diameters.
- 450-psf pier skin friction in stiff natural soil.
- Seismic not given in soil report.
- 80-psf creep earth pressure acting on 2.0x pier diameters in soil ignore zone.
- Retaining wall is not designed for heavy construction equipment operation on the retained slope.

Retaining height	Concrete 28-day compressive strength	Concrete pier spacing	Minimum concrete pier depth *1	Calculated concrete pier depth *2	Concrete pier diameter	Concrete pier vertical reinforcing	Concrete wall thickness	Concrete wall reinforcing	Special Inspection
12'-0"	4000-psi	6'-0"	19'-0"	19'-0"	36"	8 - #14	6"	#5 @ 6" o.c.	Yes
10'-0"	4000-psi	6'-0"	17'-0"	17'-0"	36"	8 - #9	6"	#5 @ 6" o.c.	Yes
8'-0"	4000-psi	6'-0"	16'-0"	16'-0"	24"	8 - #9	6"	#5 @ 8" o.c.	Yes
6'-0"	4000-psi	6'-0"	14'-0"	14'-0"	24"	8 - #7	6"	#5 @ 12" o.c.	Yes
4'-0"	4000-psi	6'-0"	12'-0"	11'-0"	24"	8 - #5	6"	#5 @ 12" o.c.	Yes

- Notes:
- Minimum pier depth is maximum value of soil report, or calculations; final depth shall be determined in field by soil engineer.
 - Calculated pier depth for reference only.



Changes will likely be specified, which may be performed in the field.
 Drainage and erosion must be continually controlled including with roof and deck waters being drained away.

Not Used

17

Not Used

18

Not Used

19

Not Used

20

Not Used

16

Not Used

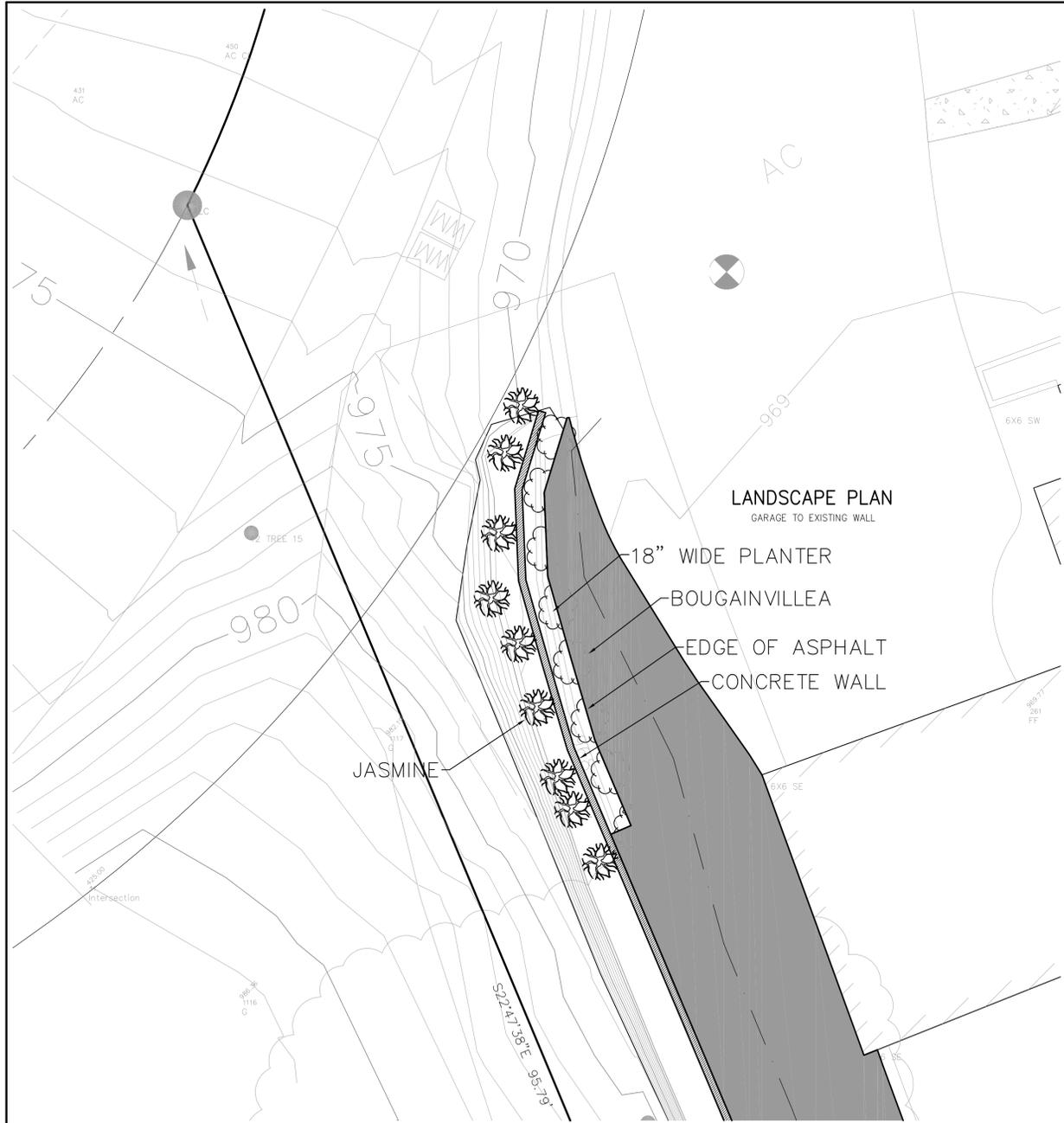
12

Not Used

8

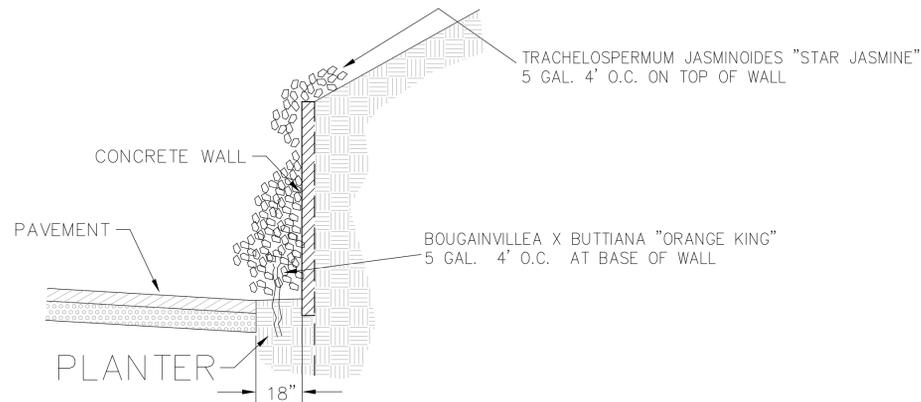
Not Used

4



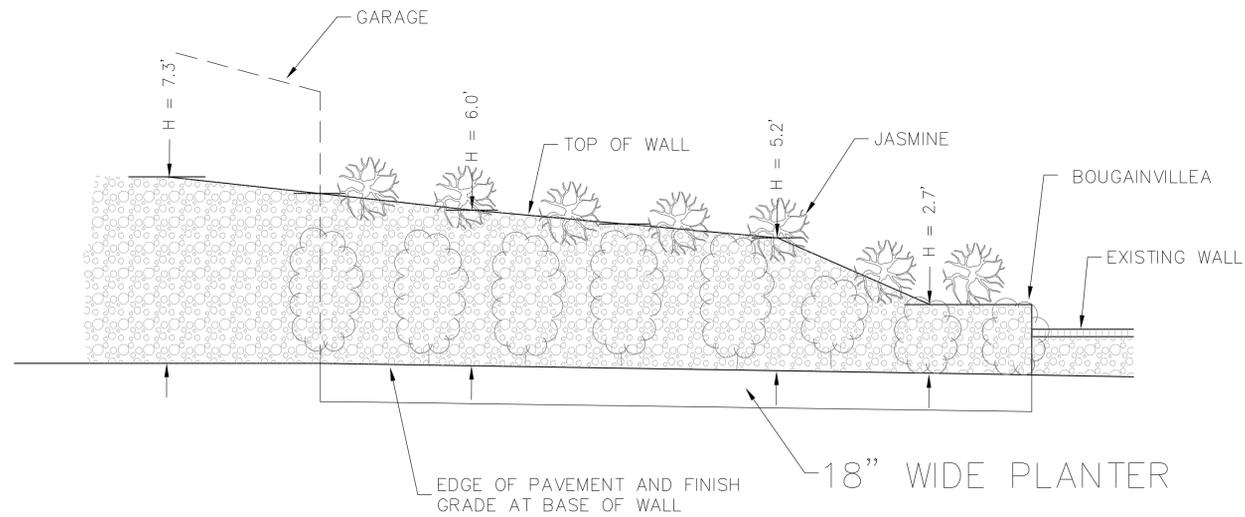
STREET VIEW

GARAGE TO EXISTING WALL



ELEVATION OF WALL

GARAGE TO EXISTING WALL

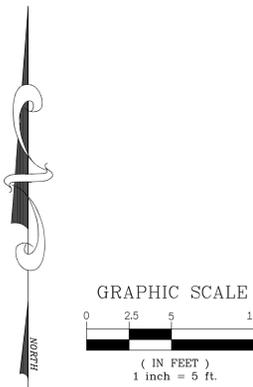


GENERAL LANDSCAPE NOTES

- REFER TO TOPOGRAPHIC SURVEY FOR GENERAL NOTES REFERENCING SURVEY INFORMATION AND DATUMS.
- STANDARDS FOR TYPE, SPREAD HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.
- NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS OTHERWISE SPECIFIED. ALL PLANTS SHALL BE SET PLUMB AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR, HABIT.
- ALL LANDSCAPE AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.
- ALL PLANTS SHALL BE WATERED THROUGHLY TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH, CONTRACTOR MAY NEED TO ADJUST QUANTITY AND FREQUENCY OF WATERING TO ENSURE PROPER ESTABLISHMENT.
- NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF 90 DAYS FOLLOWING ACCEPTANCE BY THE OWNER.
- BACKFILL MIXTURE AND SOIL MIXES TO BE INSTALLED PER SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING OF SOILS AND MAKE THE NECESSARY ADJUSTMENTS OR AMENDMENTS FOR LONG TERM PLANT HEALTH AND VITALITY.
- FOR ANY DISCREPANCIES BETWEEN THE PLANT SCHEDULE AND THE PLANTING PLAN, THE GRAPHIC QUANTITY SHOWN SHALL GOVERN.
- ALL WALL CONSTRUCTION SHALL BE COMPLETED PRIOR TO STARTING ANY LANDSCAPE PLANTING, LAWN GRASSES OR IRRIGATION WORK.
- ALL PLANT INSTALLATIONS SHALL BE COMPLETED EITHER BETWEEN APRIL 1 AND JUNE 15 OR AUGUST 15 AND NOVEMBER 1, UNLESS OTHERWISE DIRECTED BY PROJECT LANDSCAPE DESIGNER.
- EXISTING TREES WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION SPECIFIED TO REMAIN SHALL BE PROTECTED PER LOCAL REGULATORY AGENCY REGULATIONS FROM DAMAGE THAT MAY BE CAUSED BY OPERATION OF EQUIPMENT, STOCKPILING OF MATERIALS, COMPACTION OF ROOT ZONE, DRIVING OR PARKING WITHIN DRIFLINE OF TREES, OR THE SPILLAGE OF DELETERIOUS CHEMICALS, OILS, DIESEL, ETC. WITHIN THE DRIFLINE OF TREES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL STAKING OF TREES BASED ON SITE CONDITIONS AND TO PROVIDE FOR THE STABILITY OF THE TREE AND MATERIALS AND PROTECT THE HEALTH AND SAFETY OF THE PUBLIC/PROPERTY.
- INSTALL TWO SCHEDULE 40 2 INCH SLEEVES UNDER THE PROPOSED CONCRETE FOR DRIP AND IRRIGATION INSTALLATION. PIPE SHOWN ON PLAN IS DIAGRAMATIC ONLY. SLEEVE TO EXTEND PAST EDGE OF CONCRETE 6 INCHES ON EITHER SIDE.
- INSTALL A MINIMUM OF 2-SCH 40 - 2 INCH SLEEVES UNDER ANY PROPOSED CONCRETE FOR IRRIGATION, DRIP TUBING AND CONTROL WIRE INSTALLATION, ADDED SLEEVES AS NECESSARY.

PLANT SCHEDULE

-  BOUGAINVILLEA X BUTTIANA "ORANGE KING"
5 GAL. 4' O.C. AT BASE OF WALL
-  TRACHELOSPERMUM JASMINOIDES "STAR JASMINE"
5 GAL. 4' O.C. ON TOP OF WALL



CIVIL ENGINEER
JASON T. BARNUM
 2079 PARKWAY VILLAGE DR.
 CHICO, CA 95928
 530-518-5050



C2.0 LANDSCAPE PLAN				
AS REQUESTED BY: BRIAN VAJDIC				
LEGAL DESCRIPTION: PORTIONS OF LOTS 1 AND 2 OF TRACT 1771 IN THE CITY OF LOS GATOS, COUNTY OF SANTA CLARA, CA AS RECORDED IN THE FOLLOWING DOCUMENT: DOC# 23479938.				
APN: 510-30-026 DATE: AUGUST 2018 FILENAME: E-062 VAJDIC RETAINING WALL PLOT				
DRAWN BY: KDW	SCALE: 1" = 10'	PROJECT: E-062	JOB NUMBER: E-062	SHEET: 1 OF 1

ARBORIST REPORT-
Tree Resource Analysis, Construction Impact Assessment &
Tree Protection Plan for:

Proposed site improvements at:
16330 Matilija Drive, Los Gatos
(APN: 510-30-040)
June 27, 2018

Prepared for:

Mr. Jack Eitzen
P.O. Box 998
Saratoga, CA, 95071



ISA Certified Arborist WE0681A

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Attachments: Appendix A -F

Appendix A – Tree Assessment Chart

Appendix B – Criteria for Tree Assessment Chart

Appendix C - Tree Protection Plan Sheet

Appendix D – Subject Tree Images

Appendix E - Tree Protection Guidelines & Restrictions

- Protecting Trees During Construction
- Project Arborist Duties & Inspection Schedule
- Tree Protection Fencing
- Tree Protection Signs
- Monitoring
- Root Pruning
- Tree Work Standards & Qualifications
- Letter from County of Santa Clara Department of Planning and Development dated 5/26/18
- Aerial Image of Property Boundaries & Oak Woodland Extents
- Santa Clara County – Guidelines for Tree Protection and Preservation for Land Use Applications
- Santa Clara County Planning Office – Guide to Evaluating Oak Woodland Impacts

Appendix F- Assumptions & Limiting Conditions

SUMMARY

- Site improvements adjacent to a single-family home are proposed at 16330 Matilija Drive, Los Gatos.
- A new retaining wall on the eastern edge of the property is proposed.
- Excavation for the wall occurred in November of 2018.
- The excavation impacted three young “protected” trees on the property.
- Two maturing “protected” on the adjacent property were also impacted.
- The three young “protected” trees are in fair to good condition have suffered significant construction impacts and should be monitored for a specified time period to determine if their condition worsens and replacement is required.
- The two maturing trees on the adjacent property have received minor to moderate construction impacts and their future health should not change due to the previous excavation.
- There will be no impact to the adjacent Oak Woodland Habitat Area, as the limits of the project area, are not within the Oak Woodland Habitat Area.
- Any anticipated coast live oak tree losses would be limited to one tree and therefore not have a significant impact on the total oak canopy cover.

Background

Plans have been submitted to the County of Santa Clara Planning Department, for construction of a retaining wall at 16330 Matilija Drive, Los Gatos. Excavation for the wall has been completed.

Mr. Jack Eitzen has requested my services, to assess the condition of six “protected” trees, and one “not-protected” tree within the project site and the construction impacts that may have affected them. Further, to provide a report with my findings and recommendations to meet County of Santa Clara planning requirements.

Assignment

Provide an arborists report that includes an assessment of the trees within the project area. The assessment is to include the species, size (trunk diameter, height and canopy spread), condition (health and structure), and suitability for preservation ratings.

To complete this assignment, the following services were performed:

- **Tree Resource Evaluation:** Inventory, evaluate and assign suitability for preservation ratings for subject trees.
- **Plan Review:** Reviewed provided plans including: Wall Location Plan, Sheet C1.0, By Jason Barnum, Dated March 2018.
- **Construction Impact Assessment:** Combine tree resource data with observed construction impacts, to provide recommendations for removal or retention of trees.
- **Tree Protection Specifications:** Provide tree protection specifications to help ensure the long-term health of the subject trees.
- **Mapping:** Tree canopies were plotted onto, Wall Location Plan, Sheet C1.0, By Jason Barnum, Dated March 2018, to create a Tree Protection Plan sheet.

Limits of the Assignment

The information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection on June 19, 2018.

The inspection is limited to visual examination of accessible items without climbing, dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in questions may not arise in the future.

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the developer, their agents, and the County of Santa Clara as a reference for existing tree conditions and to help satisfy the County of Santa Clara planning requirements.

Resources

All information within this report is based on site plans as of the date of this report.

Resources are as follows:

- Wall Location Plan, Sheet C1.0, By Jason Barnum, Dated March 2018.
- Site Visit, Tree Inventory & Condition Evaluation at, 16330 Matilija Drive, 6/19/2018.
- Santa Clara County Planning Office Guide to Evaluating Oak Woodlands Impacts & Santa Clara County Guidelines for Tree Protection and Preservation for Land Use Applications

OBSERVATIONS

There are five “protected”, trees that were impacted by the previous excavation for the new retaining wall. All are California native species. Three are Coast Live Oaks (*Quercus agrifolia*). Two of these are maturing trees, and one is a young oak. The two remaining “protected” trees are California Bay Laurel (*Umbellularia californica*). One tree of protected size was dead before excavation for the wall occurred and the species could not be identified. One tree impacted by the excavation is not “protected”, a young Toyon (*Heteromeles arbutuifolia*).



Image #1 – Excavation for retaining wall completed with impacted trees shown above proposed wall location.

DISCUSSION

The tree inventory consists of seven trees comprised of three species. The three Coast Live Oaks, two California Bay Laurel and one dead tree (unidentified), are classified as “protected” trees and are of a species and size protected by the County of Santa Clara. The toyon tree is not “protected”.

Species List

TOTAL SUBJECT TREES: 7 Trees

Protected: 6		
3	Coast Live Oak	(<i>Quercus agrifolia</i>)
2	California Bay Laurel	(<i>Umbellularia californica</i>)
1	Unidentified (dead)	
Not Protected: 1		
1	Toyon	(<i>Heteromeles arbutifolia</i>)

Condition Rating

A trees condition is determined by an assessing both the **health** and **structure**, then combining the two factors to reach a *condition rating*. Tree condition is rated as poor, fair or good. The quantity of trees assigned for each category (good, fair or poor), is indicated below:

Tree Condition Rating

- Good - 2
- Fair - 3
- Poor - 2

Suitability for Preservation

A trees suitability for preservation is determined based on its health, structure, age, species characteristics and longevity using a scale of good, fair or poor. The quantity of trees assigned to each category (good, fair or poor), is listed below.

Suitability Rating

- Good - 2
- Fair – 3
- Poor - 2

Impact Level

Impact level rates the degree a tree may be impacted by construction activity and is primarily determined by how close the construction procedures occur to the tree. Construction impacts are rated as low, moderate, high. The quantity of trees assigned for each category (low, moderate, high), is indicated below:

- Low - 1
- Moderate – 1
- High - 4

Tree Evaluation and Recording Methods

Site evaluations were made on 5/18/2018. *The inventory included all trees on the property, and four trees on an adjacent property, with a dripline overhanging the project limits.* The health and structural **condition** of each tree was assessed and recorded. Based on the trees health and structural condition, each trees **suitability for preservation** was rated and recorded.

The recorded data is included in the *Tree Assessment Chart, Appendix A*, of this report. Tree numbers were plotted on the attached *Tree Protection Plan sheets*. **To correlate the data in the Tree Assessment Chart to the tree's location on the site, refer to the Tree Protection Plan sheet - Appendix C.**

Tree Protection Zone

The tree protection zone (TPZ), is a defined area within which certain activities are prohibited or restricted to minimize potential injury to designated trees during construction.

The size of the optimal TPZ can be determined by a formula based on: 1) trunk diameter 2) species tolerance to construction impacts, and 3) tree age (Matheny, N. and Clark, J 1998). In some instances, tree drip line is used as the TPZ. Development constraints can also influence the final size of the tree protection zone.

Fencing is installed to delineate the (TPZ), and to protect tree roots, trunk, and scaffold branches from construction equipment. *The fenced protection area may be smaller than the optimal or designated TPZ area in some circumstances.* Tree protection may also involve the armoring of the tree trunk and/or scaffold limbs with barriers to prevent mechanical damage from construction equipment. *See Tree Protection Guidelines & Restrictions – Appendix E.*

Once the TPZ is delineated and fenced (prior to any site work, equipment and materials move in), construction activities are only to be permitted within the TPZ if allowed for and specified by the project arborist.

Where tree protection fencing cannot be used, or as an additional protection from heavy equipment, tree wrap may be used. Wooden slats at least one inch thick are to be bound securely, edge to edge, around the trunk. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the outside of the wooden slats. Major scaffold limbs may require protection as determined by the City arborist or Project arborist. Straw wattle may also be used as a trunk wrap and secured with orange plastic fencing.

Data has been entered in the *Tree Assessment Chart – Appendix A*, which indicates the optimal Tree Protection Zone for each tree.

Additional general tree protection guidelines are included in *Tree Protection Guidelines & Restrictions – Appendix E*.

Critical Root Zone

Critical Root Zone (CRZ) is the area of soil around the trunk of a tree where roots are located that provide critical stability, uptake of water and nutrients required for a tree's survival. The CRZ is the minimum distance from the trunk that trenching that requires root cutting should occur and can be calculated as three to the five times the trunk Diameter at Breast Height (DBH). For example, if a tree is one foot in trunk diameter then the CRZ is three to five feet from the trunk location. We will often average this as four times the trunk diameter or 4ft. DBH = 4ft. CRZ (Smiley, E.T., Fraedrich, B. and Hendrickson, N. 2007).

Oak Woodland Impacts

An analysis has been made determine whether the proposed project may result in a conversion of oak woodlands that will have a significant effect on the environment. Any oak tree (native tree species in the genus *Quercus*) that is 5 inches or more in diameter at 4 feet above final grade is regulated and subject to evaluation in the determination of impacts.

A land development project is considered to have a significant direct impact on oak woodland if the project will result in **1/2 acre or more** decrease in native oak canopy within an oak woodland on the project site.

The proposed project is within the property boundaries of 16330 Matilija Drive, Los Gatos. The property is 1.29 acres in size, with approximately 2/3 or .86 of an acre canopy cover comprised of oak woodland. The project limits were identified as being located **adjacent** (see attached letter from County of Santa Clara Department of Planning and Development, page 3, dated 5/26/18 & aerial image of property boundaries), to an Oak Woodland. Based on the provided *Wall Location Plan* dated March 2018, I have determined, the limits of the project will not encroach into the Oak woodland Habitat area.

Further, I have determined that only one coast live oak has received significant construction impacts and may require removal in the future. If this tree is removed, the total acreage canopy cover impacts from oak trees removed is less than .05 of an acre.

The primary construction impacts to existing trees within the project area is due to excavation for the retaining wall and the corresponding root loss of adjacent trees. The excavation work was undertaken in November of 2017. No "protected" trees were removed because of the work. However, the impacts to one coast live oak and two California bay laurels is rated high, with significant encroachment into the critical root zone of each of these trees. It is very likely that a significant percentage of roots, (including anchoring roots), were lost for each of these trees. Further, due the height and branching structure of tree T3 coast live oak, the stability of this tree in wind events is suspect. However, since there is not a permanent target should the tree fail, removal of the tree is not recommended at this time. Both species, the coast live oak and the California bay laurel, are rated **moderate** (scale of good, moderate, or poor), for their construction tolerance (Matheny, N. and Clark, J 1998, *Trees & Development – A Technical Guide to Preservation of Trees During Land Development*).

The current condition of these three trees ranges from good to fair. If the condition if any of these trees declines within the next two years and becomes poor, the tree should be replaced with new trees at a ratio and species as required according to County of Santa Clara specification.

Construction Phases Affecting Subject Trees

Construction phases that will impact trees on this project include:

1. Excavation for retaining wall, (work completed). Root zone impacts.
2. Installation of piers. Trunk & canopy impacts.

Impacts to Subject Trees

1. Completed excavation for retaining wall impacted trees, T1 – T7
2. Installation of piers could potentially impact trees T3 & T4.

Tree Protection Procedures and Recommended Sequence

1. INSTALL TREE TRUNK PROTECTION
 - Wrap trees #T3 & T4 (see trunk wrapping detail, Tree Protection Plan, Sheet T1), prior to any new construction.

Replacement Trees

If protected trees are removed, the County of Santa Clara Tree Preservation Guidelines recommend the following guidelines for replacement trees:

- Replacement trees should be native and like for like.
- Oak trees lost shall be replaced with oak trees.
- For the removal of one small tree (5-18 inches):
(3) 15-gallon trees, or (2) 24-inch box trees should be planted.
- The trees should be planted in appropriate locations that will not conflict with the existing home or overhead high voltage utility wires.
- No tree removal shall be permitted until such grading or building permit has been issued by the County as indicated on approved plans.

CONCLUSION

- Site improvements adjacent to a single-family home are proposed at 16330 Matilija Drive, Los Gatos.
- A new retaining wall on the eastern edge of the property is proposed.
- Excavation for the wall occurred in November of 2018.
- The excavation impacted three young “protected” trees on the property. Including one coast live oak and two California bay laurels.
- Two maturing “protected” coast live oak trees on the adjacent property were also impacted.
- The two young “protected” California bay laurel trees are in good condition have suffered significant construction impacts and should be monitored for two years, by an experience tree professional, to determine if their condition worsens and replacement is required.
- One young “protected” coast live oak is in fair condition has suffered significant construction impacts and should be monitored for two years, by an experienced tree professional, to determine if their condition worsens and replacement is required.
- The two maturing coast live oak trees on the adjacent property have received minor to moderate construction impacts and their future health should not change due to the previous excavation.
- Two trees T3 Coast live oak & T4 California bay laurel could be impacted by the equipment used to drill the pier holes, by the installation of the pier forming material or by the concrete installation into the pier forms. For these reasons the trees should receive tree trunk protection wrap as indicated on the Tree Protection Plan sheet prior to any construction activities.
- There will be no impact to the adjacent Oak Woodland Habitat Area as the limits of the project area, are not within the Oak Woodland Habitat Area.
- Any anticipated coast live oak tree losses would be limited to one tree and will not have a significant impact on the total oak canopy cover.
- If trees T3, T4 or T5 decline to a poor condition within the next two years removal is recommended, a permit will be required and, replacement trees will be required.

RECOMMENDATIONS

1. Obtain all necessary permits prior to removing or significantly altering any trees on site.
2. Wrap trunks of trees T3 & T4 as specified on Tree Protection Plan, Sheet T-1.
3. Monitor at six-month intervals, the condition of trees that were highly impacted by the excavation for the retaining wall. Evaluation should be made by a certified arborist or other tree professional.
4. If the condition of any of the trees becomes poor within the two-year period, obtain a tree removal permit, remove failing trees and replant like for like natives at the recommended replanting size and ratio.

Respectfully submitted,

Kurt Fouts

Kurt Fouts ISA Certified Arborist WE0681A



16330 Matilija Drive, Los Gatos

Tree Assessment Chart - Appendix A

Suitability for Preservation Ratings:

- Good:** Trees in good health and structural condition with potential for longevity on the site

- Fair:** Trees in fair health and/or with structural defects that may be reduced with treatment procedures

- Poor:** Trees in poor health and/or with poor structure that cannot be effectively abated with treatment

Retention or Removal Code:

- RT:** Retain Tree
- RI:** Remove Due to Construction Impacts

- I.M.** Impacts Can Be Mitigated With Pre-Construction Treatments Remove Due to Condition **R.C.**

- Protected Tree - County of Santa Clara:** Any tree 5 inches or greater in diameter measured at 4.5 feet above grade.

Tree #	Species	Trunk Diameter @ 54 inches a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T1	coast live oak (<i>Quercus agrifolia</i>)	16" (estimated)	Yes	45'X38'	Good	Fair	Fair	12'	Low (Root loss, excavation)	RT	On adjacent property. Soil cut for retaining wall was 11' from trunk.
T2	coast live oak	13"	Yes	40'X25'	Good	Fair	Fair	10'	Moderate (Root loss, excavation)	RT	On adjacent property. Soil cut for retaining wall was 11' from trunk. Significant lean to North west. Soil cut for retaining wall was 8' from trunk.
 826 Monterey Avenue Capitola, CA 95010 831-359-3607 scharborgrounds@yahoo.com							Page 1 of 2			6/1/2018	

16330 Matilija Drive, Los Gatos

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 48 inches a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T3	coast live oak (<i>Quercus agrifolia</i>)	9"	Yes	32'X15'	Fair	Fair	Fair	7'	High (root loss, compaction)	RT	Small twig dieback over 25% of canopy. Unbalanced canopy with weight bias to north east. Soil cut for retaining wall was < 1' from trunk.
T4	California bay laurel (<i>Umbellularia californica</i>)	8"	Yes	32'X15'	Good	Fair	Good	7'	High (Root loss, excavation)	RT	Unbalanced canopy with weight bias to North. Soil cut for retaining wall was < 1' from trunk.
T5	California bay laurel (<i>Umbellularia californica</i>)	8",6",5"	Yes	20'X20'	Good	Fair	Good	10'	High (root loss, compaction)	RT	Unbalanced canopy with weight bias to North. Soil cut for retaining wall was < 2' from trunk.
T6	unidentified	15"	Yes	10'X15'	Poor	Poor	Poor	N/A	N/A	RC	Tree was dead prior to beginning of project. Bark splitting on trunk indicating tree has been dead for > one year.
T7	toyon (<i>Heteromeles arbutifolia</i>)	4"	No	8'X6'	Poor	Fair	Poor	7'	High (root loss, compaction)	RC	Soil cut for retaining wall was < 2' from trunk.
 <p>826 Monterey Avenue Capitola, CA 95010 831-359-3607 scharborgrounds@yahoo.com</p>							Page 2 of 2	6/27/2018			

APPENDIX B – CRITERIA FOR TREE ASSESSMENT CHART

Following is an explanation of the data used in the tree evaluations. The data is incorporated in the *Tree Assessment Chart, Appendix A*.

Trunk Diameter and Number of Trunks:

Trunk diameter as measured at 4.5 feet above grade. The number of trunks refers to a single or multiple trunked tree. Multiple trunks are measured at 4.5 feet above grade.

Health Ratings:

Good: A healthy, vigorous tree, reasonably free of signs and symptoms of disease

Fair: Moderate vigor, moderate twig and small branch dieback, crown may be thinning and leaf color may be poor

Poor: Tree in severe decline, dieback of scaffold branches and/or trunk, most of foliage from epicormics

Structure Ratings:

Good: No significant structural defects. Growth habit and form typical of the species

Fair: Moderate structural defects that might be mitigated with regular care

Poor: Extensive structural defects that cannot be abated.

Suitability for Preservation Ratings:

Rating factors:

Tree Health: Healthy vigorous trees are more tolerant of construction impacts such as root loss, grading and soil compaction, then are less vigorous specimens.

Structural integrity: Preserved trees should be structurally sound and absent of defects or have defects that can be effectively reduced, especially near structures or high use areas.

Tree Age: Over mature trees have a reduced ability to tolerate construction impacts, generate new tissue and adjust to an altered environment. Young to maturing specimens are better able to respond to change.

Species response: There is a wide variation in the tolerance of individual tree species to construction impacts.

Rating Scale:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures.

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment. Trees can be expected to decline or fail regardless of construction impacts or management . The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

Construction Impacts:

Rating Scale:

High: Development elements proposed that are located within the Tree Protection Zone that would severely impact the health and /or stability of the tree. The tree impacts cannot be mitigated without design changes. The tree may be located within the building footprint.

Moderate: Development elements proposed that are located within the Tree Protection Zone that will impact the health and/or stability of the tree and can be mitigated with tree protection treatments.

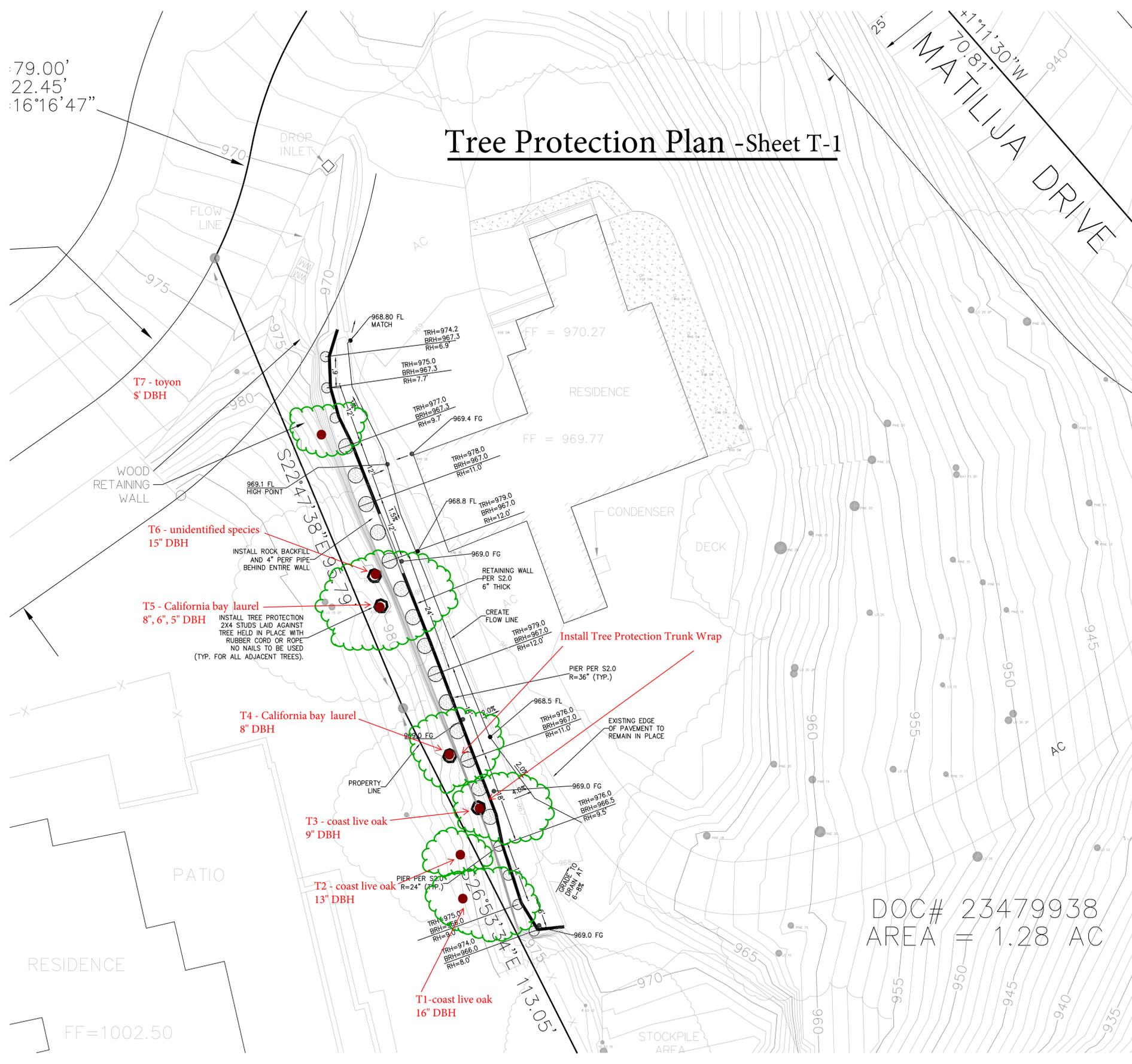
Low: Development elements proposed that are located within or near the Tree Protection Zone that will have a minor impact on the health of the tree and can be mitigated with tree protection treatments.

None: Development elements will have no impact on the health and stability of the Tree.

Tree Protection Zone (TPZ):

Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, particularly during construction or development.

Tree Protection Plan - Sheet T-1



DOC# 23479938
 AREA = 1.28 AC

Legend

- Tree Location & Number ●
- Tree Protection Fencing - - -
- Tree Canopy Extents ☁
- Hand Trenching & Root Pruning —○—○—
- Remove Tree X

For additional information refer to arborist report dated June 27, 2018
 Drawn by K.F. 6/27/2018
 Base Map provided by : Jason Barnum, Civil Engineer

Kurt Fouts
 Arborist Consultant

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Tree Protection Specification—Trunk/Scaffold Wrap

Where the City Arborist or Project Arborist has determined that tree protection fencing will interfere with the safety of work crews, Tree Wrap may be used as an alternative form of tree protection. Wooden slats at least one inch thick are to be bound securely, edge to edge, around the trunk. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the outside of the wooden slats. Major scaffold limbs may require protection as determined by the City Arborist or Project Arborist. Straw waddle may also be used as a trunk wrap by coiling the waddle around the trunk up to a minimum height of six feet from grade. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the straw waddle.





Image #2 – Trees T1, T2, T3 coast live oaks & T4 California bay laurel (circled in background).



Image #3 – Tree T5 California bay laurel & T6 unidentified (dead tree)

Appendix E - TREE PROTECTION GUIDELINES AND RESTRICTIONS

Protecting Trees During Construction:

- 1) Before the start of site work, equipment or materials move in, clearing, excavation, construction, or other work on the site, every tree to be retained shall be securely fenced- off as delineated in approved plans. Such fences shall remain continuously in place for the duration of the work undertaken in connection with the development.
- 2) If the proposed development, including any site work, will encroach upon the tree protection zone, special measures shall be utilized, as approved by the project arborist, to allow the roots to obtain necessary oxygen, water, and nutrients.
- 3) Underground trenching shall avoid the major support and absorbing tree roots of protected trees. If avoidance is impractical, hand excavation undertaken under the supervision of the project arborist may be required. Trenches shall be consolidated to service as many units as possible. Boring/tunneling under roots should be considered as an alternative to trenching.
- 4) Concrete or asphalt paving shall not be placed over the root zones of protected trees, unless otherwise permitted by the project arborist.
- 5) Artificial irrigation shall not occur within the root zone of native oaks, unless deemed appropriate on a temporary basis by the project arborist to improve tree vigor or mitigate root loss.
- 6) Compaction of the soil within the tree protection zone shall be avoided.
- 7) Any excavation, cutting, or filling of the existing ground surface within the tree protection zone shall be minimized and subject to such conditions as the project arborist may impose. Retaining walls shall likewise be designed, sited, and constructed to minimize their impact on protected trees.
- 8) Burning or use of equipment with an open flame near or within the tree protection zone shall be avoided. All brush, earth, and other debris shall be removed in a manner that prevents injury to the tree.
- 9) Oil, gas, chemicals, paints, cement, stucco or other substances that may be harmful to trees shall not be stored or dumped within the tree protection zone of any protected tree, or at any other location on the site from which such substances might enter the tree protection zone of a protected tree.
- 10) Construction materials shall not be stored within the tree protection zone of a protected tree.

Project Arborist Duties and Inspection Schedule:

The project arborist is the person(s) responsible for carrying out technical tree inspections, assessment of tree health, structure and risk, arborist report preparation, consultation with designers and municipal planners, specifying tree protection measures, monitoring, progress reports and final inspection.

A qualified project arborist (or firm) should be designated and assigned to facilitate and insure tree preservation practices. He/she/they should perform the following inspections:

Inspection of site: Prior to equipment and materials move in, site work, demolition, landscape construction and tree removal: The project arborist will meet with the general contractor, architect / engineer, and owner or their representative to review tree preservation measures, designate tree removals, delineate the location of tree protection fencing, specify equipment access routes and materials storage areas, review the existing condition of trees and provide any necessary recommendations.

Inspection of site: During excavation or any activities that could affect trees: Inspect site during any activity within the Tree Protection Zones of preserved trees and any recommendations implemented. Assess any changes in the health of trees since last inspection.

Final Inspection of Site: Inspection of site following completion of construction. Inspect for tree health and make any necessary recommendations.

Kurt Fouts shall be the Project Arborist for this project. All scheduled inspections shall include a brief Tree Monitoring report, documenting activities and provided to the City Arborist.

Tree Protection Fencing

Tree Protection fencing shall be installed prior to the arrival of construction equipment or materials. Fence shall be comprised of six -foot chain link fence mounted on eight - foot tall, 1 and 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced on a minimum of 10-foot centers. Once established, the fence must remain undisturbed and be maintained throughout the construction process until final inspection.

A final inspection by the City Arborist at the end of the project will be required prior to removing any tree protection fencing.

Tree Protection Signs

All sections of fencing should be clearly marked with signs stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited.

Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Root pruning shall be supervised by the project arborist. When roots over two inches in diameter are encountered they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Tree Work Standards and Qualifications

All tree work, removal, pruning, planting, shall be performed using industry standards of workmanship as established in the Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute series, *Safety Requirements in Arboriculture Operations* ANSI Z133-2017,

Contractor licensing and insurance coverage shall be verified.

During tree removal and clearance, sections of the Tree Protection Fencing may need to be temporarily dismantled to complete removal and pruning specifications. After each section is completed, the fencing is to be re-installed.

Trees to be removed shall be cut into smaller manageable pieces consistent with safe arboricultural practices, and carefully removed so as not to damage any surrounding trees or structures. The trees shall be cut down as close to grade as possible. Tree removal is to be performed by a qualified contractor with valid City Business/ State Licenses and General Liability and Workman's Compensation insurance.

Development Site Tree Health Care Measures

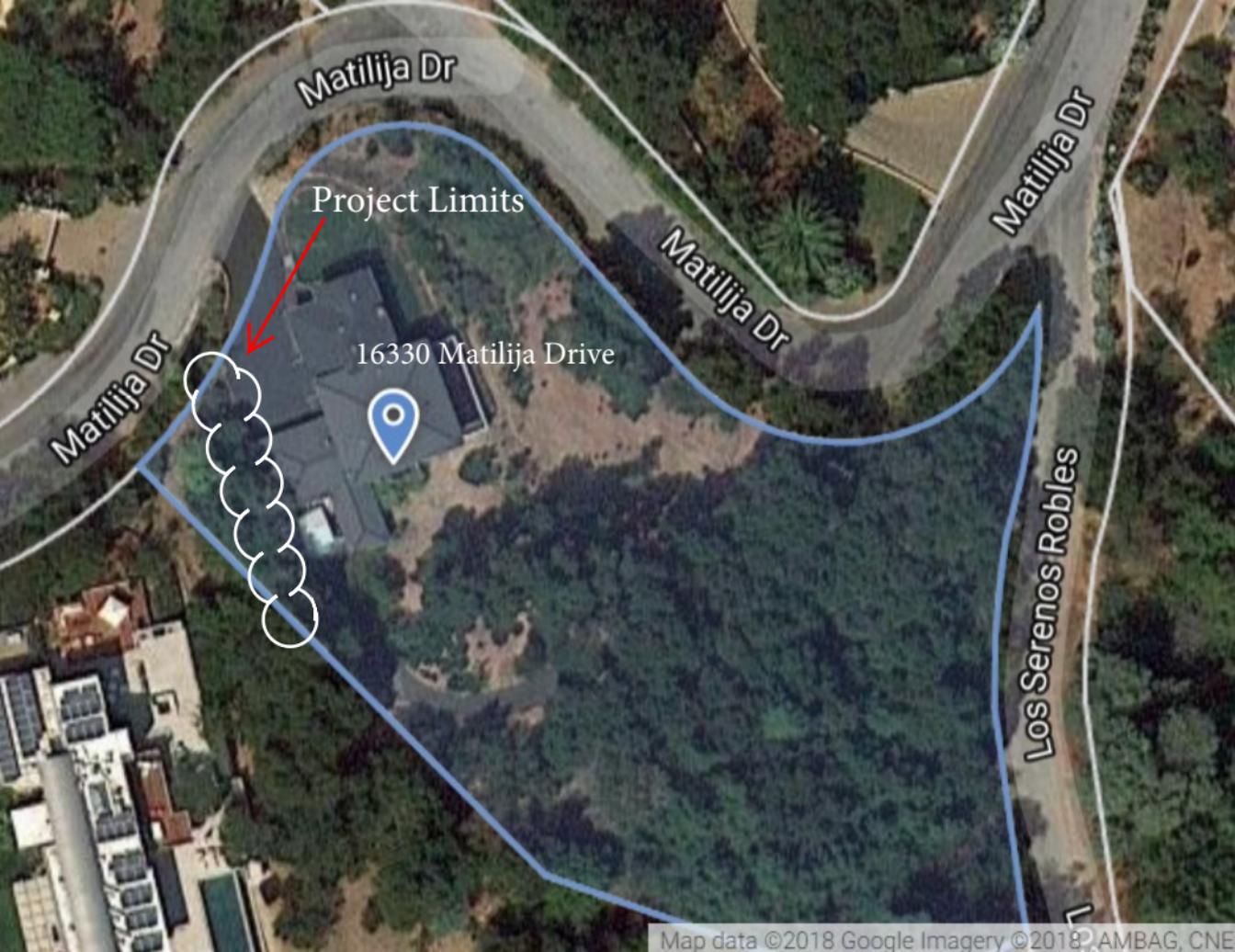
RECOMMENDED TO PROVIDE OPTIMUM GROWING CONDITIONS, PHYSIOLOGICAL INVIGORATION AND STAMINA, FOR PROTECTION AND RECOVERY FROM CONSTRUCTION IMPACT.

Establish and maintain TPZ fencing, trunk and scaffold limb barriers for protection from mechanical damage, and other tree protection requirements as specified in the arborist report.

Project arborist to specify site-specific soil surface coverings (wood chip mulch or other) for prevention of soil compaction and loss of root aeration capacity.

Soil, water and drainage management is to follow the ISA BMP for "Managing Trees During Construction" and the ANSI Standard A300(Part 2)- 2011 Soil Management (a. Modification, b. Fertilization, c. Drainage.)

Fertilizer / soil amendment product(s) amounts and method of application to be specified by certified arborist.



Matilija Dr

Project Limits

16330 Matilija Drive

Matilija Dr

Matilija Dr

Matilija Dr

Los Serenos Robles

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided by the appraiser/consultant is assumed to be correct. No responsibility is assumed for matters legal in character nor is any opinion rendered as the quality of any title.
2. The appraiser/consultant can neither guarantee nor be responsible for accuracy of information provided by others.
3. The appraiser/consultant shall not be required to give testimony or to attend court by reason of this appraisal unless subsequent written arrangements are made, including payment of an additional fee for services.
4. Loss or removal of any part of this report invalidates the entire appraisal/evaluation.
5. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person(s) to whom it is addressed without written consent of this appraiser/consultant.
6. This report and the values expressed herein represent the opinion of the appraiser/consultant, and the appraiser/consultant's fee is in no way contingent upon the reporting of a specified value nor upon any finding to be reported.
7. Sketches. Diagrams. Graphs. Photos. Etc., in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys.
8. This report has been made in conformity with acceptable appraisal/evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.
9. When applying any pesticide, fungicide, or herbicide, always follow label instructions.
10. No tree described in this report was climbed, unless otherwise stated. We cannot take responsibility for any defects which could only have been discovered by climbing. A full root collar inspection, consisting of excavating around the tree to uncover the root collar and major buttress roots, was not performed, unless otherwise stated. We cannot take responsibility for any root defects which could only have been discovered by such an inspection.

CONSULTING ARBORIST DISCLOSURE STATEMENT

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

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

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

