Tree Inventory, Assessment, And Protection

201 Delmas Avenue
San Jose, CA 95110

Prepared for:

Park Delmas Investors LLC

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Summary

The Property is located at the intersections of Park Avenue, Delmas Avenue, and Sonoma Street in San Jose and contains nine trees comprised of seven different species. There are no street trees around the exterior of the property in a park strip or otherwise. Seven of the nine trees have trunk diameters greater than eighteen inches (56 inch circumference). Most of the trees are in fair condition with poor suitability for preservation. The coast live oak (*Quercus agrifolia*) is the only tree in good condition with normal foliar color, size and density. All the trees will be highly affected by the proposed project except for the coast live oak. The trees are located within the footprint of the buildings and care has been taken to avoid activity and infrastructure around the coast live oak. Tree protection for the project should focus on the preserving the coast live oak while using other resources for new landscape plantings.

Introduction

Background

Park Delmas LLC asked me to assess the site, trees, proposed footprint plan, and to provide a report with my findings and recommendations to help satisfy the City of San Jose planning requirements.

Assignment

1. Provide an arborist's report that includes an assessment of the trees within the project area. The assessment is to include the species, size (trunk diameter), condition (health and structure), suitability for preservation ratings, and disposition.
2. Provide tree protection specifications and influence ratings for the trees that will be influenced by the project.
3. Include photos of ordinance size trees.

Limits of the assignment

1. The information in this report is limited to the condition of the trees during my inspection on July 6, 2015. No tree risk assessments were performed.
2. The plans reviewed for this assignment were as follows: Architectural Sheets A0.0 though A4.5 dated June 5, 2015. Civil plans C4 through C5.1 dated June 4, 2015. Landscape plans L1.0 through L2.2 not dated.

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 property owners, their agents, and the City of San Jose as a reference for existing tree conditions to help satisfy the City of San Jose planning requirements.

Observations

The Property is located at the intersections of Park Avenue, Delmas Avenue, and Sonoma Street in San Jose. The lot is mostly vacant with some existing buildings along Park Avenue. The site contains nine trees growing within the interior and no street trees around the exterior of the property in a park strip or otherwise. Seven of the nine trees have trunk diameters greater than eighteen inches. The average trunk diameter of the 9 trees is 33 inches with the largest tree being the centrally located coast live oak (#500). The table below lists the nine trees and their characteristics (Table 1).

Table 1: Tree Inventory and Characteristics

Tree Species	Number	Trunk Diameter (in.)	~ Height (ft.)	~ Crown Diameter (ft.)	Observation notes
Coast live oak (*Quercus agrifolia*)	500	52	50	64	Corrected lean, full crown, buried trunk flare, sycamore borers
Incense cedar (*Calocedrus decurrens*)	499	36	45	30	Leans, heaving sidewalk crowding oak, asymmetric crown
Coast redwood (*Sequoia sempervirens*)	498	27	30	25	Declining with sparse crown
Fig tree (*Ficus carica*)	497	14	20	20	Codominant stems
Tree of heaven (*Ailanthus altissima*)	496	9, 10, 8	35	30	Invasive plant
Peruvian pepper (*Schinus mole*)	495	51	30	30	Topped, significant decay in trunk, little crown remaining
Tree of heaven (*Ailanthus altissima*)	494	24	45	30	Invasive plant
Tree of heaven (*Ailanthus altissima*)	493	17	40	25	Invasive plant, suppressed
Canary island pine (*Pinus canariensis*)	492	39	75	40	Codominant stem architecture

Discussion

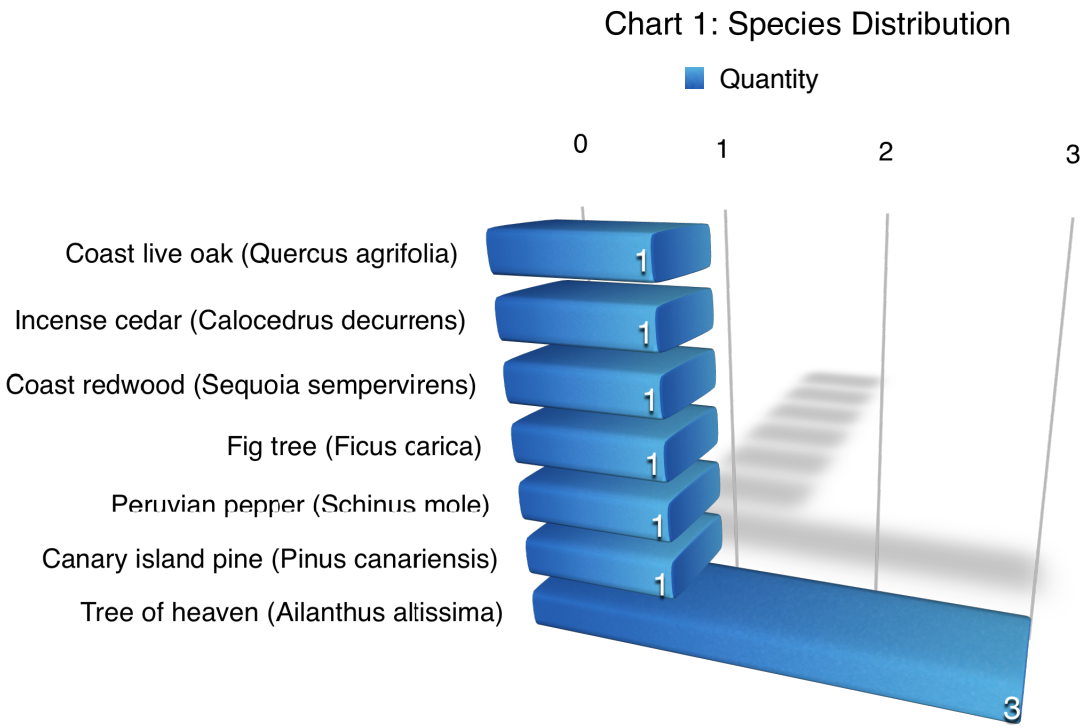
Tree Inventory

The tree inventory consists of all trees located on the site and those in close proximity on neighboring properties. The City of San Jose considers ordinance size trees to be those with a trunk diameter greater than 18 inches (56 inch circumference) (Appendix A and B).

All trunk diameters were measured with a forestry diameter tape. Heights and crown radii are estimates. Aluminum tree tags have been affixed to all trees listed in the inventory ranging from 492 to 500.

The site contains nine trees comprised of seven different species. There are three tree of heaven and one coast live oak, innocence cedar, coast redwood, fig, pepper, and Canary Island pine. Except for the fig and one tree of heaven all the remaining trees have trunk diameters greater than 18 inches. The coast live oak is the only 'Native' tree to this area although coast redwoods can be found naturally growing in the nearby Santa Cruz Mountains.

The chart below lists the species and their relative quantity within the project area (Chart 1).



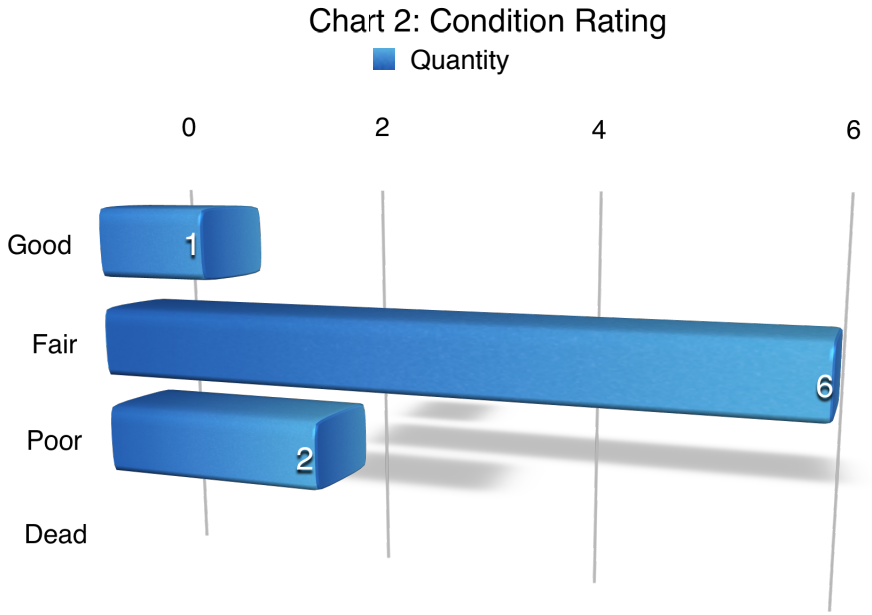
Condition Rating

A tree's condition is a determination of its overall health and structure based on five aspects: Roots, trunk, scaffold branches, twigs, and foliage. The assessment considered both the health and structure of the trees for a combined condition rating.

- Exceptional = Good health and structure with significant size, location or quality.
- Good = No apparent problems, good structure and health, good longevity for the site.
- Fair = Minor problems, at least one structural defect or health concern, problems can be mitigated through cultural practices such as pruning or a plant health care program.
- Poor = Major problems with multiple structural defects or declining health, not a good candidate for retention.
- Dead/Unstable = Extreme problems, irreversible decline, failing structure, or dead.

Most of the trees are in fair condition with some problems. The Canary Island pine has codominant stems originating about 25 feet up the tree and the incense cedar has a lean and is crowded by the coast live oak. The coast live oak is the only tree I considered to be in good condition with normal foliar color, size and density. Structurally the coast live oak has two defects or conditions that could be problematic which are codominant stems and a corrected lean but overall this tree is in good shape. The coast redwood and the Peruvian pepper are both in poor condition with defects and conditions that cannot be mitigated.

The chart below list the condition ratings and the relative quantity of each category (Chart 2).



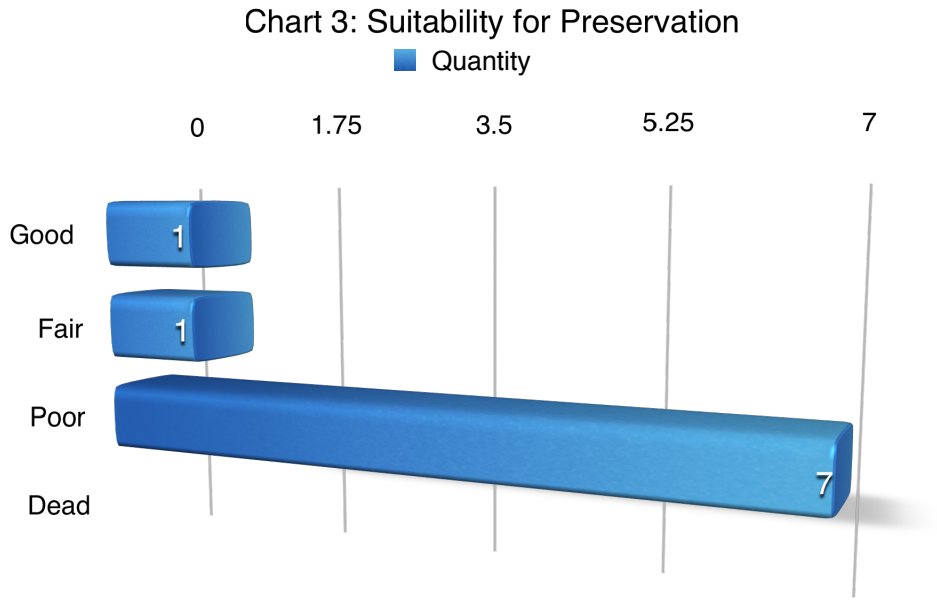
Suitability for Preservation

A tree's suitability for preservation is determined based on its health, structure, age, species characteristics, and longevity using a scale of good, fair, or poor. The following list defines the rating scale (Tree Care Industry Association, 2012):

- Good = Trees with good health, structural stability and longevity.
- Fair = Trees with fair health and/or structural defects that may be mitigated through treatment. These trees require more intense management and monitoring, and may have shorter life spans than those in the good category.
- Poor = Trees in poor health with significant structural defects that cannot be mitigated and will continue to decline regardless of treatment. The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

All the trees have poor suitability for preservation with the exception of the coast live oak and the Canary Island pine. The pepper and coast redwood are failing while the tree of heaven are an invasive plant not suitable to retain. I considered the coast live oak to be the best tree suited for retention with good suitability and the Canary Island pine is a large tree that would require some mitigation to help reduce the risk of codominant stem failure. The Canary Island pine has fair suitability for preservation.

The chart below list the condition ratings and the relative quantity of each category (Chart 3).



Influence Level

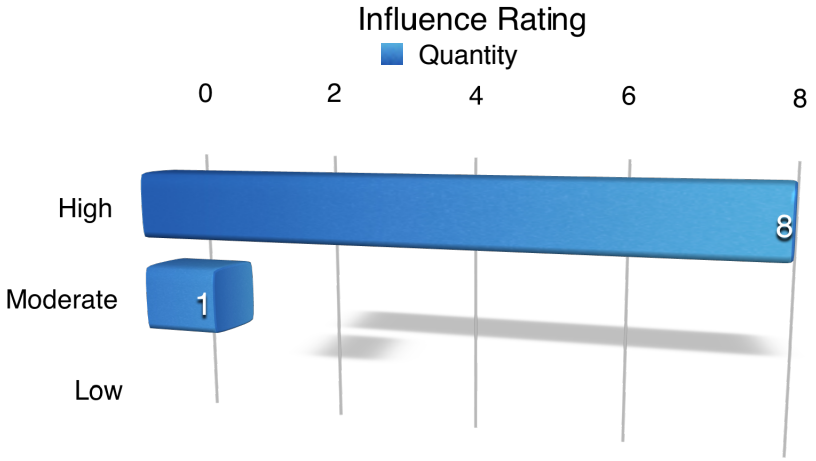
Influence level defines how a tree may be affected by construction activity and proximity to the tree, and is described as low, moderate, or high. The following scale defines the impact rating:

- Low = The construction activity will have little influence on the tree.
- Moderate = The construction may cause future health or structural problems, and steps must be taken to protect the tree to reduce future problems.
- High = Tree structure and health will be compromised and removal is recommended, or other actions must be taken for the tree to remain. The tree is located in the building envelope.

All the trees will be highly affected by the proposed project except for the coast live oak. The trees are located within the footprint of the buildings and care has been taken to avoid activity and infrastructure around the coast live oak. The incense cedar near the coast live oak is not within the footprint of any new structures but is located agains the sidewalk and leans over the street. It would make sense to remove this tree and focus resources on the sole protection of the coast live oak.

There has been discussion of soil remediation under the coast live oak to remove toxic elements that may be present. The removal of soil may negatively impact the tree depending on how the process is performed.

The chart below lists the trees and the development influence rating (Chart 4).



Tree Protection

Tree protection focuses on protecting trees from damage to the roots, trunk, or scaffold branches from heavy equipment (Appendix D).

The tree protection zone (TPZ) is the defined area in which certain activities are prohibited to minimize potential injury to the tree. The TPZ can be determined by a formula based on species tolerance, tree age, and diameter at breast height (DBH) (Matheny, N. and Clark, J. 1998) or as the drip line in some instances. The tree protection zones for this project will likely include a combination of measures (Figure 1). With the understanding the coast live oak will be the only tree preserved using the tolerance, age, and diameter formula the results are as follows: mature in age, has good tolerance for disturbance, trunk diameter at breast height of 52 inches, tree protection radius of 39 feet (.75 feet per inch trunk diameter).

Preventing mechanical damage to the main stems from equipment or hand tools can be accomplished by wrapping the main stem with straw wattle (Figure 2). The wattle will create a porous barrier around the trunk and prevent damage to the bark and vascular tissues underneath. Trees that are to be moderately affected by the project without adequate fence protection should be wrapped in wattle. The coast live oak will require wattle once landscape under the tree is to be performed.

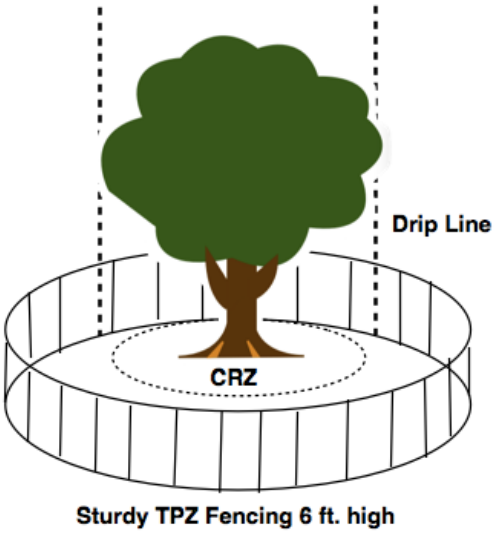


Figure 1: Tree protection distances

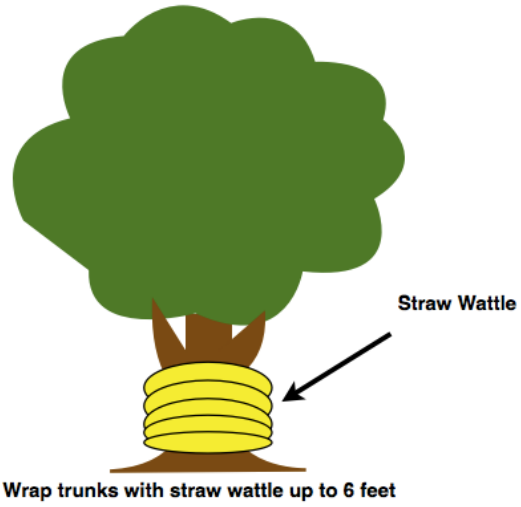


Figure 2: Trunk protection with straw wattle

Critical Root Zone

In circumstances where the tree will only be influenced on one side the CRZ will in effect be the TPZ. The CRZ distances are listed in "Appendix B2".

The critical root zone (CRZ) is the area of soil around the trunk of a tree where roots are located that provide stability and uptake of water and nutrients required for the tree's survival. The CRZ is the minimum distance from the trunk that trenching or root cutting can occur and will be defined by the trunk diameter as a distance of three times the DBH in feet, and preferably, five times (Smiley, E.T., Fraedrich, B. and Hendrickson, N. 2007). For example if the tree is two feet in diameter, the minimum CRZ distance would be six to ten feet from the stem on one side of the tree.

The recommended maximum encroachment distance into the root zone of oaks on one side is five times the trunk diameter (Coate, B.)(Costello, L., Hagan, B., Jones, K. 2011)(Figure 3). For the coast live oak the maximum recommended encroachment distance on one side would be between 13 to 22 feet, however no trenching should occur within 22 feet of the trunk.

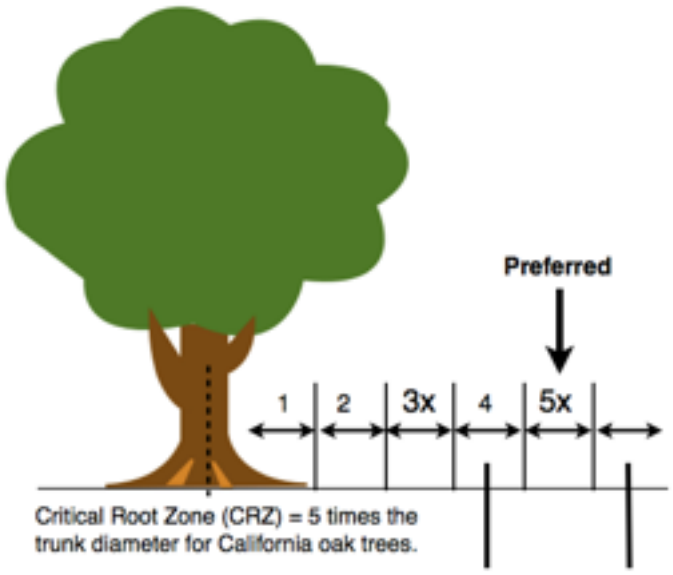


Figure 3: The image above depicts the preferred Critical Root Zone distance for oaks.

Grade Changes and Landscape Installation

It may be acceptable to add fill soils within the TPZ and the CRZ to match finished grades near the structures. Fill soil should be tapered down toward the trunk and not cause pooling or drainage under the tree. Water should be diverted away from the CRZ or percolated at the drip line distance.

Patios and Walkways

The first priority for any patio or walkway construction is to adopt a no dig policy and incorporate a design plan that will minimize soil compaction and root disturbances within the critical root zone.

Use the thinest material possible to achieve structural compliance. Materials must be permeable and allow for drainage into the current root zone and native soil.

Adjust the finished grade of any pathway or patio to be above the natural grade without digging for a sub-grade treatment where possible within the Critical Root Zone. In this instance the surface will be higher up and edge treatments or curbing also need to be constructed above grade where feasible.

Use paving material that does not rely on the strength of a compacted subbase within the critical root zone for its structural support. This may be accomplished by reinforcing the surface layer material.

Geotextile fabrics have been used and applied to the soil surface to help reduce compaction or spread the load. If these types of materials are used they must be permeable otherwise it is best to place the fill soil on top of the parent soil to allow for root growth and drainage.

Plant Compatibility with Native Oaks

Coast live oaks are not compatible with irrigated turf. A planted area with mulch should be incorporated into the landscape with compatible plants and watering requirements (Appendix F).

Soil Remediation

In the event that soil remediation needs to take place under the coast live oak the process selected for the type of remediation should not damage or destroy tree roots. Mechanical removal of soils would need to be done with a hyrdrovac or similar type machinery to remove the soil from the site. Soil remediation techniques vary greatly depending on what needs to be cleaned or removed.

Conclusion

The Property is located at the intersections of Park Avenue, Delmas Avenue, and Sonoma Street in San Jose and contains nine trees comprised of seven different species. There are no street trees around the exterior of the property in a park strip or otherwise. Seven of the nine trees have trunk diameters greater than eighteen inches (56 inch circumference). The coast live oak is the only 'Native' tree to this area although coast redwoods can be found naturally growing in the nearby Santa Cruz Mountains. Most of the trees are in fair condition with some problems. The Canary Island pine has codominant stems originating about 25 feet up the tree and the incense cedar has a lean and is crowded by the coast live oak. The coast live oak is the only tree considered to be in good condition with normal foliar color, size and density. Structurally the coast live oak has two defects or conditions that could be problematic which are codominant stems and a corrected lean but overall this tree is in good shape. The coast redwood and the Peruvian pepper are both in poor condition with defects and conditions that cannot be mitigated. All the trees have poor suitability for preservation with the exception of the coast live oak and possibly the Canary Island pine. The pepper and coast redwood are failing while the tree of heaven are an invasive plant not suitable to retain. I considered the coast live oak to be the best tree suited for retention while the Canary Island pine has fair suitability for preservation. All the trees will be highly affected by the proposed project except for the coast live oak. The trees are located within the footprint of the buildings and care has been taken to avoid activity and infrastructure around the coast live oak. Understanding the coast live oak will be the only tree preserved, using the tolerance, age, and diameter formula for Tree Protection Zone the results are as follows: mature in age, has good tolerance for disturbance, trunk diameter of 52 inches, tree protection radius of 39 feet (.75 feet per inch trunk diameter) is recommended. The Critical Root Zone distance around the coast live oak is three to five times the trunk diameter allowing for a maximum encroachment distance on one side to be 13 to 22 feet from the trunk with no trenching to occur within 22 feet. It may be acceptable to add fill soils within the Tree Protection Zone and outside 13 feet to match finished grades near the structures. Fill soil should be tapered down toward the trunk and not cause pooling or drainage under the tree. Coast live oaks are not compatible with irrigated turf and it is not advised to use turf near the tree. A planted area with mulch should be incorporated into the landscape with compatible plants and similar watering requirements.

Recommendations

1. Obtain all necessary permits from the City of San Jose prior to removing or significantly altering any tree.

2. Refer to Appendix D of this document for general protection guidelines and specifications.

3. Place tree protection fence at a radius of 39 feet from the trunk around coast live oak number 500. tree protection distance is determined using tree tolerance, age, and trunk diameter formula (Matheny, N. and Clark, J. 1998). The results are as follows: mature in age, has good tolerance for disturbance, trunk diameter at breast height of 52 inches, tree protection radius of 39 feet (.75 feet per inch trunk diameter), not the drip line distance.

4. The project arborist should supervise and monitor the removal of any tree protection fencing and any work within the CRZ of 13 to 22 feet and TPZ of 39 feet from the trunk.

5. Maintain a maximum encroachment on one side of the tree at 13 to 22 feet with no trenching within 22 feet.

6. Wrap trees that will be moderately influenced with straw wattle.

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

8. Plant trees and shrubs compatible with native oaks under the coast live oak (Appendix F).

9. Incorporate a landscape design plan that will minimize soil compaction and root disturbances within the critical root zone. Adopt a no dig policy.

10. Soil remediation under the canopy or within the TPZ/CRZ of trees retained should be monitored by the project arborist. The process implemented should not destroy roots and soil replacement will be required during the same time the soils are removed. Employ remediation techniques that cause the lease amount of disturbance to the soils.

Bibliography

American National Standard for Tree Care Operations: Tree, Shrub and Other Woody Plant Management : Standard Practices (Management of Trees and Shrubs During Site Planning, Site Development, and Construction)(Part 5). Londonderry, NH: Secretariat, Tree Care Industry Association, 2012. Print.

Costello, Laurence Raleigh, Bruce W. Hagen, and Katherine S. Jones. *Oaks in the urban landscape: selection, care, and preservation*. Oakland, CA: University of California, Agriculture and Natural Resources, 2011. Print.

ISA. *Glossary of Arboricultural Terms*. Champaign: International Society of Arboriculture, 2011. Print.

Matheny, Nelda P. Trees and development: A technical guide to preservation of trees during land development. Bedminster, PA: International Society of Arboriculture, 1998.

Smiley, E. Thomas, Fraedrich, Bruce R., and Hendrickson, Neil. *Tree Risk Management*. 2nd ed. Charlotte, NC: Bartlett Tree Research Laboratories, 2007.

Glossary of Terms

Defect: An imperfection, weakness, or lack of something necessary. In trees defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.

Diameter at breast height (DBH): Measures at 1.4 meters (4.5 feet) above ground in the United States, Australia (arboriculture), New Zealand, and when using the Guide for Plant Appraisal, 9th edition; at 1.3 meters (4.3 feet) above ground in Australia (forestry), Canada, the European Union, and in UK forestry; and at 1.5 meters (5 feet) above ground in UK arboriculture.

Drip Line: Imaginary line defined by the branch spread or a single plant or group of plants.

Mechanical damage: Physical damage caused by outside forces such as cutting, chopping or any mechanized device that may strike the tree trunk, roots or branches.

Scaffold branches: Permanent or structural branches that for the scaffold architecture or structure of a tree.

Straw wattle: also known as straw worms, bio-logs, straw noodles, or straw tubes are man made cylinders of compressed, weed free straw (wheat or rice), 8 to 12 inches in diameter and 20 to 25 feet long. They are encased in jute, nylon, or other photo degradable materials, and have an average weight of 35 pounds.

Tree Protection Zone (TPZ): Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

Tree Risk Assessment: Process of evaluating what unexpected things could happen, how likely it is, and what the likely outcomes are. In tree management, the systematic process to determine the level of risk posed by a tree, tree part, or group of trees.

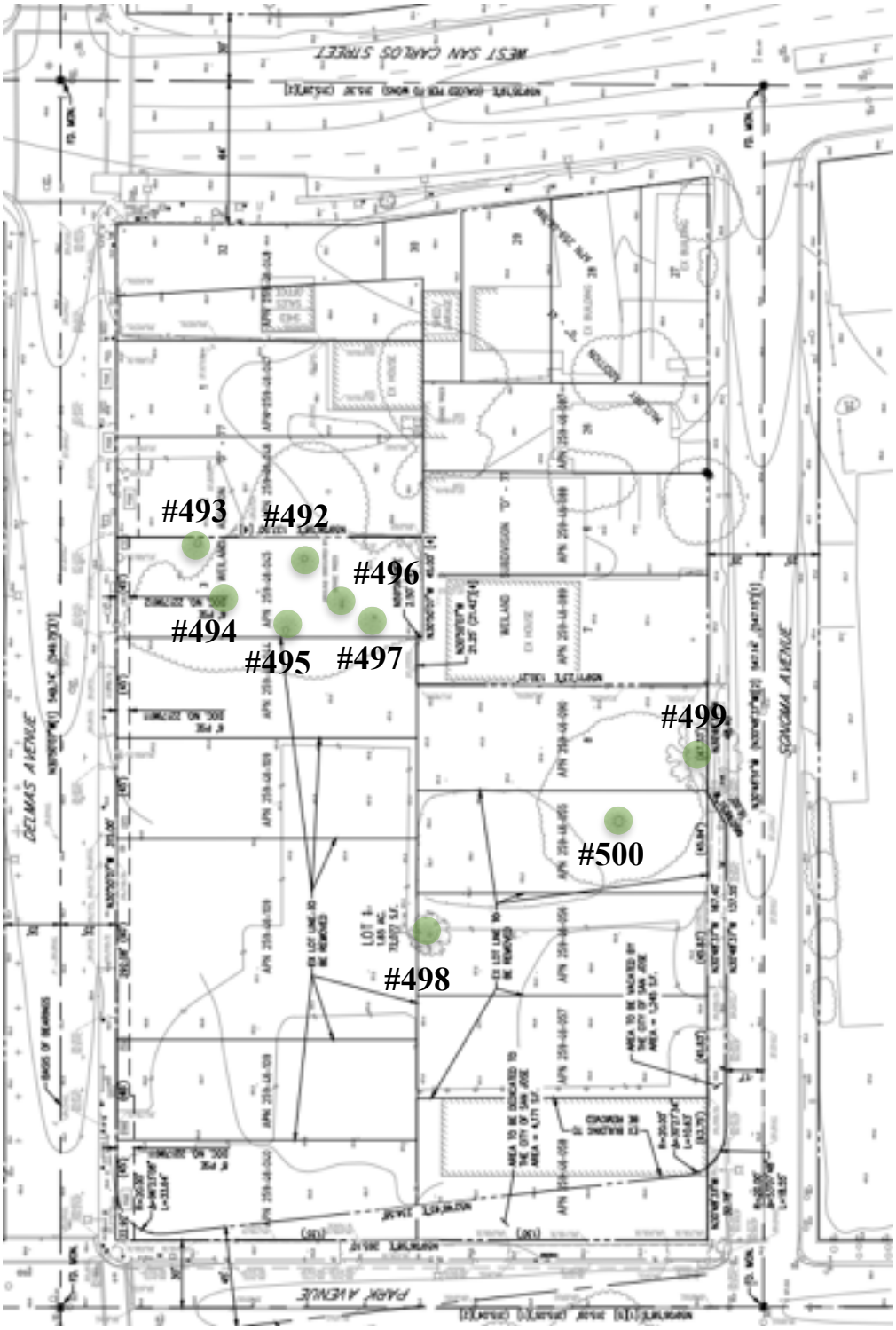
Trunk: Stem of a tree.

Volunteer: A tree, not planted by human hands, that begins to grow on residential or commercial property. Unlike trees that are brought in and installed on property, volunteer trees usually spring up on their own from seeds placed onto the ground by natural causes or accidental transport by people. Normally, volunteer trees are considered weeds and removed, but many desirable and attractive specimens have gone on to become permanent residents on many public and private grounds.

This Glossary of terms was adapted from the Glossary of Arboricultural Terms (ISA, 2011).

Appendix A: Tree Inventory Map

Tree numbers and approximate locations labeled 492 to 500.



Appendix B: Tree Inventory and Disposition Tables

B1: Tree Inventory and Assessment

Table 1: Tree Inventory and Assessment

Tree Species	Number	Trunk Diameter	~ Height	~ Crown Diameter	Condition	Suitability	Influence Level
Coast live oak (*Quercus agrifolia*)	500	52	50	32	Good	Good	Moderate
Incense cedar (*Calocedrus decurrens*)	499	36	45	15	Fair	Poor	High
Coast redwood (*Sequoia sempervirens*)	498	27	30	12	Poor	Poor	High
Fig tree (*Ficus carica*)	497	14	20	10	Fair	Poor	High
Tree of heaven (*Ailanthus altissima*)	496	9, 10, 8	35	15	Fair	Poor	High
Peruvian pepper (*Schinus mole*)	495	51	30	15	Poor	Poor	High
Tree of heaven (*Ailanthus altissima*)	494	24	45	15	Fair	Poor	High
Tree of heaven (*Ailanthus altissima*)	493	17	40	12	Fair	Poor	High
Canary island pine (*Pinus canariensis*)	492	39	75	20	Fair	Fair	High

B2: Disposition Table

Table 2: Disposition Table

Tree Species	Number	Trunk Diameter	~ Height	~ Crown Diameter	Condition	Ordinance size	Remove/ Retain
Coast live oak (*Quercus agrifolia*)	500	52	50	32	Good	Yes	Retain
Incense cedar (*Calocedrus decurrens*)	499	36	45	15	Fair	Yes	Remove
Coast redwood (*Sequoia sempervirens*)	498	27	30	12	Poor	Yes	Remove
Fig tree (*Ficus carica*)	497	14	20	10	Fair	No	Remove
Tree of heaven (*Ailanthus altissima*)	496	9, 10, 8	35	15	Fair	Yes	Remove
Peruvian pepper (*Schinus mole*)	495	51	30	15	Poor	Yes	Remove
Tree of heaven (*Ailanthus altissima*)	494	24	45	15	Fair	Yes	Remove
Tree of heaven (*Ailanthus altissima*)	493	17	40	12	Fair	No	Remove
Canary island pine (*Pinus canariensis*)	492	39	75	20	Fair	Yes	Remove

Appendix C: Photographs

C1: Coast live oak #500

C2: Coast redwood 498

C3: Peruvian pepper 495

C4: Incense cedar 499

C5: Trees 492 to 497

Canary Island pine in the middle

Appendix D: Tree protection specifications

13.32.130 - Safeguarding trees during construction.

For the purpose of safeguarding trees during construction, all of the following conditions shall apply to all such trees except for trees for which a tree removal permit has been issued or which are required to be removed pursuant to Chapter 13.28:

A. Prior to the issuance of any approval or permit for the construction of any improvement on the building site, all trees on the site shall be inventoried by the owner or contractor as to size, species and location on the lot and the inventory shall be submitted on a topographical map to the director; and
B. Damage to any tree during construction shall be immediately reported by a person causing the damage, the responsible contractor, or the owner to the director, and the contractor and/or owner shall treat the tree for damage in the manner specified by the city arborist; and
C. No construction equipment, vehicles or materials shall be stored, parked or standing within the tree dripline; and”
D. Drains shall be installed according to city specifications so as to avoid harm to trees due to excess watering; and
E. Wires, signs and other similar items shall not be attached to trees; and
F. Cutting and filling around the base of trees shall be done only after consultation with the city arborist and then only to the extent authorized by the city arborist; and
G. No paint thinner, paint, plaster or other liquid or solid excess or waste construction materials or wastewater shall be dumped on the ground or into any grate between the dripline and the base of the tree or uphill from any tree where certain substances might reach the roots through a leaching process; and
H. Barricades shall be constructed around the trunks of trees as directed by the director so as to prevent injury to trees making them susceptible to disease causing organisms; and
I. Wherever cuts are made in the ground near the roots of trees, appropriate measures shall be taken to prevent exposed soil from drying out and causing damage to tree roots.

(Ords. 21362, 26595.)

Pre-Construction Meeting with the Project Arborist

Prior to beginning work, all contractors involved with the project should attend a pre construction meeting with the project arborist to review the tree protection guidelines. Access routes, storage areas, and work procedures will be discussed. Tree protection locations should be marked before any fencing contractor arrives.

Tree Protection Zones and Fence Specifications

Tree protection fence should be established prior to the arrival of construction equipment or materials on site. Fence should be comprised of six-foot high chain link fence mounted on eight-foot tall, 1 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced no more than 10 feet apart. Once established, the fence must remain undisturbed and be maintained throughout the construction process until final inspection.

The fence should be maintained throughout the site during the construction period and should be inspected periodically for damage and proper functions.

Fence should be repaired, as necessary, to provide a physical barrier from construction activities.

A final inspection by the city arborist at the end of the project will be required prior to removing any tree protection fence and replacement tree shall be planted at this time.

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.

Restrictions Within the Tree Protection Zone

No storage of construction materials, debris, or excess soil will be allowed within the Tree Protection Zone. Spoils from the trenching shall not be placed within the tree protection zone either temporarily or permanently. Construction personnel and equipment shall be routed outside the tree protection zone of 39 feet from the trunk.

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.

Boring or Tunneling

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

Timing

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

Tree Pruning and Removal Operations

All tree pruning or removals should be performed by a qualified arborist with a C-61/D-49 California Contractors License. Tree pruning should be specified according to ANSI A-300A pruning standards and adhere to ANSI Z133.1 safety standards. Trees that need to be removed or pruned should be identified in the pre-construction walk through.

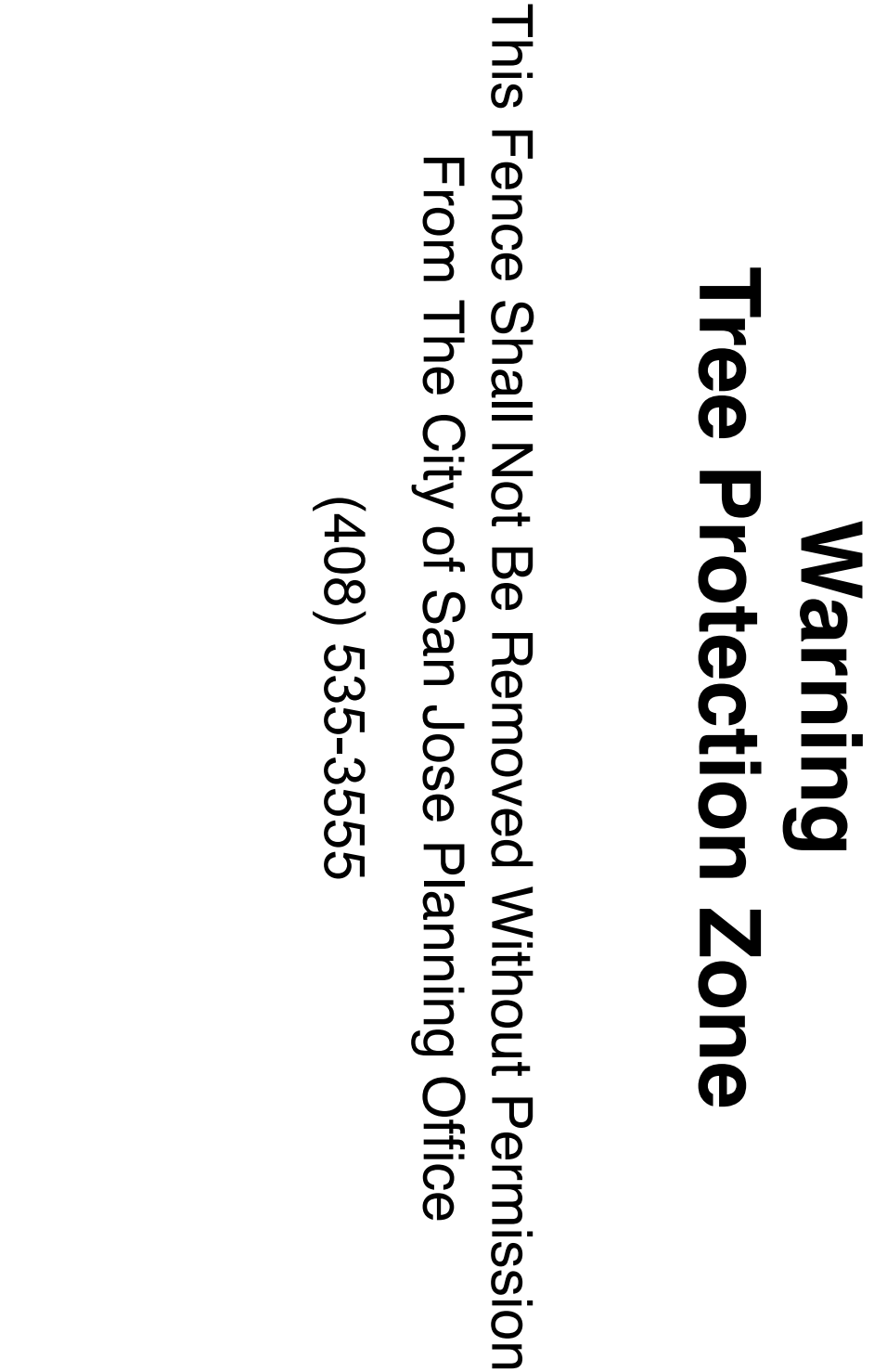
Tree Protection Signs

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. Text on the signs should be in both English and Spanish (Appendix E).

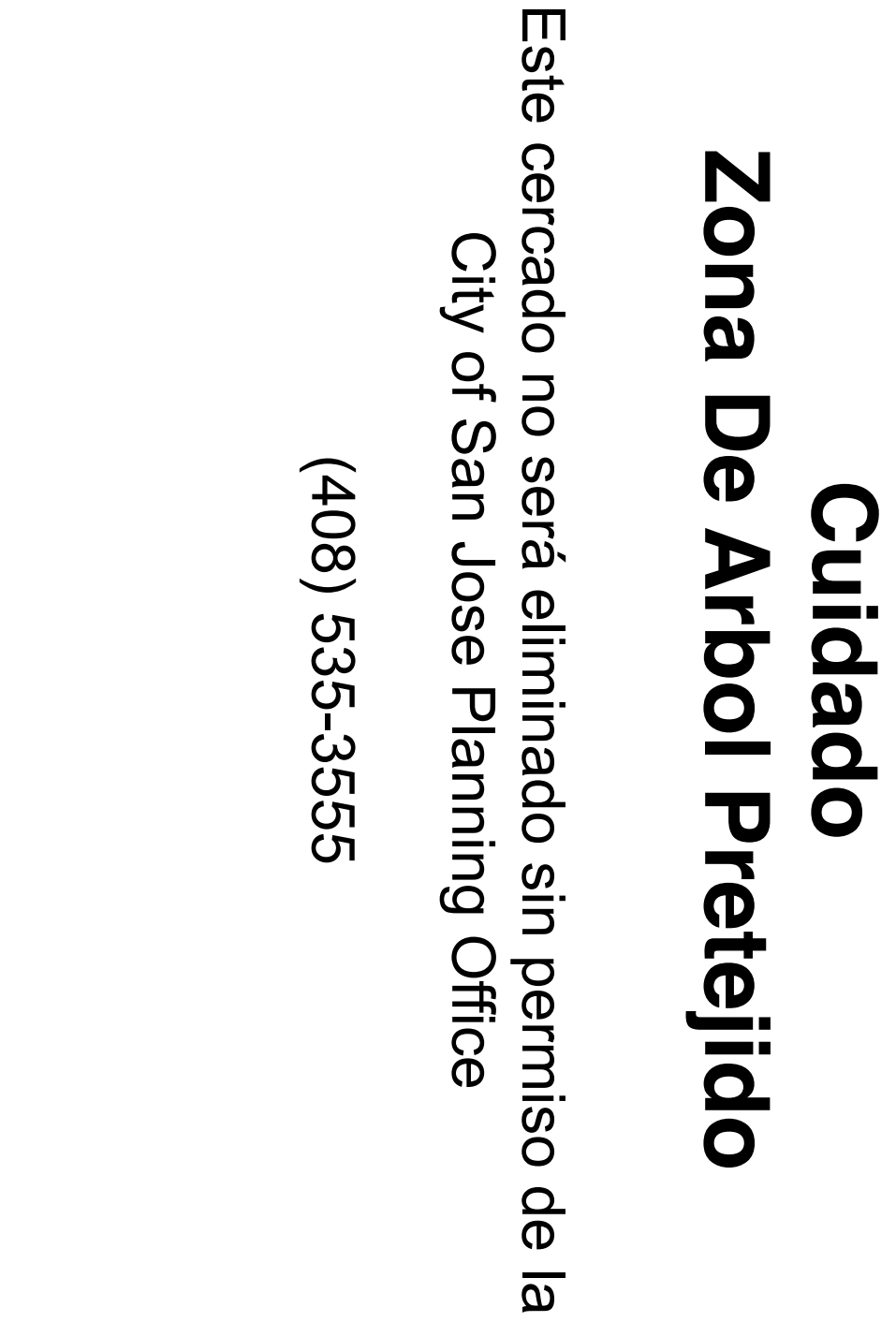
Signage stating, “Warning-This fencing shall not be removed without permission from the City of San Jose Planning Office (408) 535-3555”. Shall be placed on all tree protection fencing and remain until final occupancy.

Appendix E: Tree Protection Signs

E1: English



E2: Spanish


Cuidado
Zona De Arbol Pretejido
Este cercado no será eliminado sin permiso de la
City of San Jose Planning Office
(408) 535-3555

Appendix F: Plants Compatible to Plant Under Oaks

Scientific name	Common name
Achillea millefolium	yarrow
Adiantum jordanii	maidenhair fern
Aquilegia formosa	western columbine
Arctostaphylos edmundsii	manzinita
Aristolochia californica	Dutchman's pipe
Artemisia spp.	artemisia
Baccharis pilularis	dwarf coyote brush
Berberis Aquifolium 'Compacta'	Oregon grape
Berberis aquifolium repens, B pinnata	creeping mahonia
Berberis nervosa	long leaf mahonia
Calycanthus occidentalis	spice bush
Carpenteria californica	bush anemone
Ceanothus heastiorum, maritimus, thyrsifolia, griseum	Ceanothus
Cercis occidentalis	California redbud
Ceroparpus betuloides spp blanchae	mountain mahogany
Choisa ternata	Mexican mock orange
Clarkia spp.	clarkia
Clematis lasiantha	pipestems
Corylus cornuta	western hazelnut
Delphinium cardinale	scarlet larkspur
Dendromecon rigida, D. harfordii	island bushpoppy
Diplacus (mimulus) aurantiacus	monkey flowers
Erigeron karvinsianus	Santa Barbara daisy
Eriogonum arborecens	Santa Cruz Island buckwheat
Eriogonum grande var. rubescens	San Miguel Island buckwheat
Eriogonum umbellatum var. polyanthum	sulfer buckwheat
Fragaria vesca	woodland strawberry
Fremontodendron species and cultivars	flannelbush
Garrya elliptica	coast silktassel
Garrya fremontii	Fremont silktassel
Gaura lindheimeri	gaura
Hemerocallis spp.	daylily
Hteromeles arbutifolia	toyon
Heuchera maxima	giant alum root
Heuchera spp.	coral bells
Iris douglasiana and hybrids	Douglas iris
Iris macrosiphon, I. douglasii	iris
Keckiella antirrhinoides, K cordata	bush snapdragon
Kniphofia uvaria	red hot pokers
Lupinus albifrons	lupine
Monardella macrantha	bee balm

Scientific name	Common name
Monardella spp.	deer mint
Nandina domestica	heavenly bamboo
Ochna serrulata	bird's eye bush
Penstemon spp.	penstemon
Polystichum munitum	werstern sword fern
Rhamnus califoria 'Eve Case'	California coffeeberry
Rhus integrifolia	lemonade berry
Rhus ovata	sugarbush
Ribes menziesii	prickly gooseberry
Ribes sanguineum	red flowering currant
Ribes sanguineum var. glutinosum	pink-flowering currant
Ribes speciosum	fushia-flowered gooseberry
Ribes viburnifolium	evergreen current
Romneya coulteri	matilija poppy
Rosa californica	wild rose
Rosmarinus officinalis	rosemary
Salvia cleavlandii, S. sonomensis, S. leucophylla 'Pt. Sal'	California sage
Salvia leucophylla	coastal white sage
Salvia spathacea	hummingbird sage
Santolina chamaecyparissus	lavender cotton
Satureja douglasii	yerba buena
Sisyrinchium bellum	blue eyed grass
Sollya heterophyla	Australian blue bell creeper
Symphoricarpos albus var. laevigatus, S. mollis	snowberry
Trichostema lanatum	wooly bluecurls
Vancouveria planipetala	inside-out flower
Whipplea modesta	yerba de selva
Zauschneria californica	California fuchsia

The plant list is courtesy of Costello, Laurence Raleigh, Bruce W. Hagen, and Katherine S. Jones. *Oaks in the urban landscape: selection, care, and preservation*. Oakland, CA: University of California, Agriculture and Natural Resources, 2011. Print.

Qualifications, Assumptions, and Limiting Conditions

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

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

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

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

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

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Unless otherwise expressed: a) this report covers only examined items and their condition at the time of inspection; and b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.

Certification of Performance

I Richard Gessner, Certify:

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

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

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

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

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

That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any other subsequent events;

I further certify that I am a Registered Consulting Arborist® with the American Society of Consulting Arborists, and that I acknowledge, accept and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Board Certified Master Arborist®. I have been involved with the practice of Arboriculture and the care and study of trees since 1998.

Richard J. Gessner

ASCA Registered Consulting Arborist® #496
ISA Board Certified Master Arborist® WE-4341B

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March 18, 2016

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This letter is in response to comments provided by Amber Sharpe on February 26, 2016 regarding a review of the most recent plans, long term care of the oak tree, and recreational use under the oak tree.

I reviewed the most recent plan set dated February 12, 2016 provided by Steinberg, February 9, 2016 provided by SWA, and February 11, 2016 provided by CEA.

The project has been carefully designed to accommodate the tree and its requirements. Most of the improvements are outside the recommended tree protection zone with some construction to have minor encroachment in areas that have already been affected (Arborist Barrie Coates 2008 report identified a house and basement under the tree near the same locations as some of the proposed improvements). The greatest concern is for how constructing the underground parking area is to be performed and to maintain the TPZ without creating a slope into the root zone. This will require shoring or other safety measures during construction to keep the excavation at the limits depicted.

The plans do not indicate any detrimental use under the oak and the tables and chairs will not adversely affect the root area long term. In the larger TPZ area labeled “Lawn or Decorative Gravel” on sheet L.1, gravel would be preferable to lawn. If lawn is to be installed no more than 35 percent of the total tree protection area is to contain turf grass. For the smaller area in the TPZ labeled “Mulch or Decorative Gravel” on sheet L.1, organic mulch would be preferable to gravel.

The long term care goals or objectives for the tree are to maintain it with optimal health and structure. An ISA Certified Arborist® should at a minimum annually inspect the tree for changes in health and to assess its structural integrity. The tree should be pruned as necessary according to the most recent *ISA Best Management Practices: Part 1: Pruning* and maintenance specifications of any kind should be in writing according to the most recent American National Standards Institute *ANSI A-300 (Parts 1-9) - for tree care operations, Tree, Shrub, and Other Woody Plant Management, Standard Practices*. In addition I recommend performing preventative bark beetle applications to the lower trunk three times a year (March, June and September) with Onyx® (Bifenthrin) or Asto® (Permethrin).

Please contact me with any questions.

Richard J. Gessner

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ISA Tree Risk Assessor Qualified
CA Qualified Applicators License #104230