

Arborist Report

Lavenida Lane Orinda CA

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Tree Survey Form

Tree Exhibit (Prepared by P/A Design Resources, Inc.)

Introduction and Overview

The Bruzzone Family is planning to develop the site located at the corners of Lavenida and Donna Maria Way, in Orinda California. The site abuts the Moraga Country club and Town of Moraga limit to the southwest and slopes steeply to the east. Currently, the site is an abandoned walnut orchard with creeks flowing along the northwestern property boundary and in the southeastern corner of the site. HortScience, Inc. was asked to prepare an Arborist Report for the site for review by the City of Orinda.

This report provides the following information:

- 1. A survey of trees growing within and adjacent to the proposed project area.
- 2. An assessment of the impacts of constructing the proposed project on the trees.
- 3. Guidelines for tree preservation during the design, construction and maintenance phases of development.

Survey Methods

Trees were surveyed on May 26, 2009. The survey included all trees 4" and greater in diameter for riparian areas, and 6" and greater in diameter for all other areas per section 17.21 of the City of Orinda municipal code. The survey procedure consisted of the following

- 1. Identifying the tree as to species;
- 2. Measuring the trunk diameter at a point 54" above grade;
- 3. Evaluating the health and structural condition using a scale of 1-5:
 - 5 A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
 - 4 Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
 - 3 Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
 - 2 Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
 - 1 Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.
- 5. Rating the suitability for preservation as "good", "moderate" or "poor". Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.

Good:

Trees with good health and structural stability that have the

potential for longevity at the site.

Moderate: Trees with somewhat declining health and/or structural defects than can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life

span than those in 'good' category.

Poor.

Trees in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and

generally are unsuited for use areas.

Description of Trees

One hundred and ninety-six (196) trees were evaluated, representing seven (7) species (Table 1). Twenty-seven (27) off-site trees were included in the survey, where portions of their crowns extended onto the development site (#1-3, 32, 87, 90, 91, 93, 95-99, 174, and 177), or where they were in proximity to proposed off-site drainage work (85, 86, and 187-196). Descriptions of each tree are found in the *Tree Survey Form*, and locations are plotted on the *Tree Survey Map* (see attachments).

The site is a mix of an old walnut orchard and an oak-bay woodland. Coast five oak and riparian species dominate creeks, with walnuts concentrated on the eastern half of the site. One hundred seventeen (117) of the trees, represented by three species, were native.

The most frequently occurring species was coast live oak (106 trees, or 54% of the population). Calif. black walnut (70 trees, or 36%) was the next most common species. The remaining five species were represented by no more than 10 individuals. Tree size ranged from 4" to 33" in diameter. Ninety-eight (98) trees had multiple trunks arising below 54".

Coast live oaks were overwhelmingly in good condition. Two-thirds were in good condition and one-third in moderate. None of the coast live oaks were in poor condition. Those in moderate condition typically had small diameters (6" to 15") and one-sided, thin or suppressed crowns.

In contrast, Calif. black walnuts were almost evenly split between poor and moderate conditions (34 and 36 trees, respectively). None of the Calif. black walnuts were in good condition. Those in both poor and moderate conditions had varying amounts of twig and branch die-back, trunk wounds and decay.

Overall, tree condition was good (44%) to fair (38%). Thirty-five (35) trees were in poor condition, 34 of which were Calif. black walnuts and one was a plum with extensive dieback.

The City of Orinda defines trees on vacant or undeveloped parcels with a diameter of 6" or greater, or native riparian trees with a diameter of 4" or greater, as "Protected". Based on this definition, 190 of the trees surveyed are considered "Protected".

Table 1: Condition ratings and frequency of occurrence of trees.

Lavenida Lane, Orinda

Common Name	Scientific Name	Co	ndition Ra	ting	No. of
2 · · · · · · · · · · · · · · · · · · ·		Poor (0-2)	Fair (3)	Good (4-5)	Trees
Deodar cedar	Cedrus deodara	-		3	3
Hawthorne	Crataegus laevigata	_	1	-	1
Calif. black walnut	Juglans hindsii	34	36	-	70
Plum	Prunus sp.	1	2	2	5
Coast live oak	Quercus agrifolia		30	76	106
Arroyo willow	Salix lasiolepis	-	-	1	1
Calif. bay	Umbellularia californica	-	6	4	10
Total		35	75	86	196

Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape.

Our goal is to identify trees that have the potential for long-term health, structural stability and longevity. For trees growing in open fields or creek channels, away from areas where people and property are present, structural defects and/or poor health presents a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings, we must consider their structural stability as well as their potential to grow and thrive in a new environment. Where development will not occur, the normal life cycles of decline, structural failure and death should be allowed to continue.

Evaluation of suitability for preservation considers several factors:

Tree health

Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.

Structural integrity

Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely.

Species response

There is a wide variation in the response of individual species to construction impacts and changes in the environment. In our experience, for example, Calif. black walnut is sensitive to site disturbance, while coast live oak is more tolerant of root loss.

Tree age and longevity

Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change.

Species invasiveness

Species which spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. None of the species surveyed at the Lavenida site are considered invasive.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment (see attached *Tree Survey Form*). Table 2, following page, provides a summary of the suitability ratings. Suitability ratings for individual trees are provided in the *Tree Survey Form*.

Table 2: Tree Suitability for Preservation Lavenida Lane, Orinda

Good

These are trees with good health and structural stability that have the potential for longevity at the site. Fifty-two (52) trees were of good suitability for preservation; including 49 coast live oaks, two (2) Calif. bay laurels, and one (1) arroyo willow.

Moderate

Trees in this category have fair health and/or structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring, and may have shorter life-spans than those in the "good" category. Seventy-seven (77) trees were of moderate suitability for preservation, including 54 coast live oaks, 10 Calif. black walnuts, eight (8) Calif. bay laurels, three (3) deodar cedars, and two (2) plums.

Poor

Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. Sixty-seven (67) trees were of poor suitability for preservation, including 60 Calif. black walnuts, three (3) coast live oaks, three (3) plums, and one (1) hawthorne.

Evaluation of Impacts and Recommendations for Preservation

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The *Tree Survey* was the reference point for tree condition and quality. Potential impacts from construction were evaluated using the Plan set entitled Lavenida Lane, subdivision 9260, Vesting Tentative Map, Conceptual Landscape Plan and Preliminary Stormwater Control Plan prepared P/A Design Resources, Inc. (June 1, 2010).

The plan proposes to subdivide the site into eight (8) lots. A new road will be constructed (Lavenida Lane), extending the existing Lavenida Dr. south onto the project site. The central portion of the site will be graded to create level lots for future homes and construct driveways. Bioretention basins will be constructed along the northeastern property boundary, a drainage ditch along the southwestern property boundary, and a new storm drain will be installed along the east side of the existing Lavenida Drive. The northern ~100' of the new storm drain, to the connection point with the drainage culvert beneath Lavenida Dr., is proposed for boring to avoid trenching and potential conflicts with tree roots.

The plans depict the conceptual layout for new homes. Impacts from these conceptual layouts are not addressed in this document. Custom homes will be designed for each lot in the future. An assessment of impacts to trees and separate Arborist Reports based on individual lot layouts will be required at that time.

Potential impacts from grading and drainage were estimated for each tree. The most significant impacts to the trees would occur as a result of the grading for the lots and subdivision improvements.

Based on our evaluation of the plans and their impacts on the trees, I recommend preservation for 117 trees, 114 of which qualified as Protected. Preservation is predicated on establishing a **Tree Protection Zone** and other recommendations listed in the **Tree Preservation Guidelines** (page 7).

Three (3) of the trees recommended for preservation have been identified for pruning based on their proximity to proposed improvements (#96-98). Pruning guidelines are provided in the *Tree Preservation Guidelines* (page 7).

Four (4) of the trees proposed for preservation (#32, 34, 90, and 96) are in close proximity to the proposed improvements. All of the trees are expected to tolerate the impacts, but some may show signs of decline, such as twig and branch dieback, as a result of the adjacent grading. Table 3 provides a list of these trees and their proximity to the proposed improvement.

Removal is recommended for 79 trees, including 76 that qualified as Protected. Forty-nine (49) would be impacted by lot grading, 17 by road grading and 13 by construction of the bioretention ponds. Fifty-three (53) of the trees recommended for removal were of poor suitability for preservation. Table 4 provides a list of trees recommended for removal, along with their Protected status and a description of the associated impacts.

Table 3: Trees potentially impacted by improvements Lavenida Lane. Orinda

Tree #	Species	Trunk Diameter (in.)	Proximity to improvement
32	Calif. black walnut	10,8,7,5,5	5' E. of improvement grading
34	Calif. black walnut	16,7,6,6,5	3' E. of improvement grading
90	Calif. black walnut	18	7' E. of improvement grading
96	Coast live oak	8,6	4' N. of Lot 1 grading

Table 4: Trees recommended for removal Lavenida Lane, Orinda

Tree #	Species	Trunk Diameter (in.)	Protected?	Impacts
12	Coast live oak	9	Yes	Within Lot 4 grading
17	Calif. black walnut	17,9	Yes	Within Lot 5 grading
18	Calif. black walnut	6,5,5,4	Yes	Impacted by Lot 5 grading
20	Coast live oak	6,6,3	Yes	Within Lot 5 grading
.21	Coast live oak	10,9,9,8	Yes	Within Lot 5 grading
24	Coast live oak	17	Yes	Within Lot 5 grading
25	Calif. black walnut	17,7,6,6,6	Yes	Within Lot 3 grading
26	Calif. black walnut	9,7,6,5,5	Yes	Within bioretention
27	Calif. black walnut	17	Yes	Within bioretention
		(Continued, folio	owing page)	

Table 4: Trees recommended for removal, continued Lavenida Lane, Orinda

Tree #	Species	Trunk Diameter (in.)	Protected?	Impacts
28	Calif. black walnut	10,10,9,7,6,6	Yes	Within bioretention
29	Calif. black walnut	6,6,6,5,4,4	Yes	Within bioretention
30	Calif. black walnut	9,9,9,7,6,6,5,5	Yes	Within bioretention
31	Calif. black walnut	11	Yes	Within bioretention
33	Calif. black walnut	12,6,6	Yes	Within bioretention
35	Calif. black walnut	17	Yes	Within Lot 3 grading
36	Calif. black walnut	14,5,5,4	Yes	Within Lot 3 grading
37	Calif. black walnut	24	Yes	Within Lot 3 grading
38	Calif. black walnut	22	Yes	Within Lot 3 grading
39	Calif. black walnut	18	Yes	Within Lot 3 grading
40	Calif. black walnut	6,6	Yes	Within Lot 3 grading
41	Calif. black walnut	23	Yes	Within Lot 3 grading
42	Calif. black walnut	10,6	Yes	Within Lot 3 grading
43	Calif. black walnut	9,8,7,7	Yes	Within road grading
44	Calif. black walnut	16,7,6,6	Yes	Within road
45	Calif. black walnut	18,18	Yes	Within road
46	Calif. black walnut	7,5	Yes	Within Lot 2 grading
47	Calif. black walnut	26,6	Yes	Within road grading
48	Calif, black walnut	9,9,8	Yes	Within Lot 1 grading
49	Calif. black walnut	18,9	Yes	Within Lot 1 grading
50	Coast live oak	18,9	Yes	Within Lot 1 grading
51	Calif. black walnut	10	Yes	Within Lot 1 grading
52	Calif. black walnut	16	Yes	Within Lot 1 grading
53	Calif. black walnut	17,15,7	Yes	Within Lot 1 grading
54	Calif. black walnut	6,5,4,4,3	Yes	Within Lot 2 grading
55	Calif. black walnut	7,6,6,5,4	Yes	Within Lot 2 grading
56	Calif. black walnut	8,7,7,6,6,5,4	Yes	Within Lot 2 footprint
57	Calif. black walnut	16	Yes	Within Lot 2 grading
58	Calif. black walnut	10,9	Yes	Within Lot 2 grading
59	Calif. black walnut	6,5,4,4	Yes	Within Lot 2 grading
60	Calif. black walnut	10,8,7,6,5,5	Yes	Within Lot 2 grading
61	Calif. black walnut	8,7,4,4,3	Yes	Within road grading
62	Calif. black walnut	13,8,7,7,6	Yes	Within road grading
63	Calif. black walnut	5,4,4	No	Within Lot 2 grading
64	Calif. black walnut	9,7,7,6,5	Yes	Within road
65	Calif. black walnut	13,6,6,5	Yes	Within road
66	Calif, black walnut	5.4	No	Within road grading
67	Calif. black walnut	7,7,6,6,5,5,4	Yes	Within Lot 2 grading
68	Calif. black walnut	9,8,6,6	Yes	Within road
69	Calif. black walnut	7,7,6,4,4	Yes	Within Lot 2 grading
70	Calif. black walnut	5,5,4,4	Yes	Within Lot 2 grading
71	Calif. black walnut	7,7,6,5,4,4	Yes	Within Lot 2 grading
72	Calif. black walnut	6	Yes	Within Lot 2 grading
73	Calif. black walnut	6,5,4,4,3,3,2,2	Yes	Within Lot 2 grading
74	Calif. black walnut	7,6,6,5,5	Yes	Within Lot 2 grading
• •		(Continued, folk		

Table 4: Trees recommended for removal, continued Lavenida Lane, Orinda

Tree #	Species	Trunk Diameter (in.)	Protected?	Impacts
75	Calif. black walnut	13,9,8,7,6,6	Yes	Within Lot 2 grading
76	Calif. black walnut	14,9,8,5	Yes	Within road
77	Calif. black walnut	8.7	Yes	Within road
78	Calif. black walnut	8,7	Yes	Within Lot 6 grading
79	Calif. black walnut	10,9,7,5,5,4	Yes	Within Lot 7 grading
80	Calif. black walnut	5,5,4	No	Within road
81	Calif. black walnut	7,7,6,6	Yes	Within road
82	Calif. black walnut	15,12	Yes	Within road
83	Calif. black walnut	10,9	Yes	Within road
84	Calif. black walnut	21	Yes	Within road
88	Coast live oak	14	Yes	Within bioretention
89	Calif. black walnut	12,7,7,6	Yes	Within bioretention
92	Coast live oak	11	Yes	Impacted by bioretention
93	Coast live oak	6,6,5	Yes	Impacted by bioretention
94	Coast live oak	11,8,8,7,6,6	Yes	Impacted by bioretention
95	Coast live oak	6,6,5,4,4,2	Yes	Impacted by bioretention
144	Coast live oak	10,10,9	Yes	Impacted by Lot 8 grading
145	Coast live oak	12,10,9,7,5	Yes	Within Lot 8 grading
146	Coast live oak	7,6	Yes	Within Lot 8 grading
168	Coast live oak	10	Yes	Impacted by Lot 8 grading
182	Calif. bay	6,4,3	Yes	Within Lot 7 grading
183	Calif. bay	6,5,4,3	Yes	Within Lot 7 grading
184	Hawthorne	8,7,7,6,4,4	Yes	Within Lot 7 grading
185	Coast live oak	17	Yes	Within Lot 7/8 driveway
186	Coast live oak	16	Yes	Within Lot 7/8 driveway

Mitigation Requirements

The City of Orinda requires mitigation for the approved removal of all Protected trees. For each 6" in diameter, or fraction thereof, of the Protected tree approved for removal, the applicant shall plant one (1) 15-gallon replacement tree, or pay an in-lieu fee of \$250 per 15-gallon replacement tree. Replacement trees are to be the same genus and species as the removed tree.

In the case of the Lavenida project, the standard mitigation measure fails to recognize that the site was an abandoned walnut orchard. Sixty (60) of the 79 trees recommended for removal were Calif. black walnuts, 32 of which were in poor condition. Based on the City of Orinda standard mitigation measure, the Lavenida project would be required to plant 362 15-gallon replacement trees, 286 of which would be Calif. black walnuts. In general, we do not recommend mitigation for orchard trees or trees that are in poor condition, as these trees are not seen as contributing significantly, aesthetically or environmentally, to the site.

Tree Preservation Guidelines

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. The response of individual trees will depend on the amount of excavation and grading, the care with which demolition is undertaken, and the construction methods. Coordinating any construction activity inside the **Tree Protection Zone** can minimize these impacts.

The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

Design recommendations

1. A TREE PROTECTION ZONE shall be established around each tree to be preserved. No grading, excavation, construction or storage of materials shall occur within that zone. Trees not listed below shall have the TREE PROTECTION ZONES established at the dripline in all directions. The TREE PROTECTION ZONES for all other trees are as follows:

Specific Tree Protection Zones

••••			
11	Coast live oak	21,19	15' S., dripline in all other directions
22	Coast live oak	9	17' E. and W., 20' S., dripline N.
23	Coast live oak	16	15' N. and W., 25' E., dripline S.
32	Calif. black walnut	10,8,7,5,5	5' W., dripline in all other directions
34	Calif. black walnut	16,7,6,6,5	3' W., dripline in all other directions
85	Calif. black walnut	22	15' NW., dripline in all other directions
87	Calif. black walnut	10,4,4,3	10' S. dripline in all other directions
90	Calif. black walnut	18	7' W., dripline in all other directions
91	Calif. black walnut	6,6,6,5,4,4	14' W., dripline in all other directions
96	Coast live oak	8,6	4' S., dripline in all other directions
97	Plum	6,5,4,4,3	7' S., dripline in all other directions
98	Coast live oak	13,10,6,5	8' S., dripline in all other directions
99	Coast live oak	13,12,10,8	16' S., dripline in all other directions
110	Coast live oak	19,13,6,5	14' SE., dripline in all other directions
116	Coast live oak	21	25' SE., dripline in all other directions
119	Coast live oak	17,7	19' SE., dripline in all other directions
125	Coast live oak	15	20' SE., dripline in all other directions
135	Coast live oak	. 7	10' S. dripline in all other directions
136	Coast live oak	12	7' S., dripline in all other directions
157	Coast live oak	19	9' E., dripline in all other directions
158	Coast live oak	13	10' E., dripline in all other directions
163	Coast live oak	10	15' SE., dripline in all other directions
165	Plum	13	6' S., dripline in all other directions
169	Coast live oak	16,13,8	15' S., dripline in all other directions
170	Coast live oak	10	10' S. dripline in all other directions
171	Coast live oak	18	15' SW., dripline in all other directions
172	Coast live oak	18	13' SW., dripline in all other directions
175	Coast live oak	20	17' NE., dripline in all other directions
176	Coast live oak	19	18' NE., dripline in all other directions
179	Coast live oak	15,13,10	19' S. and E., 20' W., dripline N.
180	Coast live oak	12,10	15' E., dripline in all other directions
181	Coast live oak	19	15' S., dripline in all other directions
			· · · · · · · · · · · · · · · · · · ·

- All plans affecting trees shall be reviewed by the Consulting Arborist with regard to tree
 impacts. These include, but are not limited to, demolition plans, grading and utility plans,
 landscape and irrigation plans.
- 3. Underground services including utilities, sub-drains, water or sewer shall be routed around the TREE PROTECTION ZONE. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury.
- 4. **Tree Preservation Notes**, prepared by the Consulting Arborist, should be included on all plans.
- Irrigation systems must be designed so that no trenching will occur not within the TREE PROTECTION ZONE.
- 6. As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees should be designed to withstand differential displacement.
- 7. No underground services including utilities, sub-drains, water or sewer shall be placed in the TREE PROTECTION ZONE.
- 8. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.

Pre-construction treatments and recommendations

- The construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.
- Fence all trees to be retained to completely enclose the TREE PROTECTION ZONE prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by the City. Fences are to remain until all grading and construction is completed.
- 3. Tree(s) to be removed that have branches extending into the canopy of tree(s) to remain must be removed by a qualified arborist and not by demolition or construction contractors. The qualified arborist shall remove the tree in a manner that causes no damage to the tree(s) and understory to remain. Stumps shall be ground below grade.
- 4. Pruning trees to provide construction and access clearance will be required. Trees #96-98 have been preliminarily identified for pruning based on their proximity to proposed improvements. All pruning shall be completed by a Certified Arborist or Tree Worker and adhere to the *Tree Pruning Guidelines* of the International Society of Arboriculture. Brush shall be chipped and spread beneath the trees within the TREE PROTECTION ZONE.
- 5. All down brush and trees shall be removed from the TREE PROTECTION ZONE either by hand, or with equipment sitting outside the TREE PROTECTION ZONE. Extraction shall occur by lifting the material out, not by skidding across the ground.
- 6. Structures and underground features to be removed within the TREE PROTECTION ZONE shall use the smallest equipment, and operate from outside the TREE PROTECTION ZONE. The Consulting Arborist shall be on-site during all operations within the TREE PROTECTION ZONE to monitor demolition activity.

- 7. Apply and maintain 4-6" wood chip mulch within the TREE PROTECTION ZONE. Recommendations for tree protection during construction
- Prior to beginning work, all contractors working in the vicinity of trees to be preserved are required to meet with the Consulting Arborist at the site to review all work procedures, access routes, storage areas and tree protection measures.
- Any grading, construction, demolition or other work that is expected to encounter tree roots should be monitored by the Consulting Arborist.
- 3. No grading, construction, demolition or other work shall occur within the TREE PROTECTION ZONE. Any modifications must be approved and monitored by the Consulting Arborist.
- 4. Do not lime within 50' of any tree. Lime is toxic to tree roots.
- 5. Fences have been erected to protect trees to be preserved. Fences define a specific TREE PROTECTION ZONE for each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without permission of the Consulting Arborist.
- Construction trailers, traffic and storage areas must remain outside fenced areas at all times.
- 7. Prior to grading, pad preparation, excavation for foundations/footings/walls, trenching, trees may require root pruning outside the TREE PROTECTION ZONE by cutting all roots cleanly to the depth of the excavation. Roots shall be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, or other approved root pruning equipment. The Consulting Arborist will identify where root pruning is required and monitor all root pruning.
- 8. All underground utilities, drain lines or irrigation lines shall be routed outside the TREE PROTECTION ZONE. If lines must traverse through the protection area, they shall be tunneled or bored under the tree as directed by the Consulting Arborist.
- Supplemental irrigation may be required and shall be specified by the Consulting Arborist.
- 10. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.
- 11. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the TREE PROTECTION ZONE.
- 12. Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.

Maintenance of impacted trees

Preserved trees will experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, annual inspection for hazard potential is recommended.

HortScience, Inc.

John Leffingwell

Board Certified Master Arborist WE-3966B

Registered Consulting Arborist #442

Attached:

Tree Survey Forms

Tree Exhibit (Prepared by P/A Design Resources)

Bruzzone Family Lavenida Lane Orinda, California May 2009



COMMENTS

SUITABILITY

CONDITION 1=POOR

Protected?

SIZE DIAMETER

SPECIES

TREE Š. (in inches)

PRESERVATION

5=EXCELLENT

Off-site; codominant trunks at base; narrow crown. Good form and structure; epicormic shoots; saturated soil from broken pipe. Codominant trunks at base; good young tree. Multiple attachments at base; 12" stem leans east. Codominant trunks at base; narrow crown. One-sided south; laterals south. Codominant trunks at base; southern stem dead; ganoderma conk. Codominant trunks at 10"; thin crown. Codominant trunks at 5", western stem failed; large trunk wound. Growing on slope; leans south. Multiple attachments at 10"; one-sided west. Codominant trunks at 6"; twig dieback. Multiple attachments at 12"; low lateral east. Good form and structure; lateral north. Codominant trunks at 4"; trunk decay; twig and branch dieback. Multiple attachments at base:dead stems:	Moderate Good Good Good Moderate Moderate Moderate Moderate Good Good Good Good Poor	4 4 roro 44w ww 4444row 0	\$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	9,3 21,77,12 8,8 19 5,4 21,19 8 21,19 17,9 17,9 17,9 17,9	Calif. bay Coast live oak Coast live oak Calif. bay Coast live oak Calif. bay Coast live oak	ε 4 το Γασ C1
Multiple attachments at base;dead stems;	Poor	7	Yes	6,5,5,4	Calif. black walnut	2
branch dieback.	1	f	;	1	-	,
Codominant trunks at 4'; trunk decay; twig and	Poor	ന	Yes	17,9	Calif, black walnut	11
Good form and structure; lateral north.	Good	S.	Yes	17,9	Calif. bay	0
Multiple attachments at 12"; low lateral east.	Good	4	Yes	18	Coast live oak	1 3
Codominant trunks at 6'; twig dieback.	Moderate	4	Yes	12	Coast live oak	4
Multiple attachments at 10'; one-sided west.	Good	4	Yes	21,19	Coast live oak	1 3
Growing on slope; leans south.	Good	4	Yes	O)	Coast live oak	7
large trunk wound.						
Codominant trunks at 5'; western stem failed;	Moderate	ო	Yes	21,19	Coast live oak	7
Codominant trunks at 10'; thin crown.	Moderate	ო	Yes	13	Coast live oak	9
ganoderma conk.						
Codominant trunks at base; southern stem dead;	Moderate	ო	Yes	5,4	Calif. bay	တ
One-sided south; laterals south.	Moderate	4	Yes	19	Coast live oak	œ
Codominant trunks at base; narrow crown.	Moderate	4	Yes	ဆ ထ	Calif. bay	7
east.			7		-	
Multiple attachments at base; 12" stem leans	Good	വ	Yes	21,17,12	Coast live oak	ဖ
Codominant trunks at base; good young tree.	Good	2	Yes	6,5	Coast live oak	Ŋ
saturated soil from broken pipe.						
Good form and structure; epicormic shoots;	Good	4	Yes	21	Coast live oak	4
crown.						
Off-site; codominant trunks at base; narrow	Moderate	4	Yes	හ _් ර	Calif. bay	က
broken pipe.						
Off-site; one-sided north; saturated soil from	Moderate	4	Yes	12	Coast live oak	7
west.						,
Off-site; codominant trunks at 10'; crown bowed	Moderate	4	Yes	12	Coast live oak	<u>-</u>
TOWARD TO THE TOWARD T					-	

Bruzzone Family Lavenida Lane Orinda, California May 2009

COMMENTS		
SUITABILITY	FOR	PRESERVATION
CONDITION	1=POOR	5=EXCELLENT
Protected?		
SIZE	DIAMETER	(in inches)
SPECIES		

TREE No.

HORT SCIENCE

Multiple attachments at 1'; good form and	Multiple attachments at 1'; good young tree.	Multiple attachments at base; included bark.	High crown; good form and structure.	Slightly one-sided south.	Embedded barbed wire; dieback.	Multiple attachments at 1'; dieback in upper	crown,	Multiple attachments at 1"; central leader	decayed.	Trunk decay; dieback.	Multiple attachments at base; central leader	dead.	Multiple attachments at base; mistletoe.	Multiple attachments at base; central leader	decayed; dead stems.	Trunk wound; decay; mistletoe.	Off-site; extensive dieback; trunk decay.	Twig and branch dieback; trunk decay.	Multiple attachments at 2'; twig and branch	dieback.	Trunk wound; twig and branch dieback.	All but dead.	Codominant trunks at 5'; southern stem dead.	Embedded barbed wire; dead top.	Extensive trunk decay.
роод	Good	Good	Good	Good	Moderate	Poor		Poor		Poor	Poor		Moderate	Poor		Poor	Poor	Poor	Poor		Poor	Poor	Poor	Poor	Poor
5	വ	4	5	5	4	ო		7		2	က		ო	ო		ო	2	က	ო		က	_	7	~	~
Yes	Yes	Yes	Xes	Yes	Yes	Yes		Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
21	6,6,3	10,9,9,8	6	16	17	17,7,6,6,6		9,7,6,5,5		17	10,10,9,7,6,6		6,6,6,5,4,4	9,9,9,7,6,6,5,5		7	10,8,7,5,5	12,6,6	16,7,6,6,5		17	14,5,5,4	24	22	18
19 Coast live oak	Coast live oak	Coast live oak	Coast live oak	Coast live oak	Coast live oak	Calif. black walnut		Calif. black walnut		Calif. black walnut	Calif. black walnut		Calif. black walnut	Calif. black walnut		Calif. black walnut	Calif. black walnut	Calif. black walnut	Calif. black walnut		Calif. black walnut	Calif. black walnut	Calif, black walnut	Calif. black walnut	Calif. black walnut
. 6	20	21	22	23	24	25		56		27	28		53	30		31	32	33	34		35	36	37	38	39

Multiple attachments at 6'; poor form and structure; dieback.

Multiple attachments at base; minor twig dieback.

Crown.

Moderate

က

Yes

8,7,7,6,6,5,4

Calif. black walnut

29

Poor

က

Yes

16

Calif. black walnut

57

Tree Survey

Bruzzone Family Lavenida Lane Orinda, California May 2009

SCIENCE

HORT

	stern lent. lecay;	y r r per
COMMENTS	Embedded barbed wire; dead top. Extensive frunk decay south; dead top. Twig dieback Asymmetric crown; twig dieback. Extensive frunk decay; mistletoe. Codominant frunks at 1'; trunk decay on eastern stem. One stem dead; engulfed in poison oak. Multiple attachments at 5'; decay in attachment. Multiple attachments at 3'; twig dieback; mistletoe. Multiple attachments at 3'; extensive frunk decay; dieback. Multiple attachments at 7'; low lateral south.	Leans west; engulfed in poison oak; dieback. Multiple attachments at 6°; dieback in upper crown. Trunk decay in attachment; dieback in upper crown. Multiple attachments at 1°; engulfed in poison oak; dieback in upper crown. Multiple attachments at base; dieback in upper
SUITABILITY FOR PRESERVATION	Poor Moderate Moderate Poor Poor Poor Poor Poor	Poor Poor Poor
CONDITION 1=POOR 5=EXCELLENT	← ← ∞ ∞ 0 0 0 0 0 4	ოო ი ო ო
Protected?	\$\\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	es s s s ← es es c ← es es es c ← es es es c ← es es es c ← es
SIZE DIAMETER (in inches)	6,6 23 10,6 10,6 16,7,7 18,18 7,5 26,6 9,9,8 18,9	10 16 17,15,7 6,5,4,4,3 7,6,6,5,4
SPECIES	Calif. black walnut	Calif. black walnut
TREE No.	0 + 4 + 4 + 4 + 4 + 6 + 6 + 6 + 6 + 6 + 6	52 53 54 55 55

Bruzzone Family Lavenida Lane Orinda, California May 2009

HORT SCIENCE

COMMENTS	Trunk decay south; extensive dieback. Multiple attachments at base; shrub form. Stump sprout; central leader decayed. Multiple attachments at base; several dead stems. Multiple attachments at base; central leader decayed. Multiple attachments at base; one stem dead. Multiple attachments at base; one stem dead. Multiple attachments at base; central leader decayed. Basal cavity; decay; dead top. Dead stems; dead top. Trunk decay; extensive dieback. Central leader decayed; dead top. Twig dieback; engulfed in poison oak. Central leader decayed; dead top. Twig dieback. Central leader decayed; dead top. Central leader decayed; twig and branch dieback. Central leader decayed; twig dieback. Central leader decayed; twig dieback. Extensive trunk decay, twig dieback. Fair structure; minor twig dieback. Fair structure; minor twig dieback. Fair structure; minor twig dieback.	Multiple attachments at 2'; extensive dieback. All but dead.
SUITABILITY FOR PRESERVATION	Poor Poor Poor Poor Poor Poor Poor Poor	Poor Poor
CONDITION 1=POOR 5=EXCELLENT	←େଉପ ପ ଜଳ ପ୍ରଥେଶର ଅଧିକ୍ଷ	O
Protected?	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Yes No
SIZE DIAMETER (in inches)	10,9 6,5,4,4 10,8,7,6,5,5 8,7,4,4,3 13,8,7,7,6 5,4,4 9,7,7,6,5,5,4 9,8,6,6 7,7,6,6,5,5,4 9,8,6,6 7,7,6,4,4 5,5,4,4 7,7,6,5,4,4 5,5,4,4 7,7,6,5,4,4 7,7,6,5,5,4,4 6,5,4,4,3,2,2 7,6,6,5,5 13,9,8,7,6,6 14,9,8,5 8,7	10,9,7,5,5,4 5,5,4
SPECIES	Calif. black walnut	Calif. black walnut Calif. black walnut
TREE No.	58 60 61 63 63 64 65 65 67 77 77 77 77 77 77 78	79 80

Bruzzone Family Lavenida Lane Orinda, California May 2009



HORT SCIENCE

REE No.	SPECIES	SIZE DIAMETER (in inches)	Protected?	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
81	Calif. black walnut	7,7,6,6	Yes	7	Poor	Multiple attachments at base; central leader
82	Calif. black walnut	15,12	Yes	ო	Poor	decayed; gleback. Codominant trunks at 3'; twig and branch dieback
83	Calif. black walnut	10,9	Yes	2	Poor	Codominant trunks at 2": extensive dieback.
84	Calif. black walnut	21	Yes	2	Poor	Extensive trunk decay; dieback.
82	Calif. black walnut	22	Yes	ო	Poor	Off-site; trunk decay; dieback.
98	Calif. black walnut	11,10,7,6	≺es	ო	Poor	Off-site; multiple attachments at 3"; central leader
7	Calif black walnut	10.4.4.3	\ \	ς.	Moderate	decayed, dieback. Off-site: multiple attachments at 11: tuita diaback
. 80	Coast live oak	7. 4.	χ _Θ χ γ _Θ ς	> 4	Good	Growing against #87: slight lean porth
68	Calif. black walnut	12.7.7.6	Yes	•	Poor	Extensive frunk decay, dead too
06	Calif, black walnut	18	Yes	ന	Poor	Off-site; dieback in upper crown.
9	Calif. black walnut	6,6,6,5,4,4	Yes	ო	Poor	Off-site; multiple attachments at base; central
						leader decayed.
92	Coast live oak	-	Yes	4	Good	Codominant trunks at 5'; included bark.
60	Coast live oak	9'9'9	Yes	ო	Moderate	Off-site; codominant trunks at 3'; leans east; seam in attachment.
94	Coast live oak	11,8,8,7,6,6	Yes	4	Good	Multiple attachments at base; branches to the
95	Coast live oak	6,6,5,4,4,2	Yes	ო	Moderate	Off-site; multiple attachments at base; one-sided north
96	Coast live oak	9,8	Yes	4	Moderate	Off-site; codominant trunks at 3'; seam in attachment.
97	Plum Coast live oak	6,5,4,4,3	Yes Yes	4 ro	Moderate Good	Off-site; multiple attachments at base. Off-site: multiple attachments at base; upright
						form.

TREE No.

Bruzzone Family Lavenida Lane Orinda, California May 2009

SCIENCE

HORT

COMMENTS **PRESERVATION** SUITABILITY 5=EXCELLENT CONDITION 1=POOR **Protected?** DIAMETER (in inches) SIZE SPECIES

- 66	Coast live oak	13.12.10.8	Yes	. ro	Good	Off-site: multiple attachments at base: good form
						and structure.
100	Coast live oak	14,10	Yes	Ð	Good	Codominant trunks at base; good form and structure.
101	Coast live oak	13	Yes	S.	Good	Slight lean east: good form and structure.
102	Coast live oak	21	Yes	4	Good	Multiple attachments at 8'; embedded barbed
						wire; twig dieback.
103	Coast live oak	34,22,21	Yes	4	Moderate	Multiple attachments at 6'; embedded barbed
						wire; dieback in upright 15" stem.
104	Coast live oak	12	Yes	ო	Moderate	One-sided west; sapsucker damage.
105	Calif. bay	4	<u>8</u>	ო	Moderate	Suppressed form; leans north.
106	Calif. bay	5	Š	ო	Moderate	Suppressed form; leans north.
107	Calif. bay	4,3,3,2,2	₈	က	Moderate	Multiple attachments at base; narrow crown.
108	Coast live oak	15,11	Yes	4	Moderate	Codominant trunks at base; narrow crown; lateral
						south, "
109	Coast live oak	14,13,7	Yes	က	Moderate	Codominant trunks at 2'; narrow crown;
						embedded barbed wire.
110	Coast live oak	19,13,6,5	Yes	4	Moderate	Codominant trunks at 2'; embedded barbed wire;
		-				13" stem forms heavy lateral limb south.
111	Coast live oak	4	Yes	4	Good	Upright form; narrow crown.
112	Coast live oak	19,6	Yes	4	Moderate	One-sided south; heavy lateral limbs.
113	Coast live oak	12	Yes	4	Moderate	Slight lean east; high crown.
114	Coast live oak	7	Yes	ო	Moderate	Asymmetric crown; twig dieback.
115	Coast live oak	-	Yes	4	Moderate	One-sided and leaning south.
116	Coast live oak	21	Yes	4	Good	Multiple attachments at 5'; asymmetric crown.
117	Coast live oak	-	Yes	ო	Moderate	Slight lean east; asymmetric crown.

Tree

Bruzzone Family

Tre	ree Survey	Bruzzone Family Lavenida Lane Orinda, California May 2009	e Family a Lane ifornia			HORT SCIENCE
TREE No.	SPECIES	SIZE DIAMETER (in inches)	Protected?	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
118	Coast live oak	16	Yes	4	Moderate	Codominant trunks at 5'; heavy lateral limb
119	Coast live oak	17,7	Yes	4	Good	Good form and structure; 7" stem forms lateral south
120	Coast live oak	7,3,2	Yes	်င	Moderate	Suppressed form; leans east.
121	Coast live oak	15	Yes	4	Moderate	Leans west.
122	Coast live oak	17	Yes	5	Good	Good form and structure.
123	Coast live oak	13	Yes	4	Moderate	Slight lean west; lateral north.
124	Coast live oak	10	Yes	က	Moderate	Multiple attachments at 8'; poor branch structure.
125	Coast live oak	15	Yes	ო	Moderate	Good form and structure; very thin crown.
126	Coast live oak	12	Yes	က	Moderate	One-sided north.
127	Coast live oak	17	Yes	4	Good	Codominant trunks at 5'; seam in attachment.
128	Plum	7	Yes	4	Moderate	Upright form; epicormic shoots.
129	Plum	9,9	Yes	က	Poor	Twig and branch dieback.
130	Coast live oak	_	Yes	4	Good	Upright form.
131	Coast live oak	7	Yes	4	Moderate	Leans northeast.
132	Coast live oak	10	Yes	က	Poor	One-sided west; large trunk wound.
133	Coast live oak	-	Yes	4	Good	Codominant trunks at 7'; branch wound in upper
						crown,
134	Coast live oak	23	Yes	4.	Good	Multiple attachments at 7'; engulfed in poison
						oak.
135	Coast live oak	7	Yes	က	Moderate	Suppressed form; crown bowed south.
136	Coast live oak	12	Yes	4	Good	Slight lean south.
137	Coast live oak	7	Yes	ო	Moderate	One-sided east.
138	Coast live oak	∞	Yes	ო	Moderate	One-sided east.
139	Coast live oak	တ	Yes	က	Poor	Suppressed form; basal wound.
140	Coast live oak	10	Yes	ო	Moderate	Upright form.

Bruzzone Family Lavenida Lane Orinda, California May 2009

SCIENCE

HORT

141 Coast live oak 6	TREE No.	SPECIES	SIZE DIAMETER (in inches)	Protected?	CONDITION 1=POOR 5=EXCELLENT	SUITABILITY FOR PRESERVATION	COMMENTS
Coast live oalk 10 Yes 3 Moderate Coast live oalk 10,10,9 Yes 4 Good Coast live oalk 12,10,97,5 Yes 4 Moderate Coast live oalk 13,5 Yes 3 Moderate Coast live oalk 14 Yes 3 Moderate Coast live oalk 14 Yes 3 Poor Coast live oalk 15,7 Yes 2 Poor Coast live oalk 14 Yes 3 Moderate Coast live oalk 14 Yes 3 Moderate Coast live oalk 16 Yes 3 Moderate Coast live oalk 19 Yes 4 Good Coast live oalk 19 Yes 4 Good Coast live oalk 19 Yes 4 Good Coast live oalk 17 Yes 4 Good Coast live oalk 17 Yes 4 Good	141	Coast live oak		Yes	က	Moderate	Upright form: slightly one-sided east
Coast live oak 9 Yes 3 Moderate Coast live oak 10,10,9 7,5 Yes 4 Good Coast live oak 12,10,9,7,5 Yes 4 Moderate Coast live oak 13,5 Yes 3 Moderate Coast live oak 14 Yes 3 Poor Coast live oak 13,11 Yes 4 Good Coast live oak 15,7 Yes 4 Moderate Coast live oak 14 Yes 3 Moderate Coast live oak 14 Yes 3 Moderate Coast live oak 19 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good	142	Coast live oak	10	Yes	ന	Moderate	One-sided east.
Coast live oak 10,10,9 Yes 4 Good Coast live oak 7,6 Yes 4 Good Coast live oak 7,6 Yes 3 Moderate Coast live oak 13,5 Yes 3 Moderate Coast live oak 14 Yes 3 Poor Calif. black walnut 6,5,4,3,3,3 Yes 2 Poor Coast live oak 15,7 Yes 4 Good Coast live oak 14 Yes 4 Moderate Coast live oak 19 Yes 3 Moderate Coast live oak 19 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 17 Yes 4 Good	143	Coast live oak	o	Yes	ო	Moderate	One-sided south.
Coast live oak 12,10,9,7,5 Yes 4 Good Coast live oak 7,6 Yes 4 Moderate Coast live oak 13,5 Yes 3 Moderate Coast live oak 14 Yes 3 Poor Calif. black walnut 6 Yes 2 Poor Calif. black walnut 6 Yes 3 Poor Cast live oak 13,11 Yes 4 Good Coast live oak 14 Yes 4 Moderate Coast live oak 15,7 Yes 4 Good Coast live oak 16 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 9 Yes 4 Good Coast live oak 9 Yes 4 Good Coast live oak 9 Yes 4 Good	144	Coast live oak	10,10,9	Yes	4	Good	Multiple attachments at 3'; seam in attachment.
Coast live oak 7,6 Yes 4 Moderate Coast live oak 13,5 Yes 3 Poor Coast live oak 14 Yes 4 Good Calif. black walnut 6 Yes 3 Moderate Calif. black walnut 6 Yes 3 Poor Calif. black walnut 6 Yes 3 Moderate Calif. black walnut 6 Yes 3 Poor Calif. black walnut 6 Yes 3 Moderate Calif. black walnut 6 Yes 4 Good Calif. black walnut 6 Yes 4 Moderate Plum 65,4,3,3,3 Yes 4 Moderate Coast live oak 19 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 9 Yes 4 Good Coast live oak 10 Yes 4 Good <td>145</td> <td>Coast live oak</td> <td>12,10,9,7,5</td> <td>Yes</td> <td>4</td> <td>Good</td> <td>Multiple attachments at 8"; narrow attachment.</td>	145	Coast live oak	12,10,9,7,5	Yes	4	Good	Multiple attachments at 8"; narrow attachment.
Coast live oak 8 Yes 3 Poor Coast live oak 13,5 Yes 3 Moderate Coast live oak 14 Yes 4 Good Calif. black walnut 6 Yes 3 Poor Plum 6,5,4,3,3,3 Yes 2 Poor Coast live oak 13,11 Yes 4 Good Coast live oak 14 Yes 3 Moderate Coast live oak 19 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 10 Yes 4 Moderate Coast live oak 12 Yes 6 Good Coast liv	146	Coast live oak	2,6	Yes	4	Moderate	Codominant trunks at base, one-sided west.
Coast live oak 13,5 Yes 3 Moderate Coast live oak 14 Yes 4 Good Calif. black walnut 6,5,4,3,3,3 Yes 2 Poor Plum 6,5,4,3,3,3 Yes 2 Poor Coast live oak 15,7 Yes 4 Good Coast live oak 14 Yes 3 Moderate Coast live oak 19 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 9 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 9 Yes 4 Good Coast live oak 10 Yes 4 Good Coast live oak 10 Yes 4 Moderate C	147	Coast live oak	œ	Yes	ო	Poor	Suppressed; poor form and structure.
Coast live oak 14 Yes 4 Good Calif. black walnut 6 Yes 3 Poor Plum 6,5,4,3,3,3 Yes 2 Poor Coast live oak 15,7 Yes 4 Moderate Coast live oak 14 Yes 3 Moderate Coast live oak 16 Yes 4 Moderate Coast live oak 19 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 6 Yes 4 Good Coast live oak 17 Yes 3 Moderate Coast live oak 10 Yes 4 Moderate Coast live oak 10 Yes 4 Moderate	148	Coast live oak	13,5	Yes	ო	Moderate	Codominant trunks at 4'; 5" stem forms lateral
Coast live oak 14 Yes 4 Good Calif. black walnut 6 Yes 3 Poor Plum 6,5,4,3,3,3 Yes 2 Poor Coast live oak 15,7 Yes 4 Moderate Coast live oak 9 Yes 3 Moderate Coast live oak 16 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 6 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 10 Yes 3 Moderate Coast live oak 10 Yes 4 Moderate Coast live oak 10 Yes 5 Good Coast liv			-				west.
Calif. black walnut 6 Yes 3 Poor Plum 6,5,4,3,3,3 Yes 2 Poor Coast live oak 13,11 Yes 4 Moderate Coast live oak 14 Yes 3 Moderate Coast live oak 19 Yes 4 Moderate Coast live oak 13 Yes 4 Good Coast live oak 6 Yes 4 Good Coast live oak 9 Yes 4 Good Coast live oak 9 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 9,8,6 Yes 4 Good Coast live oak 10 Yes 4 Good Coast live oak 10 Yes 5 Good Coast live oak 12 Yes 5 Good Coast live oak 12 Yes 5 Good Coast live	149	Coast live oak	4	Yes	4	Good	Upright form; small lateral west.
Plum 6,54,3,3,3 Yes 2 Poor Coast live oak 13,11 Yes 4 Good Coast live oak 14 Yes 3 Moderate Coast live oak 19 Yes 4 Moderate Coast live oak 13 Yes 4 Good Coast live oak 6 Yes 4 Good Coast live oak 6 Yes 4 Good Coast live oak 9 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 9,8,6 Yes 4 Good Coast live oak 10 Yes 4 Good Coast live oak 10 Yes 5 Good Coast live oak 12 Yes 5 Good Coast live oak 12 Yes 5 Good Flum <	150	Calif. black walnut	9	Yes	က	Poor	Upright form; twig dieback.
Coast live oak 13,11 Yes 4 Good Coast live oak 15,7 Yes 4 Moderate Coast live oak 14 Yes 3 Moderate Coast live oak 16 Yes 4 Moderate Coast live oak 13 Yes 4 Good Coast live oak 6 Yes 4 Good Coast live oak 9 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 10 Yes 4 Good Coast live oak 10 Yes 4 Moderate Coast live oak 10 Yes 5 Good Coast live oak 12 Yes 5 Good Coast live oak 12 Yes 5 Good Coast liv	151	Plum	6,5,4,3,3,3	Yes	2	Poor	Multiple attachments at 2"; extensive dieback.
Coast live oak 15,7 Yes 4 Moderate Coast live oak 14 Yes 3 Moderate Coast live oak 16 Yes 4 Moderate Coast live oak 13 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 6 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 10 Yes 4 Good Coast live oak 10 Yes 4 Good Coast live oak 10 Yes 5 Good Coast live oak 12 Yes 5 Good Flum	152	Coast live oak	13,11	Yes	4	Good	Codominant trunks at 4'; included bark.
Coast live oak 14 Yes 3 Moderate Coast live oak 16 Yes 3 Moderate Coast live oak 19 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 6 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 10 Yes 3 Moderate Coast live oak 10 Yes 4 Good Coast live oak 10 Yes 5 Good Coast live oak 12 Yes 5 Good Plum 13 Yes 3 Poor	153	Coast live oak	15,7	Yes	4	Moderate	Fair structure; 9" stem fors lateral south.
Coast live oak 9 Yes 3 Moderate Coast live oak 16 Yes 4 Moderate Coast live oak 13 Yes 4 Good Coast live oak 6 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 3 Moderate Coast live oak 10 Yes 5 Good Coast live oak 12 Yes 5 Good Plum 13 Yes 3 Poor	154	Coast live oak	4	Yes	က	Moderate	Asymmetric crown; trunk wounds.
Coast live oak 16 Yes 4 Moderate Coast live oak 19 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 9 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 9,8,6 Yes 3 Moderate Coast live oak 10 Yes 4 Moderate Coast live oak 12 Yes 5 Good Plum 13 Yes 3 Poor	155	Coast live oak	တ	Yes	က္	Moderate	Small, high crown.
Coast live oak 19 Yes 4 Good Coast live oak 13 Yes 4 Good Coast live oak 9 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 9,8,6 Yes 3 Moderate Coast live oak 10 Yes 4 Moderate Coast live oak 12 Yes 5 Good Plum 13 Yes 3 Poor	156	Coast live oak	16	Yes	4	Moderate	Codominant trunks at 6'; asymmetric crown.
Coast live oak 13 Yes 3 Moderate Coast live oak 6 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 9,8,6 Yes 3 Moderate Coast live oak 10 Yes 4 Moderate Coast live oak 12 Yes 5 Good Plum 13 Yes 3 Poor	157	Coast live oak	19	Yes	4	Good	Crook at 6'; good form.
Coast live oak 6 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 17 Yes 3 Moderate Coast live oak 10 Yes 4 Moderate Coast live oak 12 Yes 5 Good Plum 13 Yes 3 Poor	158	Coast live oak	13	Yes	ო	Moderate	Leans west.
Coast live oak 9 Yes 4 Good Coast live oak 17 Yes 4 Good Coast live oak 9,8,6 Yes 3 Moderate Coast live oak 10 Yes 4 Moderate Coast live oak 12 Yes 5 Good Plum 13 Yes 3 Poor	159	Coast live oak	9	Yes	4	Good	Good young tree; upright form.
Coast live oak 17 Yes 4 Good Coast live oak 9,8,6 Yes 3 Moderate Coast live oak 10 Yes 4 Moderate Coast live oak 12 Yes 5 Good Plum 13 Yes 3 Poor	160	Coast live oak	့တ	Yes	4	Good	Slight lean west.
Coast live oak 9,8,6 Yes 3 Moderate Coast live oak 10 Yes 4 Moderate Coast live oak 12 Yes 5 Good Plum 13 Yes 3 Poor	161	Coast live oak	17	Yes	4	Good	Multiple attachments at 6'; twig dieback.
Coast live oak 10 Yes 4 Moderate Coast live oak 12 Yes 5 Good Plum 13 Yes 3 Poor	162	Coast live oak	9,8,6	Yes	က	Moderate	Multiple attachments at 3"; one-sided west.
Coast live oak 12 Yes 5 Good Plum 13 Yes 3 Poor	163		10	Yes	4	Moderate	Slight lean west.
Plum 13 Yes 3 Poor	164	Coast live oak	12	Yes	5	Good	No tag; good young tree.
	165	Plum	13	Yes	က	Poor	Multiple attachments at 5'; narrow attachments;

Bruzzone Family Lavenida Lane Orinda, California May 2009





COMMENTS

SUITABILITY

CONDITION 1=POOR

Protected?

SIZE DIAMETER

SPECIES

TREE No. (in inches)

PRESERVATION

5=EXCELLENT

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Good form and structure.	One-sided east; twig dieback.	One-sided west.	Codominant trunks at 3'; good form and	structure; 8" stem form lateral southwest.	Very one-sided west.	Codominant trunks at 5'; good form and	structure.	Codominant trunks at 5'; good form and	structure.	Multiple attachments at 5'; included bark; good	form and structure.	Off-site; multiple attachments at 8'; one-sided	northwest.	Codominant trunks at 6'; asymmetric crown.	Multiple attachments at 6'; one-sided south;	lateral north.	Multiple attachments at base; upright form.	Off-site, no tag; codominant trunks at 6'; good	form and structure.	Multiple attachments at 4'; good form and	structure.	Codominant trunks at 4'; slight lean east.	Codominant trunks at 6'; crook at 2'; leans east.	Multiple attachments at 2'; engulfed in poison	oak.	Multiple attachments at 1'; shrubby.
Good	Moderate	Moderate	Good		Moderate	Good		Good		Good		Moderate		Moderate	Moderate		Good	Good		Good		Good	Moderate	Moderate		Moderate
က	ო	4	4		ო	S		2		4		4		4	4		4	ည		S		4	4	က		က
Yes	Yes	Yes	Yes		Yes	Yes		Yes		Yes		Yes		Yes	Yes		Yes	Yes		Yes		Yes	Yes	Yes		Yes
16	တ	9	16,13,8		10	92		18		32		20		20	19	-	14,12,5	18		15,13,10		12,10	19	6,4,3		6,5,4,3
Coast live oak	Calif. black walnut	Coast live oak	Coast live oak		Coast live oak	Coast live oak		Coast live oak		Coast live oak		Coast live oak		Coast live oak	Coast live oak		Arroyo willow	Coast live oak		Coast live oak		Coast live oak	Coast live oak	Calif. bay		Calif. bay
166	167	168	169		170	171		172		173		174		175	176		177	178		179		180	181	182		183

Bruzzone Family Lavenida Lane Orinda, California May 2009

Protected? CONDITION SUITABILITY
1=POOR FOR

DIAMETER (in inches)

SIZE

SPECIES

TREE No.

COMMENTS

1=POOR FOR 5=EXCELLENT PRESERVATION

F.	Ź	7	HORT SCIENCE

184	Hawthorne	8,7,7,6,4,4	Yes	ო	Poor	Multiple attachments at base; twig dieback.
185	Coast live oak	17	Yes	4	Good	Slight crook at 2'; good form and structure.
186	Coast live oak	16	Yes	4	Moderate	Multiple attachments at 5'; trunk wound east.
187	Coast live oak	19,18,17	Yes	4	Moderate	Off-site; multiple attachments at 1'; leans west;
						trunk wound.
188	Coast live oak	တႋ	Yes	ო	Moderate	Off-site; suppressed form; crown bowed west to
						horizontal.
189	Coast live oak	14	Yes	ო	Moderate	Off-site; one stem decayed; remaining stem
						bowed west to horizontal.
061	Calif. bay	9'2	Yes	4	Good	Off-site; codominant trunks at 2'; upright form.
191	Coast live oak	32	Yes	4	Good	Off-site; upright form; good form and structure.
192	Calif. black walnut	10	Yes	5	Poor	Off-site; high crown; enguifed in ivy.
193	Coast live oak	33	Yes	4	Good	Off-site; upright form; lateral north.
194	Deodar cedar	20	Yes	4	Moderate	Off-site, no tag; pruned for overhead utilities.
195	Deodar cedar	20	Yes	4	Moderate	Off-site, no tag; pruned for overhead utilities.
196	Deodar cedar	18	Yes	4	Moderate	Off-site no tag: pruned for overhead utilities