PUD-84
Frank and Barbara Berlogar

EXHIBIT C

Berlogar Engineering
Silver Oaks Project
Arborist Tree Assessment Report

27 September 2010

Ralph Osterling Consultants

Natural & Urban Resources Management

ARBORIST TREE ASSESSMENT REPORT

Silver Oaks Project
Livermore, California

Prepared for:

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27 September 2010

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Contents

Introduction
Assignment 1
Survey Methods 1

Observations and Discussion 1

Conclusion 2

Recommendations 2

Literature Referenced 4

Table 1
Tree Species Summary 5

Table 2
Evaluation Factors for Determining
Overall Tree Condition 6

Table 3
Suitability Factors for Tree Preservation 7

Table 4
Tree Assessment Chart 8

Appendix 1
Tree Map 11

Attachments
Certification of Performance 12
Terms and Conditions 13

Introduction

Assignment

Berlogar Geotechnical Consultants (BGC) requested Ralph Osterling Consultants, Inc. (ROC) to complete a tree assessment report of certain trees located on property adjacent to Silver Oaks Court. This report is limited to 21 trees called out by BGC and an additional four trees ROC observed to be possibly relevant to the project.

Survey Methods

A visual assessment of the trees was made from the ground. No samples were collected for laboratory analysis nor were the trees climbed as neither were part of the assignment. The trees were affixed with blue numerical aluminum tags for reference purposes in the report and the Tree Location Map. The numerical tags were affixed on the north facing side of the trunk approximately five to six feet above grade when physically possible. The trunk diameter of trees was measured with a diameter tape at the height of 4.5 feet above ground level as specified in Chapter 17.16 'Tree Preservation', section 17.16.006 'Definitions' of the municipal code for the City of Pleasanton

Observations and Discussion

On 22 September 2010, ROC visited the subject property to complete the requested tree assessment. The property was observed to be former pasture land and without residential structures. Mature blue oaks are the dominate tree species.

A total of 25 trees composed of 3 tree species were assessed; blue oak (23), black oak (1) and valley oak (1). Please refer to Table 1 – Summary of Tree Species for additional information.

The subject trees were assessed for structure, health and overall condition. Table 2 – Evaluation Factors for Determining Overall Tree Condition defines the characteristics for each rating. Table 4 – Tree Assessment Chart includes the condition ratings for each assessed tree.

Two trees, both blue oaks were observed to have suffered major limb failures. Tree 6 lost approximately one third of its canopy with its limb failure. The failed limb remains attached to the trunk and appears stable. One half of the canopy for tree 8 was lost with its limb failure. Debris and the failed limb were removed from the vicinity of tree 8. A large crack is visible from the face of the wound extending to the base of the tree.

Assessed trees were also rated as to suitability for preservation. Nineteen trees were rated high in suitability for preservation and six were determined to be moderate in suitability for preservation.

Table 3 – Suitability Factors for Tree Preservation explains the method behind the rating system. Suitability for preservation is especially valuable when used as a design component by architects and planners. This qualitative tree data is a contributing factor when deciding the cost-effectiveness and the reasonableness of whether to accommodate a tree by design. Table 4 – Tree Assessment Chart contains the suitability rating for each tree with germane comments.

Conclusions

With the exception of trees 6 and 8, the resident trees are for the most part in fair to very good overall condition. Removal of large dead branches and judicious reduction pruning when necessary by a qualified tree contractor would be a prudent course of action prior to beginning construction activities.

Trees 6 and 8 will require work to balance or reduce their foliar canopies to increase their aerodynamic properties. Proper installation of suitable hardware may increase structural integrity. Currently these two trees present a low risk of hazard to humans or domestic animals.

Construction activities adjacent to the dripline of trees, grade changes or changes in the direction of run-off should be avoided. If construction impacts to trees are a concern, an effective tree protection plan that is properly implemented is expected to extend the life of these trees.

Recommendations

1. Final grading, improvement and construction plans should consider the tree data presented in this report to proactively reduce construction impacts to the trees through the design process.

2. The final grading, improvement and construction plans should be reviewed by a qualified Arborist prior to the commencement of construction activities.

3. Proper implementation of an effective tree protection plan, which includes regular monitoring by a qualified Arborist, is expected to extend the life of those protected trees determined to be moderately or highly suitable for preservation.

4. All tree work (pruning and removals) is to be performed by a State of California Licensed Tree Contractor. All pruning is to be performed or directed by a Certified Arborist or a Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture) and adhere to the most recent editions of the American National Standards Institute (ANSI) for Tree Care

Operations (Z133.1) and Pruning (A300). The Project Arborist should monitor any pruning of the trees.

5. Should monitoring of the trees during construction be required, a qualified Arborist should be retained to act as the Project Arborist. A qualified Arborist would include an ISA Certified Arborist, an ASCA Registered Consulting Arborist or a Registered Professional Forester.

References

American National Standard. Tree Care Operations (ANSI 133.1- ANSI A300 et al.) American National Standards Institute 11 West 42nd Street New York, NY 10036 c.1994

Dreistadt, S.H. and Kelly, J.K. Pests of Landscape Trees and Shrubs. 2nd ed. Oakland, CA: UC/ANR Publications (Publication 3359) c.2004

Harris, R.W., Clark, J.R. and Matheny, N.P. Arboriculture: *integrated management of landscape tree, shrubs, and vines*.3rd ed. Upper Saddle River, NJ: Prentice-Hall, Inc. c.1999

Hayes, E. Evaluating Tree Defects. Rochester, MN: Safetrees, c.2001

Shigo, A.L. A New Tree Biology. Durham, NH: Shigo and Trees, Associates c.1986

Swiecki, Tedmund J. and Bernhardt, Elizabeth A. 2006. A field guide to insects of California oaks. Gen. Tech Rep. PSW-GTR—197. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture, 151p.

Table 1

Tree Species Summary

TABLE 1
Tree Species Summary
Silver Oaks Project
Pleasanton, California

SPECIES	TREE POPULATION	PERCENTAGE OF POPULATION	Range of Trunk Diameters				OVERALL CONDITION RATING				
			6- 14	15 - 23	24 - 32	33 - 39	Very Poor	Poor	Fair	Good	Very Good
black oak *(Quercus kelloggii)*	1	4%	1					1			
blue oak *(Quercus douglasii)*	23	92%		5	16	2		3	12	6	2
valley oak *(Quercus lobata)*	1	4%		1				1			
TOTAL TREES	**25**	**100%**	**1**	**6**	**16**	**2**	**0**	**5**	**12**	**6**	**2**

TABLE 2

Evaluation Factors for Determining
Overall Tree Condition

Table 2
Evaluation Factors for Determining
Overall Tree Condition

Structure	
1-Very Poor	Trunk has large pockets of decay, is weakly bifurcated or has a severe lean. Limbs or branches are poorly attached or dead. Possible hazard.
2-Poor	Limbs or branches are poorly attached or developed. Canopy is not symmetrical. Trunk has a lean.
3-Fair	Trunk, limb and branch development though flawed is typical of this species
4-Good	Trunk is well developed with well-attached limbs and branches have some flaws but hardly visible.
5-Very Good	In addition to attributes of a good rating, the tree exhibits a well-developed root flare and a balanced canopy.
Health	
1-Very Poor	Tree displays severe dieback of branches, canopy is extremely sparse. May exhibit extensive pathogen infestation. Or tree is dead.
2-Poor	Tree displays some dieback of branches, foliar canopy is sparse, little to no signs of new growth or vigor. Possible pathogen infestation.
3-Fair	Tree is developing in a manner typical to others in the area. Canopy is full.
4-Good	New growth is vigorous as evidenced by stem elongation and color. Canopy is dense.
5-Very Good	In addition to attributes of a good rating, tree is displaying extremely vigorous growth and trunk displays a pattern of vigor cracks or lines.
Overall	
0-DEAD	Tree has no green foliage and no green in sampled twigs.
1-Very Poor	Tree is in severe decline or dead.
2-Poor	Tree is in decline or lacks vigor.
3-Fair	Tree is typical of species in the area.
4-Good	Tree is vigorous with few visible flaws.
5-Very Good	Tree is extremely vigorous.

TABLE 3

Suitability Factors for Tree Preservation

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Table 3
Suitability Factors for Tree Preservation

Suitability Factors
To assist in the design process assessed trees have been rated as to suitability for preservation. Factors that influence suitability include:

Health: Overall tree vigor, extension of new growth, proper closing of wounds and the presence of plant pathogens.

Structure: The overall tree architrave, including roots, trunk, limbs, and branches are visually assessed for defects. A defect that can be corrected by proper arboricultural practices may allow a tree to be preserved.

Safe and Useful Life Expectancy: The life of a tree is much like a bell-shaped curve; where aging accentuates tree vigor until a point at the top of the curve where aging now reduces tree vigor and decline begins. A species may be long lived but have a poor structure that is prone to fail (e.g. blue gum) and should not be considered safe or useful.

Tree Species: The factors described above are predicated on the tree species. Certain species grow slowly and decline slowly (e.g. coast live oak). Other species grow quickly and decline quickly (e.g. Monterey pine). Tree species that are invasive, or a nuisance or have an inherently poor structure are to be avoided (e.g. Bailey acacia).

Suitability Ratings
When the above factors are considered, assessed trees were rated as HIGH, MODERATE or LOW in suitability for preservation. An explanation for each rating is provided below.

HIGH: Trees which are significant and expected to provide long-term contributions to the site. They display fair or better health and fair or better structural condition. On-going suitability may require typical maintenance practices commonly associated with the tree species. These trees are the most suitable for retention measures and are worthy of consideration during the design process or design revision.

MODERATE: Trees which contribute to the site but provide less than significant contributions for reasons of health, structural condition or appearance. On-going suitability will require properly implemented maintenance practices. Design revisions to preserve these trees may not be warranted.

LOW: Trees which provide minor contributions to the property for reasons of poor health, structural condition or appearance. A tree species that is a nuisance due to litter, will grow too large for the area or is known to develop a structure prone to failure is also rated low in suitability. Generally speaking, trees in this category are not expected to benefit or respond to acceptable corrective measures. Removal of these trees will often allow the safe, useful and aesthetic enjoyment of the property. *Preservation of low rated trees is not recommended.*

TABLE 4

Tree Assessment Chart

Table 4
Tree Assessment Chart
Silver Oaks Project
Pleasanton, California

Tree No.	Common Name	Species	Trunk Diameter [1]	Adjusted Trunk Diameter [2]	Crown Radius [3]	Approximate Height [4]	Structure	Health	Overall Condition [5]	Suitability [6]	Comments A	Comments B	Comments C	Recommendations
1	blue oak	*Quercus douglasii*	25.5	26	24	55	3	3	Fair	High	Shared canopy,	Typical form		
2	blue oak	*Quercus douglasii*	32.1	32	48	63	4	4	Good	High	Good overall form,	shared canopy,		
3	black oak	*Quercus kelloggii*	7.1	7	4	9	2	2	Poor	Moderate	Suppressed growth	trunk lean,	one sided canopy	
4	blue oak	*Quercus douglasii*	23.2	23	22	50	5	5	Very Good	High	Good overall form,	dense canopy		
5	blue oak	*Quercus douglasii*	28.6	29	36	50	3	4	Fair	High	Shared canopy.	one sided canopy,	dead branches	
6	blue oak	*Quercus douglasii*	30.5	31	40	50	1	4	Poor	Moderate	Major limb failure, one third of canopy damaged, requires mitigation	shared canopy,	trunk wounds	Recommended removal of failed limb and proper follow-up maintenance pruning
7	blue oak	*Quercus douglasii*	18.3	18	18	20	5	5	Very Good	High	Good overall form,	dead branches		
8	blue oak	*Quercus douglasii*	25.5	26	24	28	1	5	Poor	Moderate	Major stem failure, half of tree removed, crack extends to root collar,	one sided canopy,	dense canopy	Recommended reduction of foliar end weight.
9	blue oak	*Quercus douglasii*	25	25	20	23	3	3	Fair	Moderate	Dead branches,	trunk wounds and canker		

Table 4
Tree Assessment Chart
Silver Oaks Project
Pleasanton, California

Tree No.	Common Name	Species	Trunk Diameter [1]	Adjusted Trunk Diameter [2]	Crown Radius [3]	Approximate Height [4]	Structure	Health	Overall Condition [5]	Suitability [6]	Comments A	Comments B	Comments C	Recommendations
10	blue oak	*Quercus douglasii*	29	29	26	45	5	4	Good	High	Mistletoe observed in canopy	dense canopy	dead branches	
11	blue oak	*Quercus douglasii*	17	17	20	30	4	2	Poor	Moderate	Sparse canopy,	branch dieback,	branch failures	
12	blue oak	*Quercus douglasii*	28¥	28	33	25	3	3	Fair	High	Trunk bifurcation,	one sided canopy,		
13	blue oak	*Quercus douglasii*	31.4¥	31	30	38	3	4	Fair	High	Trunk lean	cavity at root collar,	trunk wounds	
14	blue oak	*Quercus douglasii*	29	29	25	38	4	3	Fair	High	Trunk wounds,	shared canopy,	dead branches	
15	blue oak	*Quercus douglasii*	15.8	16	12	14	4	3	Fair	High	Sparse canopy,	dead branches		
16	valley oak	*Quercus lobata*	22.1	22	25	28	3	2	Poor	Moderate	Sparse canopy,	one sided canopy,	dead branches	
17	blue oak	*Quercus douglasii*	19.8	20	28	28	4	5	Good	High	Trunk lean	root collar covered,		
18	blue oak	*Quercus douglasii*	28.8	29	36	35	4	3	Fair	High	Dense canopy, tag affixed on west side,	dead branches	root collar covered	
19	blue oak	*Quercus douglasii*	32.1	32	36	30	4	4	Good	High	Shared canopy,	dense canopy	trunk wounds	
20	blue oak	*Quercus douglasii*	24.2	24	20	33	4	4	Good	High	Good overall form,	root collar covered,		
21	blue oak	*Quercus douglasii*	34	34	30	38	4	4	Good	High	Trunk bifurcation,	dead branches		

Table 4
Tree Assessment Chart
Silver Oaks Project
Pleasanton, California

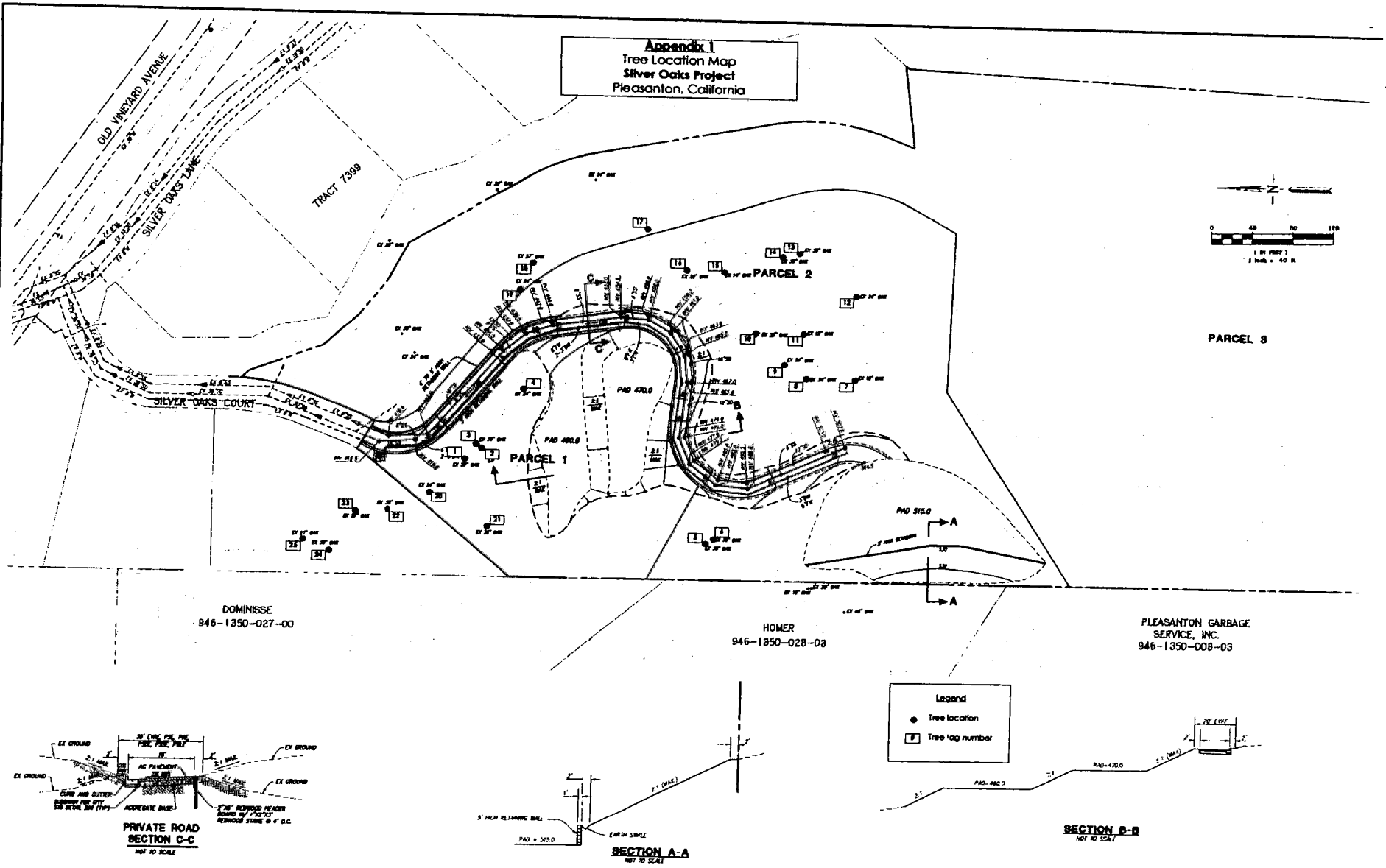
Tree No.	Common Name	Species	Trunk Diameter [1]	Adjusted Trunk Diameter [2]	Crown Radius [3]	Approximate Height [4]	Structure	Health	Overall Condition [5]	Suitability [6]	Comments A	Comments B	Comments C	Recommendations
22	blue oak	*Quercus douglasii*	25.7,13.4	39	26	28	3	3	Fair	High	Sparse canopy, one stem	trunk bifurcation,	trunk lean	
23	blue oak	*Quercus douglasii*	25	25	26	30	4	3	Fair	High	Sparse canopy,	trunk wounds,		
24	blue oak	*Quercus douglasii*	25.2	25	30	33	4	3	Fair	High	Trunk wounds: barb wire,	trunk bifurcation,	sparse canopy	
25	blue oak	*Quercus douglasii*	26.2	26	35	38	4	3	Fair	High	High foliar crown,	trunk wounds,	sparse canopy	

1/ Trunk Diameter: Measured at 4.5 feet from the existing grade with a diameter tape.
2/ Adjusted Trunk Diameter: Diameters were rounded to whole numbers. Multi-stem trunk diameters were added together as stated in the ordinance.
3/ Crown Radius: Distance was paced from trunk to furthest point of dripline
4/ Approximate Height: Tree height was visually approximated
5/ Overall Condition: Please refer to Table 2a for an explanation of terms.
6/ Suitability for Preservation: Please refer to Table 2b for an explanation of terms.
¥/ Symbol indicates that the trunk or trunks were measured below trunk bifurcation or largest limb
TREE Highlighted trees were observed to be at risk for structural failure and should be mitigated prior to beginning construction activities

Appendix 1

Tree Location Map

Appendix 1
Tree Location Map
Silver Oaks Project
Pleasanton, California



PRELIMINARY GRADING AND UTILITY PLAN
BERLOGAR PROPERTY

CITY OF PLEASANTON, ALAMEDA COUNTY, CALIFORNIA

RJA
RUGGERI·JENSEN·AZAR
ENGINEERS • PLANNERS • SURVEYORS

DATE: JULY 20, 2009 JOB NO. 0210408 SHEET 3 OF

Attachments

Certification of Performance
and
Terms and Conditions

Certification of Performance

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

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 and are based on current scientific procedures and facts;

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 subsequent events;

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

I further certify that I am a Registered Consulting Arborist affiliated with the American Society of Consulting Arborists (ASCA), a member of the International Society of Arboriculture (ISA) and an ISA Certified Arborist.

Disclosure Statement

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

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

Trees can be managed but they cannot be controlled.
To live near trees is to accept some degree of risk.

Signed: Walter Fujii Date: 9/27/10

Walter Fujii

Ralph Osterling Consultants, Inc.
TERMS AND CONDITIONS

The following terms and conditions apply to all oral and written reports and correspondence pertaining to the consultations, inspections and activities of Ralph Osterling Consultants, Inc. hereinafter referred to as "ROC".

1. Any legal description provided to the consultant is assumed to be correct. No responsibility is assumed for matters legal in character nor is any opinion rendered as to the quality of any title.

2. It is assumed that any property referred to in any report or in conjunction with any services performed by ROC, is not in violation of any applicable codes, ordinances, statutes, or other governmental regulations, and that any titles and ownership to any property are assumed to be good and marketable. Any existing liens and encumbrances have been disregarded.

3. Possession of this report or a copy thereof does not imply any right of publication or use for any purpose, without the express permission of the consultant and the client to whom the report was issued. Loss, removal or alteration of any part of a report invalidates the entire appraisal/evaluation.

4. The scope of any report or other correspondence is limited to the trees and conditions specifically mentioned in those reports and correspondence. ROC and the consultant assume no liability for the failure of trees or parts of trees, either inspected or otherwise. The consultant assumes no responsibility to report on the condition of any tree or landscape feature not specifically requested by the named client.

5. No tree described in this report was climbed, unless otherwise stated. We cannot take responsibility for any defects, which could only have been discovered by climbing. A full roots collar inspection, consisting of excavating the soil around the tree to uncover the root collar and major buttress roots was not performed unless otherwise stated. We cannot take responsibility for any root defects, which could only have been discovered by such an inspection.

6. The consultant shall not be required to provide further documentation, give testimony, be deposed, or attend court by reason of this appraisal/report unless subsequent contractual arrangements are made, including payment of additional fees for such services as described by the consultant or in the fee schedules or contract.

7. ROC offers no guarantees or warrantees, either expressed or implied, as to the suitability of the information contained in the reports for any purpose. It remains the responsibility of the client to determine applicability to his/her particular case.

8. Any report and the values, observations, and recommendations expressed therein represent the professional opinion of the consultants, and the fee for services is in no manner contingent upon the reporting of a specified value nor upon any particular finding to be reported.

9. Any photographs, diagrams, graphs, sketches, or other graphic material included in any report, being intended solely as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys, unless otherwise noted in the report. Any reproductions of graphs material or the work produce of any other persons is intended solely for the purpose of clarification and ease of reference. Inclusion of said information does not constitute a representation by ROC or the consultant as to the sufficiency or accuracy of that information.

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

11. Payment terms are net payable upon receipt of invoice. All balances due beyond 30 days of invoice date will be charged a service fee of 1.5 percent per month (18.0% APR). All checks returned for insufficient funds or any other reason will be subject to a $25.00 service fee. Advance payment of fees may be required in some cases.