



ARBOR RESOURCES

professional consulting arborists and tree care

ARBORIST REPORT

3192 SANTA RITA ROAD

PLEASANTON, CALIFORNIA

Submitted to:

Mr. Joe Nguyen
ASI Consulting
4307 Valley Avenue, Suite 3
Pleasanton, CA 94566

Prepared by:

David L. Babby
Registered Consulting Arborist® #399
Board-Certified Master Arborist® #WE-4001B

EXHIBIT D

EXHIBIT D
PUD-102/P14-0014
3192 Santa Rita Road
Dated "Received July 26, 2013"

July 8, 2013

TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
1.0	INTRODUCTION	1
2.0	TREE COUNT AND COMPOSITION	2
3.0	REGULATED STATUS	3
4.0	APPRAISED VALUES	3
5.0	REVIEW OF POTENTIAL IMPACTS	4
6.0	TREE PROTECTION MEASURES	5
7.0	ASSUMPTIONS AND LIMITING CONDITIONS	10

EXHIBITS

<u>EXHIBIT</u>	<u>TITLE</u>
A	TREE INVENTORY TABLE (three sheets)
B	AERIAL MAP (one sheet)
C	PHOTOGRAPHS (four sheets)

1.0 INTRODUCTION

I have been retained by Mr. Joe Nguyen of ASI Consulting to prepare this *Arborist Report* in connection with the future site improvements at **3192 Santa Rita Road**, Pleasanton (located at the southeast corner of West Las Positas Boulevard and Santa Rita Road).

Specific tasks assigned to perform are as follows:

- Visit the site on July 8, 2013.
- Identify the species of 15 trees that have trunk diameters \geq six inches at 54 inches above grade, and are located either on the subject site, along street frontages, or have canopies overhanging the site or project area from a neighboring property.
- Measure each tree's trunk diameter at 54 inches above grade, or for appraisal purposes, where necessary to obtain the most representative sample of trunk size. All diameters are rounded to the nearest tenth of an inch. Trees listed with more than one diameter are formed by multiple trunks.
- Identify tree height and canopy spread (rounded to the nearest fifth).
- Ascertain each tree's health and structural integrity, and assign an overall condition rating (e.g. good, fair, poor or dead).
- Obtain photographs; see Exhibit C.
- Identify trees defined as "heritage" pursuant to Section 17.16.006(A) of the Pleasanton Municipal Code.
- Assign a number to each tree, and plot them on a copy of an aerial photo presented in Exhibit B (derived from *Google Earth*); the numbers are approximately shown on top of the canopies.
- Affix metal tags with corresponding numbers to each trunk or major limb (the tags are round aluminum with engraved numbers).
- Appraise each tree's monetary value.
- Review the site plan (Sheet SP.1) to identify potential impacts.
- Provide measures to mitigate or avoid impacts to retained trees.
- Prepare a written report that presents the aforementioned information, and submit via email as a PDF document.

2.0 TREE COUNT AND COMPOSITION

Fifteen (15) trees of seven various species were inventoried for this report. They are sequentially numbered as **1 thru 15**, and the table below identifies their names, assigned numbers, counts and overall percentages.

NAME	TREE NUMBER(S)	COUNT	% OF TOTAL
Raywood ash	1	1	7%
London plane	2	1	7%
American sweetgum	3	1	7%
tulip	4, 8, 11, 14, 15	5	33%
coast redwood	5, 6, 7, 9, 10	5	33%
flowering plum	12	1	7%
camphor	13	1	7%
Total		15	100%

Specific information regarding each tree is presented within the table in **Exhibit A**. The trees' assigned numbers and approximate locations can be viewed on the aerial map in **Exhibit B**, and photographs are presented in **Exhibit C**.

Trees #1 and 2 are situated within the public right-of-way along West Las Positas Boulevard and regarded as **street trees**; their trunks are within rectangular-shaped planters along the sidewalk.

The following **seven trees** have trunks situated entirely on **neighboring properties** to the south and east: **#3, 4, 8, 12, 13, 14 and 15**. The trunk of **tree #9** (at its base) appears to **span** the shared property line adjacent to the neighboring trash enclosure.

5.0 REVIEW OF POTENTIAL IMPACTS

My review of Sheet SP.1 reveals that by implementation of the proposed design, **tree #11** will require **removal**, and **#9 and 10** would be **severely impacted**.

Tree #11 is a small, non-heritage tulip tree that has a dying top (nearly half of the tree), and its removal is appropriate regardless of the proposed project.

Trees #9 and 10 are coast redwoods and considered "heritage trees," #9 for its trunk diameter and height, and #10 only for its height. The proposed drive aisle for the future car wash would excavate into their root zones, and potentially within only a few feet of the trunks when considering overexcavation to form and pour the new drive. If this impact was to occur, the trees would become exposed to premature decline and possible uprooting (due to the loss of numerous buttress roots serving to anchor the trees into the ground).

Should **#9 and/or 10** be retained with a reasonable degree of assurance for their survival and stability, I recommend the drive aisle is setback by *at least* **nine feet** from the base of their trunks, and overexcavation beyond the proposed drive aisle edge is reduced to **12 inches**. Any additional distance from the trunks would only decrease the risk of potential impacts.

Additional measures are presented in Section 6.0 of this report, and should be carefully followed to achieve adequate protection of trees to be retained.

6.0 TREE PROTECTION MEASURES

Recommendations presented within this section are intended to serve as measures to help mitigate or avoid impacts to retained trees. I should be consulted in the event any cannot be followed or implemented in their entirety.

1. **Recommendations** presented in **Section 5.0** of this report should be followed and considered part of this section.
2. A **note** should be placed on all site-related plans to instruct contractor personnel to adhere to recommendations presented in this report.
3. For this project, the **Tree Protection Zone (hereinafter "TPZ")** should be the ground area away from existing foundations, and to a distance from their trunks (center at base) of six to ten times the diameters; where a tree consists of multiple trunks, the largest trunk would only be considered. The TPZ is where all demolition, grading, overexcavation, subexcavation, soil scraping, trenching and compaction shall be avoided except where otherwise approved. In areas where these setbacks are not feasible, I can be consulted to consider mitigation for an alternative TPZ.
4. The project design should consider that **soil disturbance** (e.g. overexcavation, subexcavation, grading, compaction or trenching) beyond a feature to be built should be **reduced** to the maximum extent possible in the direction of a tree's trunk.
5. **Swales, biowales and biofiltration areas** should be established beyond TPZs.
6. To restrict spoils and runoff from traveling into root zones, the future **erosion control design** should establish any silt fence and/or straw rolls as close to the canopy edge as possible (and not against a trunk). Additionally, any material installed within a TPZ should require a maximum vertical soil cut of two inches for its embedment.
7. All **utilities and services** (e.g. storm drain, electrical, water, sewer, fiber optic, gas, etc.) should be routed beyond TPZs. In the event this is not feasible, the location and

proximity to a tree's trunk would dictate which of the following installation methods can offer sufficient mitigation: mechanically excavating, hand-digging, a pneumatic air device (such as an Air-Spade[®]), or directional boring.

8. The proposed **landscape design** should conform to the following additional guidelines:
 - a. Plant material installed beneath tree canopies should be at least 36 inches or more from their trunks.
 - b. Irrigation should not be sprayed within 12 inches from the trees' trunks.
 - c. Irrigation and lighting (including wiring and controllers) installed within a TPZ shall be in a radial direction to a tree's trunk. If this is not possible, the work may need to be performed using a pneumatic air device (such as an Air-Spade[®]) to avoid unnecessary root damage. Any Netafim tubing used should be placed on grade, and header lines installed in a radial direction to a trunk.
 - d. Valve boxes should be established beyond TPZs.
 - e. Ground cover beneath canopies should be comprised of a three- to four-inch layer of coarse wood chips or other high-quality mulch (gorilla hair, bark or rock, stone, gravel, black plastic or other synthetic ground cover should be avoided). Mulch should not be placed against the trees' trunks.
 - f. Tilling, ripping, compaction and fine grading within TPZs should be avoided.
 - g. Bender board or other edging material proposed beneath the canopies should be established on top of existing soil grade (such as by using vertical stakes).

9. **Tree protective fencing** shall be installed prior to any demolition and construction for the purpose of restricting access inside the TPZs of trees being retained around the existing building. A few weeks prior to demolition, I (hereinafter the "**project arborist**") should be retained to meet with the contractor to identify those locations. The fencing should consist of five- to six-foot high chain link mounted on eight-foot tall, 1 and 7/8-inch diameter galvanized steel posts that are driven into the ground 24 inches deep, and reasonably spaced apart to provide support. It should be established no farther than 12 inches from a curb, pathway and existing/proposed driveway edges, and remain intact and maintained throughout construction.

10. All construction activities must be **conducted beyond TPZs**, to include, but not necessarily limited to, the following: grading, subexcavation, stripping of topsoil, trenching, equipment cleaning, stockpiling or dumping materials, and equipment/vehicle operation and parking.
11. **Existing, unused lines, conduit or pipes** within a TPZ should be **abandoned** and cut off at existing soil grade (rather than being dug up and causing subsequent root damage).
12. Prior to construction, a four- to six-inch layer of coarse **wood chips** should be manually spread within all exposed ground areas of the retained redwoods. The chips should be obtained from a state-licensed tree-service company, remain in place throughout construction, and not be piled against the trunks.
13. **Great care** must be taken during demolition of the **existing hardscape** to avoid excavating into roots and existing grade. The same should be applied during demolition of any walls, light posts, etc. to avoid damaging canopies.
14. The **light post footing** at trees #9 and 10 should be carefully removed to avoid inadvertently damaging the trees' roots.
15. The **staging area(s) and routes of access** should be established beyond TPZs.
16. **Spoils** created during digging shall not be piled or spread on unpaved ground within a TPZ; if necessary, they should be temporarily piled on plywood or a tarp.
17. **Tree trunks** shall not be used as winch supports for moving or lifting heavy loads.
18. Any approved **digging or trenching** within a **TPZ** shall be **manually performed** without heavy equipment or tractors operating on unpaved ground beneath canopies.
19. Prior to excavation for the car wash drive aisle, a **one-foot wide trench** should be **manually dug** along the perimeter of where soil excavation will occur closest to the

trees' trunks. The trench should be dug to the required subgrade depth (including for base materials) to a distance of five to ten feet beyond a TPZ, and any roots encountered with diameters of one-inch and greater shall be cleanly severed by hand (at 90° to the direction of root growth) against the tree side of the trench. All soil beyond the trench (i.e. away from the tree) can then be mechanically excavated using heavy equipment. Alternatively, the use of a **stump grinder** could be utilized precisely where a curb/gutter and any overcut (12" max) will be established.

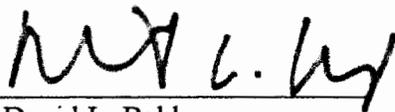
20. Except where mentioned in the prior recommendation, **trenching and excavation** should not damage, scrape or gouge **roots two inches and greater in diameter**. In the event these roots are encountered, the project arborist should be notified, and the root(s) should either be covered with soil or wrapped in moistened burlap within a few hours of exposure. If burlap is used, it should remain continually moist until the trench is backfilled.
21. During **trenching**, roots encountered that have **diameters less than two inches** and require removal can be cleanly severed at a 90-degree angle to the direction of root growth. In doing so, sharp cutting tools (e.g. loppers or handsaw) shall be used, and the cut should occur against the tree side of the trench.
22. Digging any **holes for piers** shall be manually performed, and in the event a root or two inches and greater in diameter is encountered during the process, the hole should be shifted over by 12 inches and the process repeated. Before doing so, the root and hole should be reviewed by the project arborist.
23. **Supplemental water** should be supplied to the coast redwoods during the dry months of the year (e.g. March thru November) at approximate rates of ten gallons per inch of trunk diameter every three to four weeks. For this site, I suggest the water is applied either through flooding the inside of a 12-inch tall berm formed around the canopy perimeter (or as close as possible to the canopy edge), or through deep-root injection. Water for all other trees should continue being applied to their root areas throughout construction.

24. **Removal** of any vegetation or plants within a TPZ should be manually performed versus being excavated. Additionally, any **stumps** removed within a TPZ should be ground versus excavated.
25. Great care must be taken by **equipment operators** to position their equipment to avoid the trees' trunks and branches, including placing any exhaust pipes beneath or near canopies, and consequently, scorching foliage.
26. Tree **pruning** should occur prior to demolition and construction, particularly to clear encroaching branches away from the existing building. It shall be performed in accordance with ANSI A300-2001 standards, and by a California state-licensed tree service company (D-49 classification) that has an ISA certified arborist in a supervisory role, carries General Liability and Worker's Compensation insurance, and abides by ANSI Z133.1-2006 (Safety Operations).
27. The **disposal** of harmful products (such as cement, paint, chemicals, oil and gasoline) is prohibited beneath canopies or anywhere on site that allows drainage beneath or near TPZs. **Herbicides** should not be used with a TPZ; where used on site, they should be labeled for safe use near trees.
28. **Fertilization**, if properly applied, may benefit the tree's health, vigor and appearance. Prior to doing so, however, soil samples should first be obtained to identify the pH levels and nutrient levels so a proper fertilization program can be established. I further recommend any fertilization is performed in accordance with ANSI A300 (Part 2) – 2004 Fertilization standards.

7.0 ASSUMPTIONS AND LIMITING CONDITIONS

- All information presented herein reflects my observations and measurements obtained from the project site on July 8, 2013.
- Condition ratings of dormant trees are subject to change once they can be observed following the growth of new leaves.
- My observations were performed visually without probing, coring, dissecting or excavating. I cannot, in any way, assume responsibility for any defects that could only have been discovered by performing the mentioned services in the specific area(s) where a defect was located.
- The assignment pertains solely to trees listed in Exhibit A. I hold no opinion towards other trees on or surrounding the project area.
- I cannot provide a guarantee or warranty, expressed or implied, that deficiencies or problems of any trees or property in question may not arise in the future.
- No assurance can be offered that if all my recommendations and precautionary measures (verbal or in writing) are accepted and followed, that the desired results may be achieved.
- I cannot guarantee or be responsible for the accuracy of information provided by others.
- I assume no responsibility for the means and methods used by any person or company implementing the recommendations provided in this report.
- The information provided herein represents my opinion. Accordingly, my fee is in no way contingent upon the reporting of a specified finding, conclusion or value.
- The tree numbers shown on the aerial map in Exhibit B are intended to only roughly approximate a tree's location.
- This report is proprietary to me and may not be copied or reproduced in whole or part without prior written consent. It has been prepared for the sole and exclusive use of the parties to who submitted for the purpose of contracting services provided by David L. Babby.
- If any part of this report or copy thereof be lost or altered, the entire evaluation shall be invalid.

Prepared By:



David L. Babby

Registered Consulting Arborist® #399

Board-Certified Master Arborist® #WE-4001B

Date: July 8, 2013



EXHIBIT A:

TREE INVENTORY TABLE

(three sheets)



TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	TREE SIZE			TREE CONDITION			"Heritage Tree"	Appraised Value
		Trunk Diameter (in.)	Tree Height (ft.)	Canopy Spread (ft.)	Health Condition (100%=Best, 0%=Worst)	Structural Integrity (100%=Best, 0%=Worst)	Overall Condition (Good/Fair/Poor/Dead)		
1	Raywood ash (<i>Fraxinus o. 'Raywood'</i>)	17.6	35	35	70%	40%	Fair	X	\$2,500

Comments: Street tree. Trunk within a rectangular-, nearly square-shaped planter. Sidewalk raised and repaired in past. Current damage includes a section of walk (road side) being raised and the adjacent curb being slightly damaged. Main trunk divides into codominant leaders at nine feet high and forms a weak attachment. Deadwood in canopy from ash blight. Has a large, pronounced girdling root surfaced around the trunk's base along the sidewalk side.

2	London plane tree (<i>Platanus acerifolia</i>)	21.8	45	65	70%	60%	Fair	X	\$4,010
---	---	------	----	----	-----	-----	------	---	---------

Comments: Street tree. Trunk within a rectangular-, nearly square-shaped planter. A girdling root was partially cut sometime ago. On road side, the sidewalk is raised and curb somewhat damaged.

3	American sweetgum (<i>Liquidambar styraciflua</i>)	12.6	40	35	70%	30%	Fair	X	\$1,300
---	---	------	----	----	-----	-----	------	---	---------

Comments: Trunk is situated on adjacent property, and canopy overhangs site by a few feet. Has an asymmetrical canopy that has been significantly raised. Formed by a main trunk that divides into multiple leaders.

4	tulip tree (<i>Liriodendron tulipifera</i>)	12.2	35	25	60%	40%	Fair	X	\$730
---	--	------	----	----	-----	-----	------	---	-------

Comments: Trunk is situated on adjacent property, and canopy overhangs site by five or more feet. Canopy has been significantly raised. Has a pronounced buttress root that surfaces and is directed towards the project site. Decay visible at trunk's base, and possibly has a girdling root along the opposite side.



TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	TREE SIZE			TREE CONDITION			"Heritage Tree"	Appraised Value
		Trunk Diameter (in.)	Tree Height (ft.)	Canopy Spread (ft.)	Health Condition (100%=Best, 0%=Worst)	Structural Integrity (100%=Best, 0%=Worst)	Overall Condition (Good/Fair/Poor/Dead)		
5	coast redwood (<i>Sequoia sempervirens</i>)	18.6	40	25	70%	70%	Good	X	\$2,950
<p>Comments: Has a contiguous canopy with #6. Adjacent to PG&E underground vault.</p>									
6	coast redwood (<i>Sequoia sempervirens</i>)	21.9	50	25	80%	70%	Good	X	\$4,370
<p>Comments: Has a contiguous canopy with #5. Adjacent to PG&E underground vault.</p>									
7	coast redwood (<i>Sequoia sempervirens</i>)	18.2	45	25	60%	70%	Fair	X	\$2,630
<p>Comments:</p>									
8	tulip tree (<i>Liriodendron tulipifera</i>)	10.3	35	30	80%	70%	Good	X	\$840
<p>Comments: Is situated on adjacent property. Small girdling roots are developing.</p>									
9	coast redwood (<i>Sequoia sempervirens</i>)	21.0	50	25	50%	70%	Fair	X	\$3,040
<p>Comments: Has a contiguous canopy with #10. Prominent buttress root in direction of proposed drive aisle. Base of trunk is two feet from existing trash enclosure wall. Some of the canopy's outer foliage is scorched (appears to be from excessive heat). Also appears to be drought-stressed (due to sparse canopy). Has small girdling roots developing. Trunk appears to span shared property line.</p>									
10	coast redwood (<i>Sequoia sempervirens</i>)	17.2	40	20	50%	70%	Fair	X	\$2,050
<p>Comments: Has a contiguous canopy with #9. Base of trunk is 6.5 feet from trash enclosure wall. Has a sparse canopy likely due to the tree being drought-stressed.</p>									



TREE INVENTORY TABLE

TREE/ TAG NO.	TREE NAME	TREE SIZE			TREE CONDITION			"Heritage Tree"	Appraised Value
		Trunk Diameter (in.)	Tree Height (ft.)	Canopy Spread (ft.)	Health Condition (100%=Best, 0%=Worst)	Structural Integrity (100%=Best, 0%=Worst)	Overall Condition (Good/Fair/Poor/Dead)		

11	tulip tree (<i>Liriodendron tulipifera</i>)	6.7	25	15	40%	30%	Poor		\$130
----	--	-----	----	----	-----	-----	------	--	-------

Comments: Top eight feet is dead, and has numerous dead branches in lower canopy.

12	flowering plum (<i>Prunus cerasifera</i>)	9.9	20	20	30%	30%	Poor		\$260
----	--	-----	----	----	-----	-----	------	--	-------

Comments: Sparse and one-sided canopy. Large stem wound along lower trunk, and substantial wounds (with decay) along all leaders. Is situated on adjacent property.

13	camphor (<i>Cinnamomum camphora</i>)	4, 3, 3, 3	15	20	70%	40%	Fair		\$560
----	---	------------	----	----	-----	-----	------	--	-------

Comments: Multi-trunk tree. Umbrella-shaped canopy. Is situated on adjacent property.

14	tulip tree (<i>Liriodendron tulipifera</i>)	11.6	35	30	40%	40%	Poor	X	\$560
----	--	------	----	----	-----	-----	------	---	-------

Comments: Has deadwood throughout canopy. Small girdling roots developing. Main trunk divides into codominant leaders at nine feet high. Within a narrow planter and canopy has been significantly raised. Is situated on adjacent property.

15	tulip tree (<i>Liriodendron tulipifera</i>)	12.1	40	25	40%	50%	Poor	X	\$690
----	--	------	----	----	-----	-----	------	---	-------

Comments: Within a narrow planter and has girdling roots. Canopy is sparse and has been significantly raised. Is situated on adjacent property.

EXHIBIT B:

AERIAL MAP

(one sheet)

3192 SANTA RITA ROAD

Pleasanton, California

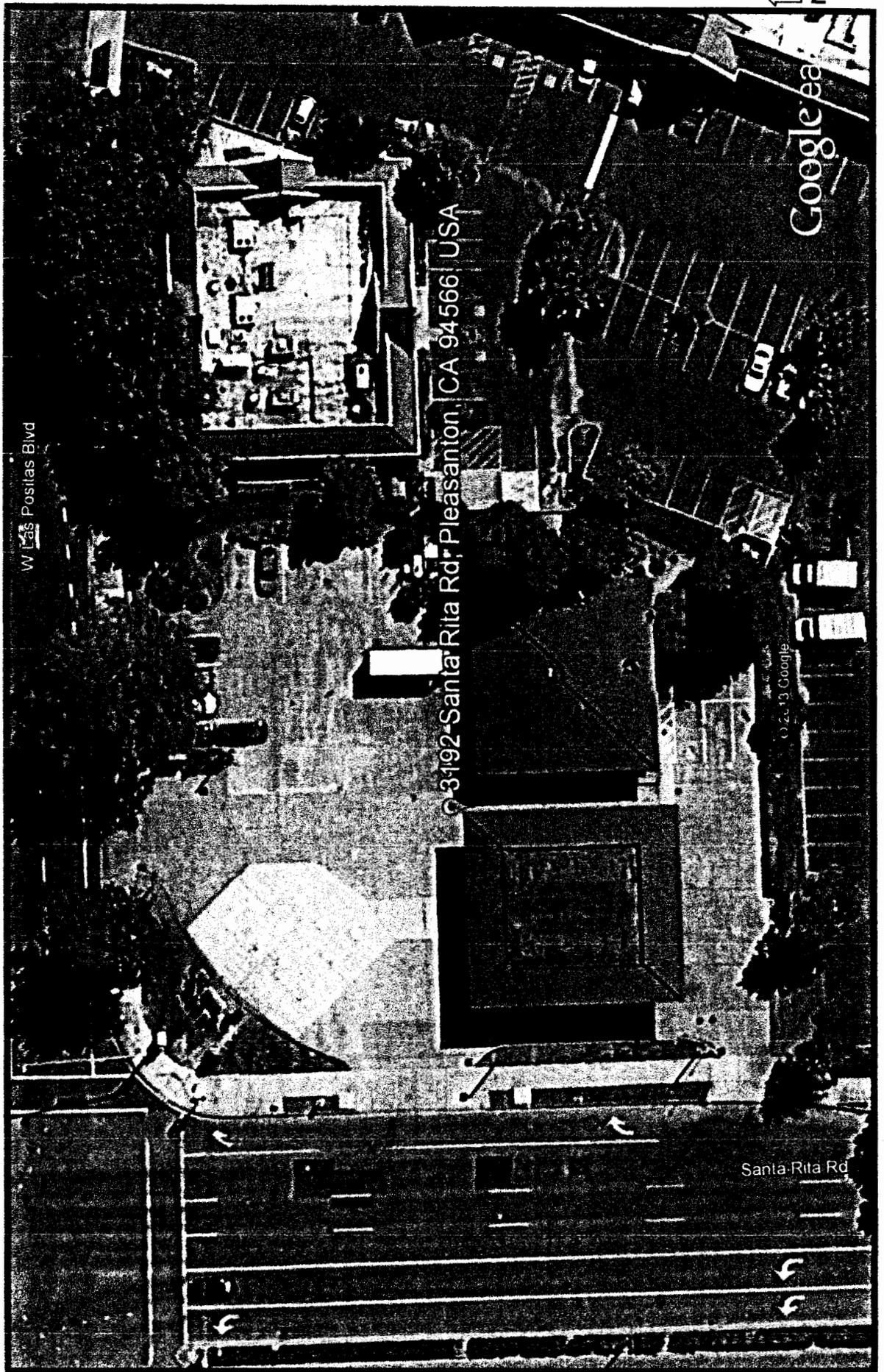


EXHIBIT C:
PHOTOGRAPHS
(four sheets)

Photo Index

Page C-1: Trees #1 and 2

Page C-2: Trees #3 thru 7

Page C-3: Trees #5 thru 10

Page C-4: Trees #11 thru 15

3192 SANTA RITA ROAD

Pleasanton, California

