APPENDIX A
Tree Report

Consulting Arborist's Report
June 20, 2016

Non-Protected Tree Report

2800 Casitas, Los Angeles

Prepared for:

Casitas Investment Co. II, LLC
15149 Camarillo Street
Sherman Oaks, CA 91403

Prepared by:

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Tustin, CA 92780
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Table of Contents

Introduction

Background

Casitas Investment Co. II, LLC is planning to repurpose the existing building and site into a commercial condominium at 2800 Casitas, in the City of Los Angeles, California. This site is near the intersection of the Glendale Freeway and the Santa Ana Freeway. At the time of my site inspection the existing businesses were in operation and the parking lot was well used.

There are no trees protected by City ordinance and no City street trees within or in front of the project. There are no walnuts, sycamores, bay, oak or other protected trees on site. All 55 of the landscape trees 4-inch caliper and larger on site are included in this report. All are exotic trees and six are palms.

The enclosed tree location map shows the approximate location of the 55 trees on the site. The overall site has a minor slope from north to south. The enclosed tree location map is used as a base map to give approximate tree locations (not surveyed by this consultant).

The purpose of this report is to help analyze the impact of the project on the existing trees and satisfy City of Los Angeles requirements and questions. The current plans are to fully clear and all or none may be retained. The Urban Forestry Division would like to know that there are no street trees or protected trees before issuing permits.

Reporting requirements of the new 177404 ordinance will be addressed. Section 13 reads:

13. The approximate location and general description of any large or historically significant trees and of any protected trees and an indication as to the proposed retention or destruction of the trees.

There are no protected, rare, historically significant, or endangered tree species are on this property. It is unlikely that any of the trees will be considered as "large". This report is intended to provide the "approximate location and general description" of all trees over four inches in trunk diameter, all street trees, and provide "an indication as to the proposed retention or destruction of the trees" as required.

Assignment

Mr Scott Solomon of 2800 Casitas, LLC contacted this consultant and asked that I provide arboricultural evaluation of approximately 60 trees' health and condition, professional opinions regarding their suitability for preservation and possible status as protected species, and report as appropriate for the City of Los Angeles Urban Forestry Department. Each tree will be numbered, tagged and mapped, and referenced to the report. Representative photographs are included

Executive Summary

Overview of Conditions and Recommendations

This site contains a mix of exotic trees and palms, but no protected, rare, endangered, native or street trees were found. Representative photographs can be found later in this report, starting on page 13. Small weed trees and palms on the adjoining properties are not included here.

All the trees on site have been poorly pruned and their structure is weak due making them look pruned by ignoring the structural defects. Nearly all trees on site have been over-pruned which has also caused their health to deteriorate.

The queen palms in front of the building are not adequately healthy or worth transplanting. New ones could be bought, if there is a need or desire, and they would enhance the project far more than these.

There are no protected trees on site, no rare trees, no endangered trees, and no trees of particular value or merit, except possibly the two Brazil peppers at the front entry. Even those have structural defects that have not been dealt with, but they are reasonably attractive.

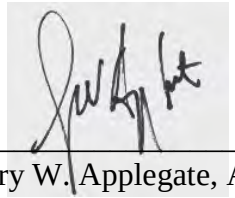
Protected Tree Summary

Total number of protected trees over 4 inches in trunk diameter listed on enclosed map	0
Total number of protected trees over 4 inches in trunk diameter to be removed	0
Total number of protected trees over 4 inches in trunk diameter to be retained	0
Total number of dead protected trees over 4 inches on site	0
Total number of protected trees impacted or to be removed due to planned construction	0*

Reasons for Removal

- **The removal of the trees will not result in an undesirable, irreversible soil erosion through diversion or increased flow of surface waters which cannot be mitigated to the satisfaction of the City, and…**

The above information, together with the plot plan showing the locations of the trees, is true and correct.



Gregory W. Applegate, ASCA, ASLA
Registered Consulting Arborist #365
Certified Arborist WC-0180

Findings

General

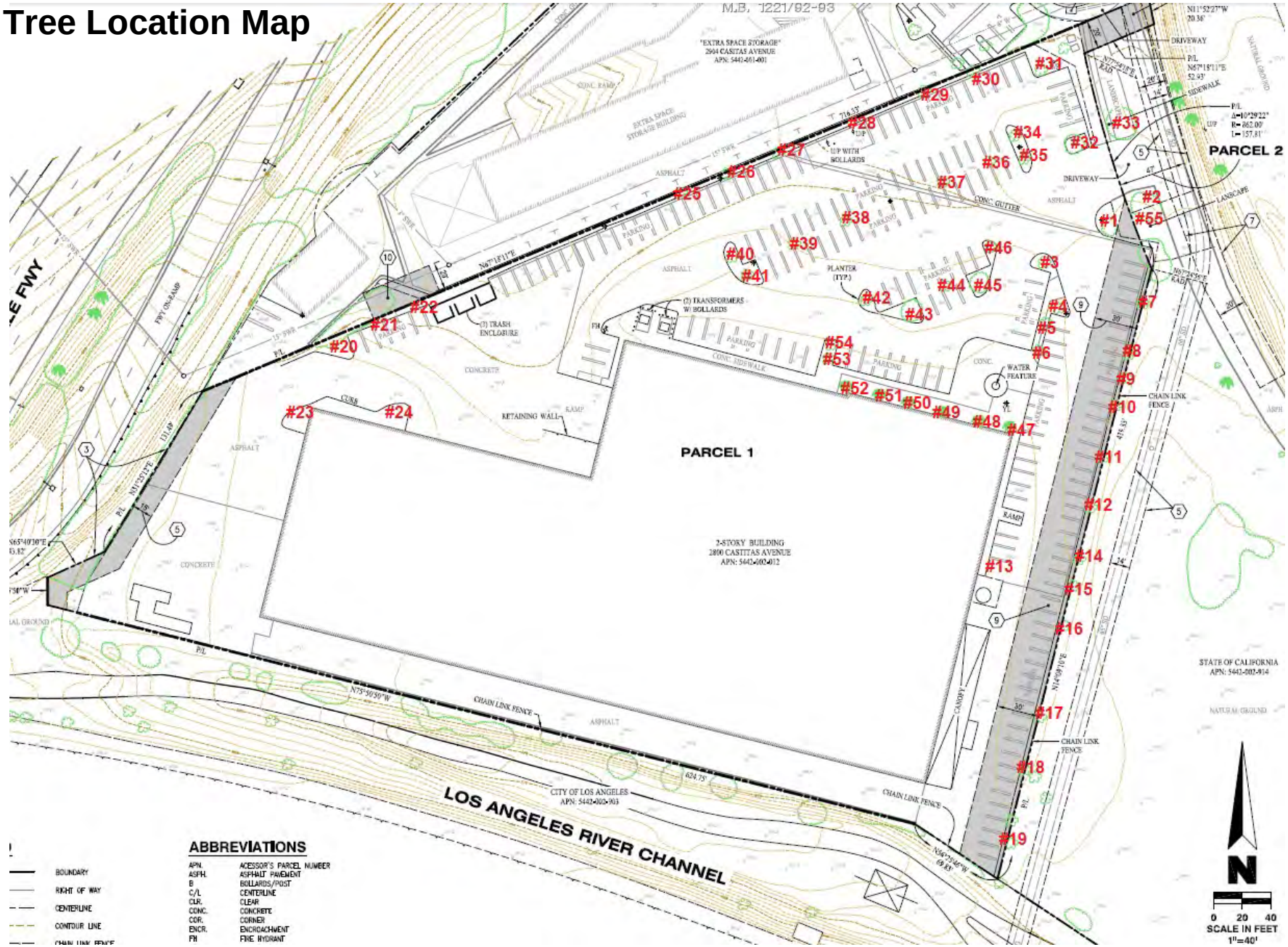
The site contains 49 exotic trees and 6 palms, over 4 inches in trunk diameter. There are six queen palms, *Syagrus romanzoffianum*, along the front of the building. The site trees are of low value, mostly due to poor maintenance, poor pruning, and small planting spaces. Most are the Saratoga variety of Grecian laurel, Brisbane box, bottle trees and a few Brazil peppers. There are no rare, endangered or protected species on this site or immediately adjoining. To my knowledge the preservation of the trees is an economic decision up to the developer.

This site is at the end of a small street in an industrial area. A self-storage yard is the only neighbor. There are no street trees under the control of the Urban Forestry Department. It is unclear at this time if the developer wants to re-landscape or protect the existing trees in place.

Any efforts to save by transplanting either the queen palms or the other trees would cost more than new trees and leave weak and declining palms and trees.

No pest or disease issues are factors in the above considerations, other than a minor scale infestation on the laurels. .

Tree Location Map



Matrix of Findings

Tree#	Species	DBH	Ht.	Wd.	Health	Trunk cond	Limb cond	Branch cond	Foliage cond	Root cond	Comments
1	Schinus terebinthifolius	8+4+5	12	15	B	Cod	Hd	Epi	Okay	Deep	ivy on trunk
2	Schinus terebinthifolius	6+8+5+9	18	20	B	Cod inc	Hd	Epi	Okay	mGird	
3	Brachychiton populneus	10.5	18	12	C	Cod	Cr Hd	Lt	Sp	Okay	OP
4	Brachychiton populneus	6	21	8	B	Topped	Hd DL	Epi	Okay	Okay	OP
5	Laurus x 'Saratoga'	7	22	12	B	Lean cod	Hd DL	Epi	Okay	Cr mGird	OP
6	Laurus x 'Saratoga'	5.5	23	12	B	Topped	Hd DL	Epi	Pale	Cr	OP
7	Laurus x 'Saratoga'	4.3	12	7	C	Topped cod	Hd Lt	Epi	Sp	Cr	<1' from curb
8	Laurus x 'Saratoga'	4	11	6	C	Topped cod SS	Hd	Epi	Sp	Cr	<1' from curb
9	Laurus x 'Saratoga'	6	12	7	B	Topped cod	Hd	Epi	Okay	Cr	<1' from curb
10	Laurus x 'Saratoga'	5	12	6	C	Topped cod SS	Hd Lt DL	Epi	Sp	Cr	<1' from curb
11	Laurus x 'Saratoga'	4	11	5	C	Topped cod SS	Hd Lt DL	Epi	Okay	Cr	<1' from curb
12	Laurus x 'Saratoga'	4	11	6	C	Topped cod SS	Hd Lt DL	Epi	Okay	Cr	<1' from curb
13	Brachychiton populneus	5.4	22	6	D	Topped cod	Hd DL	Sp	Sp	Cr	
14	Laurus x 'Saratoga'	4.4	12	7	B	Topped cod SS	Hd DL	Epi	Okay	Cr	<1' from curb
15	Laurus x 'Saratoga'	3.5	12	7	C	Topped cod SS	Hd DL	Sp epi	Sp	Cr	<1' from curb
16	Laurus x 'Saratoga'	4	11	8	C	Topped cod	Hd DL	Sp epi	Sp	Cr	<1' from curb
17	Laurus x 'Saratoga'	4	11	6	B	Topped cod	Hd DL	Epi	Okay	Cr	<1' from curb
18	Laurus x 'Saratoga'	4	11	6	B	Topped cod SS	Hd DL	Epi	Okay	Cr	<1' from curb
19	Laurus x 'Saratoga'	4	12	7	B	Top'd cod SS	Hd DL	Epi	Okay	Cr	<1' from curb, Binj
20	Lophostemon confertus	5	25	10	C-	Top'd cod	Hd DL	Sp	Sp pale	Cr Gird	OP

Tree#	Species	DBH	Ht.	Wd.	Health	Trunk cond	Limb cond	Branch cond	Foliage cond	Root cond	Comments
21	Lophostemon confertus	5	20	10	C-	Topped cod	Hd DL	Sp	Sp pale	Cr mGird	OP
22	Lophostemon confertus	4	18	10	C-	Topped cod lean	Hd DL	Sp	Sp	Cr Gird	OP
23	Brachychiton populneus	13	30	13	C	Topped cod	Hd DL	Hd Dl	Sp	Okay	
24	Schinus terebinthifolius	2+4+2+3	8	9	C	Cod inc	Hd DL Lt	Epi	Pale	Cr	Lt
25	Lophostemon confertus	4.2	18	9	C	Topped cod	Hd DL	Okay	Okay	Cr	OP
26	Lophostemon confertus	6	22	12	B	Cod	Hd DL	Okay	Okay	Cr Sh	
27	Lophostemon confertus	9	22	14	C	Topped cod	DL Lt	Sp epi	Sp	Cr	<1' from curb OP
28	Lophostemon confertus	8	23	13	C	Topped cod	Hd Lt DL	Sp epi	Sp pale	Cr	<1' from curb OP
29	Lophostemon confertus	5.8	18	13	C	Topped cod inc	Hd Lt DL	Sp epi	Sp pale	Cr	<1' from curb OP
30	Lophostemon confertus	5.7	18	13	D	Topped cod	Hd Lt DL	Sp epi	Sp pale	Cr gird	<1' from curb OP
31	Brachychiton populneus	8	15	9	D	Topped cod	Hd Lt DL	Sp epi	Sp pale	Okay	OP
32	Brachychiton populneus	8	20	14	D	Topped	Hd Lt DL	Sp epi	Sp	Sh	OP
33	Schinus terebinthifolius	11+13	20	21	C	Cod inc	OL Xing	Epi	Okay	Sh mGird	OP
34	Brachychiton populneus	11	18	18	C	Topped	Hd Lt DL	Sp epi	Sp	Okay	OP
35	Brachychiton populneus	9	18	18	D	Topped cod	Hd Lt DL	Sp epi	Sp	1sRC	OP
36	Lophostemon confertus	4.6	18	10	C-	Topped cod	Hd Lt DL	Sp	Sp	deep Cr	OP
37	Lophostemon confertus	7	20	10	C	Topped cod	Hd Lt DL	Sp	Sp	Cr Gird	OP
38	Lophostemon confertus	7.3	17	12	C	Top'd 60^0 lean	Hd Lt DL	Sp epi	Sp	deep Cr	OP
39	Lophostemon confertus	5.3	22	11	C	Topped cod	Hd Lt DL	Sp	Sp	Cr	OP
40	Brachychiton populneus	8	18	12	C	Topped cod	Hd Lt DL	Sp epi	Sp	ivy cover	OP
41	Brachychiton populneus	8	18	12	C	Topped cod	Hd Lt DL	Sp epi	Sp	ivy cover	OP
42	Brachychiton populneus	5	16	9	C	Topped cod	Hd Lt DL	Sp epi	Sp	Okay	OP

Tree#	Species	DBH	Ht.	Wd.	Health	Trunk cond	Limb cond	Branch cond	Foliage cond	Root cond	Comments
43	Brachychiton populneus	10	24	14	C	Okay	Hd Lt DL	Sp epi	Sp	Okay	OP
44	Lophostemon confertus	7	18	12	C	Cod inc	Hd Lt DL	Sp epi	Okay	Gird	
45	Brachychiton populneus	6.5	16	14	C-	Topped	Hd Lt DL	Sp epi	Sp	Gird	OP
46	Brachychiton populneus	4	14	6	C	OL	Hd Lt DL	Epi	Okay	Okay	
47	Syagrus romanzoffianum	30'th	30'th	10'	D	gaffed, penciled	N/A	N/A	Sp 1s	Deep	OP
48	Syagrus romanzoffianum	33'th	33'th	10'	D	gaffed, penciled	N/A	N/A	Sp	Deep	OP
49	Syagrus romanzoffianum	30'th	30'th	10'	D	gaffed, penciled	N/A	N/A	Sp	Deep	OP
50	Syagrus romanzoffianum	27'th	27'th	10'	D	gaffed, penciled	N/A	N/A	Sp	Deep	OP
51	Syagrus romanzoffianum	27'th	27'th	10'	D	gaffed, penciled	N/A	N/A	Sp	Deep	OP
52	Syagrus romanzoffianum	28'th	28'th	10'	D	gaffed, penciled	N/A	N/A	Sp	Deep	OP
53	Brachychiton populneus	4.3	13	7	C-	Topped	Hd Lt DL	Sp	Sp small	Okay	OP
54	Brachychiton populneus	6.3	14	7	C-	Topped	Hd Lt DL	Sp epi	Sp	Deep	OP
55	Brachychiton populneus	7	18	14	D	Topped cod	Hd Lt DL	Sp epi	Sp	Okay	OP

DBH = diameter at breast height (54”above grade)
Trunk height is for palm measurement per ANSI Z60

Analysis

Reasons for Removal

One reason for removing site trees would be lack of a use in a new design. Because of the poor pruning and small growing spaces, they are no longer attractive and do not enhance the site. Taken as a group or individually nearly all are worthless. Due to the small planting spaces, few trees, except rather small species, will have long lives.

Their health is poor due to lack of root space and over-pruning. The edge trees on the north and east edges are large species and their trunks are no more than a foot from the curbs. If the trees were healthy enough, they would damage the adjoining curbs and paving in a few years. The trees in the parking islands are also large species with inadequate root space. The soil in most of the islands is not mulched or adequately managed and as a result the root space is less than it could be.

The trees are stunted and unlikely to be worth the time and effort to restore them. It would take years of corrective pruning and being over-pruned already little additional pruning can be done in the next couple years. Over half the trees have been topped. Topping ruins the structure and beauty of a tree and can never be totally undone. Even California State Government Code 53067 decries topping. In some cities you can lose your license for topping trees. Many trees are also headed which creates epicormic shoots at the end of the branch, which end up forming doglegs in the branching. These shoots later become branches that are poorly attached and because they have a dogleg form they

get torsional forces that trees are not adequately designed to handle. All this means that these trees would require much more professional care, years of corrective pruning and more frequent pruning.

Another reason for removal and replacement would be to provide more root space for a longer likely life span of new small trees or large shrubs. The small parking islands, especially the diamond shaped ones are too small to allow a tree to live more than ten years without dying or causing excessive hardscape damage. This would be a good time to make provisions for more root space. More root space could be had by either trenching tree well to tree well or from parking island to a larger landscape area, backfilling with lightly compacted and amended soil (<80% Proctor density) and paving over with thicker or reinforced concrete to span the trenches. Down the center of a herring bone parking row the trench could be left uncovered and use wheel stops to prevent driving over this area. If the trench will be paved over, covering and lining the trenches with BioBarrier will help keep the roots away from the paving.

Construction Impacts

Based my observations on site, all the trees should be removed, except perhaps the two Brazil peppers outside the entry. The parking islands will need to be totally dug out, roots removed and the soil amended.

General Tree Preservation

If they are not planted until after construction, the main stresses and risks of building and site remodeling to future new trees are:

- Soil pollution
- Inadequate soil preparation
- Dumping of potentially toxic construction wastes
- Poor species selection
- Incompatible landscaping beneath tree canopies

Scheduling landscaping after the other building and site improvements will help avoid some of these risks.

The main stresses and risks of building and site remodeling to existing trees are:

* Soil compaction
* Lack of water or changes in the site hydrology
* Change of grade in the root zone
* Cutting roots or unauthorized pruning of the canopy
* Physical damage to tree roots or canopy
* Dumping of potentially toxic construction wastes
* Lack of adequate pest control and other care
* Construction dust
* Incompatible landscaping beneath the canopy
* Human error

Photographic Documentation

Tree #1 – Brazil pepper inside the front gate on the right

The Saratoga laurels along the east edge are about a foot from the curb and badly pruned.

The Brazil peppers have crowded trunks likely to split out.
The turf should be carefully removed or kept several feet from the trunks.

These 2 trees are small and young, but not bad looking.

Nearly all the bottle trees have been topped. This island is too small for two trees. One could eventually outgrow it.

Besides the other issues, bare soils like this may indicate soil chemistry issues. Agronomic testing is recommended.

Note the large pruning cuts. Those limbs did not protrude into traffic.

Even this tree was topped.

The Brisbane box trees are over pruned.
Note how close the trunk is to the curb.

This is the largest planting space for Brisbane box.

The diamond planters will damage the base of the trunk in time.

Replace the gravel with mulch and break out the diamond islands.

These are nicer Brisbane box, but their trunks are about a foot from the curb.

The thin trunks and small heads are evidence of chronic over-pruning.

Note gaff scars on the trunk. They never “heal” or close.

The trunk constriction below the head is a weak point.

Bare soil will crust over and reduce root health and depth. After planting new trees, apply a 2-3 inch deep layer of coarse mulch.

Recommendations

General Recommendations

- Remove existing trees and roots from the planters.
- Amend the soil based on agronomic testing of three zones on site.
- Plant smaller species that will last longer and need less pruning.
- Do not plant aggressive ground cover, such as ivy.
- Plant few drought tolerant low spreading shrubs where needed.
- Apply a 2-3 inch deep layer of well-composted, coarse-textured, green-waste type mulch and replenish several times a year to maintain that depth.
- Trench between parking islands to create more root space. Do not compact the soil in the trenches more than 80% Proctor density.
- If there are new palms, do not climb them using gaffs or spikes. Do not prune fronds above a horizontal line running across the base of the head. There is no benefit to removing healthy green fronds.

Tree Preservation

- If any trees will be preserved, fence and protect the Brazil peppers at the entry. The fencing should protect their canopies. Chain link fencing is necessary for this purpose. Fence off any other trees that will be preserved.
- Carefully remove the turf around the Brazil peppers, if they remain.
- All storage of construction equipment and supplies must be kept as far from trees to remain as possible.
- Rinse off dust at the end of each work week during construction and irrigate deeply every other week.
- Protect all planting spaces from dumping of paint, concrete washout and other construction wastes.

Protected Tree Removals

There are no protected trees of any species or size. None fall under the City of Los Angeles Protected Tree Ordinance.

Appendix

A. Resume

B. Assumptions and Limiting Conditions

C. Certification

D. Glossary

RESUME: GREGORY W. APPLEGATE, ASCA, ASLA

PROFESSIONAL REGISTRATIONS:
American Society of Consulting Arborists #365
International Society of Arboriculture, Certified Arborist Number WC-180
International Society of Arboriculture, Tree Risk Assessment Qualified PNC-444

EXPERIENCE:
Mr. Applegate is an independent consulting arborist. He has been in the horticulture field since 1963, providing professional arboricultural consulting since 1984 within both private and public sectors. His expertise includes appraisal, tree preservation, diagnosis of tree growth problems, construction impact mitigation, environmental assessment, expert witness testimony, hazard evaluation, pruning programs, species selection and tree health monitoring.

Mr. Applegate has consulted for insurance companies, major developers, , theme parks, homeowners, homeowners' associations, landscape architects, landscape contractors, property managers, attorneys and governmental bodies.

Notable projects on which he has consulted are: Disneyland, Disneyland Hotel, DisneySeas-Tokyo, Disney's Wild Animal Kingdom, the New Tomorrowland, Disney's California Adventure, Disney Hong Kong project, Knott's Berry Farm, J. Paul Getty Museum, Tustin Ranch, Newport Coast, Crystal Court, Newport Fashion Island Palms, Bixby Ranch Country Club, Playa Vista, Laguna Canyon Road and Myford Road for The Irvine Company, Beverly Hilton Hotel, MWD-California Lakes, Paseo Westpark Palms, Loyola-Marymount campus, Cal Tech, Cal State Long Beach, Pierce College, The Irvine Concourse, UCI, USC, UCLA, LA City College, LA Trade Tech, Riverside City College, Crafton Hills College, MTA projects, and the State of California review of the Landscape Architecture License exam (re: plant materials)

EDUCATION:
Bachelor of Science in Landscape Architecture,
California State Polytechnic University, Pomona 1973
Arboricultural Consulting Academy (by ASCA)
Arbor-Day Farm, Kansas City 1995
Continuing Education Courses in Arboriculture
required to maintain Certified Arborist status and for registration

PROFESSIONAL AFFILIATIONS:
American Society of Consulting Arborists (ASCA), Registered Member
American Society of Landscape Architects (ASLA), Full Member
International Society of Arboriculture (ISA), Regular Member
ASCA 2011 Nominations Committee
California Tree Failure Report Program, UC Davis, Participant
Street Tree Seminar (STS), Member

COMMUNITY AFFILIATIONS:
Guest lecturer at UCLA, UCI, Cal Poly, Saddleback College, & Palomar Junior College
Landscape Architecture License Exam, Reviewer, Cal Poly Pomona (1986-90)
American Institute of Landscape Architects (L.A.) Board of Directors (1980-82)
California Landscape Architect Student Scholarship Fund - Chairman (1985)
International Society of Arboriculture - Examiner-tree worker certification (1990)

Assumptions and Limiting Conditions

1. Any legal description provided to this consultant is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in nature. Any and all property is evaluated as though free and clear, under responsible ownership and competent management.
2. It is assumed that this property is not in violation of any applicable codes, ordinances, statutes, or other governmental regulations.
3. Care has been taken to obtain as much information as possible from reliable sources. Data has been verified insofar as possible. However, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
4. This consultant shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule or contract of engagement.
5. Unless required by law otherwise, possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than this specific project and the person to whom it is addressed, without the prior expressed written or verbal consent of this consultant.
6. Unless required by law otherwise, neither all nor any part of this report or a copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, new, sales or other media without the prior expressed written consent of this consultant - particularly as to value conclusions, identity of the consultant, or any reference to any professional society or institute or to any initialed designation conferred upon this consultant as stated in his qualifications.
7. Sketches, drawings, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise. The reproduction of any information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is for the express purposes of coordination and ease of reference only. Inclusion of said information on any drawings or other documents does not constitute a representation by Greg Applegate as to the sufficiency or accuracy of said information.
8. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.
9. Loss or alteration of any part of this report invalidates the entire report.
10. This consultant did not survey the tree locations.
11. Measurements are subject to typical margins of error, considering the oval or asymmetrical cross-section of most trunks.

Certification

I, Gregory W. Applegate, certify to the best of my knowledge and belief:

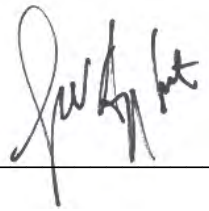
That the statements of fact contained in this report, are true and correct. That the report analysis, opinions, and conclusions are limited only the reported assumptions and limiting conditions, and are my personal unbiased professional analysis, opinions and conclusions.

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

That my compensation is not contingent upon a reporting that favors the cause of the client or the attainment of stipulated result.

That my analysis, opinions, and conclusions were developed, and this report has been prepared, in conformity with the standards of arboricultural practice.

That I have made a personal inspection of the plants that are the subject of this report. No one provided significant professional assistance to the person signing this report.



Gregory W. Applegate_____ Date: 6-20-20146

Registered Consulting Arborist #365
Certified Arborist WC-0180

Glossary

Arboricultural	Pertaining to the awareness, care, evaluation, identification, growing, maintenance, management, planting, selection, treatment, understanding, valuation and so forth of trees and other woody plants and their growing environments, particularly in shade and ornamental (non-crop/commodity) settings.
Arborist	A person possessing the technical competence through experience and related training to provide for or supervise the management of trees or other woody plants in a landscape setting.
ASCA	The American Society of Consulting Arborists, Inc. a professional society, as described in its by-laws.
Bark	Tissue on the outside of the vascular cambium. Bark is usually divided into inner bark - active phloem and aging and dead crushed phloem - and outer bark.
Caliper	Diameter of a nursery-grown or small size tree trunk. Larger trees are usually measured at 4.5 feet (see DBH) Trees with calipers 4 inches and below are measured at 6 inches above grade(ANSI Z60-1-1990) Trees above 4 inches, but still transplantable are measured at 12 inches above grade.
Canopy	The part of the crown composed of foliage and twigs, for an individual tree or collective group of trees.
Codominant	Leaders equal in size and relative importance, developed from 2 apical buds at the top of a stem. Each codominant stem is an extension of the stem below it. There are no branch collars or trunk collars at the bases of codominant stems.
Compaction	(Soil Compaction) The compression of soil, causing a reduction of pore space and an increase in the bulk density of the soil. Tree roots cannot grow in compacted soil.
Crown	The upper portions of a tree or shrub, including the main limbs, branches, and twigs.
DBH	Diameter of the trunk, measured at breast height or 54 inches above the average grade. Syn. = caliper.

Decay	Progressive deterioration of organic tissues, usually caused by fungal or bacterial organisms, resulting in loss of cell structure, strength, and function. In wood, the loss of structural strength.
Decline	Progressive reduction of health or vigor of a plant.
Dripline	A projected line on the ground that corresponds to the spread of branches in the canopy; the farthest spread of branches.
Foliage	The live leaves or needles of the tree; the plant part primarily responsible for photosynthesis.
Fruit	A ripened ovary, together with any other parts which may develop with it, containing one, two or more seeds.
Grading	Intentional altering of topography and soil levels, using machinery.
Hardscape	The sidewalk, curb, gutter, paving or other concrete permanent features.
Heading	Pruning techniques where the cut is made to a bud, weak lateral branch or stub.
Included bark	The pattern of development at branch junctions where bark is turned inward rather than pushed out forming a branch bark ridge.
Limb	A large lateral branch growing from the main trunk.
Mulch/mulching	Substances spread on top of the ground to conserve water, protect against erosion, retain moisture, and protect the roots of trees from heat, cold or drought. The substances are typically organic, such as compost or bark chips.
Root crown	Area at the base of a tree where the roots and stem merge (synonym - root collar)
Root system	The portion of the tree containing the root organs, including buttress roots, transport roots, and fine absorbing roots; all underground parts of the tree.
Root zone	The area and volume of soil around the tree in which roots are normally found. May extend to three or more times the branch spread of the tree, or several times the height of the tree.
Scaffold limb	Primary structural branch of the crown.
Shrub	A relatively low woody plant with several stems arising near the ground.
Stress	"Stress is a potentially injurious, reversible condition, caused by energy drain, disruption, or blockage, or by life processes operating near the limits for which they were genetically programmed." Alex Shigo
Topping	The practice of cutting large limbs back severely, without regard to form or habit of the tree. Cuts are usually made between lateral branch nodes. This practice is extremely injurious to trees, and promotes decay.
Vigor	Active, healthy growth of plants: ability to respond to stress factors.