



# Tree Appraisal Report

Prepared for 

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## Summary

Five protected trees and one additional tree were heavily pruned on [REDACTED]. A notice of violation was issued by the City of [REDACTED] for failure to obtain a permit to perform the pruning. I was asked to prepare an appraisal of the damage to the trees by using the Reproduction Cost Trunk Formula Technique as outlined in the Guide for Plant Appraisal.

I appraised the Pre-Loss cost solution for the five protected trees to be \$51,900. I appraised the Post-Loss cost solution for the trees to be \$19,000. This reflects a diminution of \$32,900 resulting from the pruning event on [REDACTED].

I was also asked to determine whether each of the trees should be retained or removed. All six of the subject trees can be retained in the landscape at this time, despite their significantly diminished condition. Continued annual monitoring is the recommended management strategy at this time. No further action is recommended to improve their likelihood of survival until they have time to regrow foliage mass.

## Background

I was contacted by [REDACTED] on [REDACTED]. He told me that [REDACTED] had received a citation from the [REDACTED] for a violation of the tree protection ordinance. To respond to the request of the [REDACTED], [REDACTED] asked me to prepare an arborist report documenting the condition of six trees that had been pruned.

I subsequently spoke with [REDACTED], Planning & Community Development Administrator with the [REDACTED] about the scope of the report. [REDACTED] asked for an evaluation of the condition of each of the six trees, including recommendations of whether the trees could be salvaged or should be removed. [REDACTED] also asked for an appraisal of the damage according to the most recent edition of the Guide for Plant Appraisal, per [REDACTED] the City of [REDACTED] Tree Protection Ordinance.

I visited the property on [REDACTED] to collect data for this report. To obtain pre-loss condition ratings, I referenced Google Maps Street View images taken in December of 2017 of the subject property.

[REDACTED] met me on site and translated for property owner [REDACTED]. [REDACTED] explained to me that prior to the pruning event on [REDACTED], [REDACTED] was concerned about Trees 5 and 6 touching the power lines along the western property line and starting a fire. [REDACTED] noted the branches of Tree 4 reached over the roof of the house, and she was concerned about both fire safety and the risk of whole tree failure, saying the tree was "too tall." She was pleased with the inexpensive estimate she received from one tree trimming company. The estimator from that company also offered to perform similar pruning on Trees 1, 2, and 3 at a low cost, so she accepted their offer.

Shortly after the pruning, a notice of violation was issued by the City of [REDACTED] on [REDACTED].

The 10<sup>th</sup> Edition of the Guide for Plant Appraisal was published and released for the public in 2018. My appraisal in this report utilizes this most recent edition of the guide. The most notable changes to the Trunk Formula Technique from the 9<sup>th</sup> edition of the Guide are the changing of the depreciation rating classifications. The ratings of species, location, and condition from the 9<sup>th</sup> edition of the Guide were replaced with ratings of condition, functional limitations, and external limitations in the 10<sup>th</sup> edition of the Guide to align with the Uniform Standards of Professional Appraisal Practice (USPAP). In this report, I provided a brief narrative of my justification for each rating I assigned to each tree.

[REDACTED]



## Observations and Discussion

Five protected trees and one additional tree growing along the front and side yard setbacks at [REDACTED] were heavily pruned on [REDACTED]. The leading stems were pruned using “heading” or “topping” cuts. This pruning was not performed according to the Best Management Practices (BMP) for pruning as published by the International Society of Arboriculture (ISA).

The BMP for pruning requires the minimum amount of foliage be removed to achieve a given objective. Homeowner [REDACTED] stated three objectives for the pruning that I will address separately:

- *Fire Safety from Electrical Lines:* Trees 5 and 6 were the stated catalysts for the pruning event on [REDACTED]. As seen in the pre-loss images of the trees from the street view, these trees were not in contact with the power lines at the time of the pruning.

The utility company that manages the power lines has the responsibility of maintaining safe clearance of all vegetation near the lines. A homeowner would be expected to check with the utility company prior to engaging a tree company to prune. Trimming of tree branches in conflict with power lines are most often performed by the utility company at no expense to the homeowner.

The minimum amount of pruning to achieve the objective of line clearance was determined by the utility company. The minimum amount of pruning required by the homeowner to achieve this objective was zero pruning because the utility company had determined that the trees were adequately pruned for clearance at their most recent inspection. Because the pruning event on [REDACTED] removed more foliage than required (zero required pruning), it was not performed according to the BMP for pruning.

- *Mitigation of Risk of Failure:* [REDACTED] expressed her concern about the risk posed by Tree 4 impacting the house. [REDACTED] said it was “too tall,” so she concluded it was unsafe.

It does not necessarily follow that if a tree is tall it is likely to fail. Trees can be both large and structurally sound. Furthermore, although this was a mature specimen tree, it was not unusually large for the species.

From the pre-loss images and from my site inspection, I did not observe any significant structural defects on Tree 4. Its lateral branches were well attached to the main stem. They had a normal lateral spread that would be expected of this species. Immediately prior to the pruning, I would have rated the likelihood of whole tree failure of Tree 4 as *improbable* over the next three year time frame, resulting in a *low* overall risk rating according to the ISA Tree Risk Assessment Qualification (TRAQ) Methodology.

Pruning branches off Tree 4 would not have changed its risk rating, so the [REDACTED] pruning did not achieve the objective of risk reduction. The pruning was not only unnecessary, but also damaging to the tree.

- *Reduction of Nuisance Leaf Drop:* Historically, leaf drop has not been held as a private nuisance. A homeowner is reasonably expected to incur expenses of cleaning leaf drop from trees, plants, and shrubs in an outdoor setting. It has historically been held that municipalities can use tree protection ordinances to restrict removal or pruning of trees based solely upon reduction of leaf drop.

Prevention of all leaf drop would require removal of all trees. Such an outcome has historically not been considered reasonable by municipalities in Southern California.

[REDACTED] pointed out several branches on Tree 6 and told me that they were dead at the time of pruning. He explained the pruning of Tree 6 removed mostly dead branches and did not remove a substantial amount of live tissue.

The branch wounds that [REDACTED] pointed out had milky sap exuding from the xylem tissue at the pruning cuts. The presence of sap indicates these branches were not completely compartmentalized off from the tree, so they were still alive at the time of pruning. Furthermore, there were many small watersprouts beginning to emerge from the trunk and remaining scaffold branches of Tree 6. The only way these sprouts could be emerging was if these sections of the tree were still alive. If the objective of pruning Tree 6 was to remove dead branches, then an excessive amount of living tissue was removed to achieve that objective, thereby contradicting the BMP for pruning.

[REDACTED] and [REDACTED] did not communicate a clear objective for pruning Trees 1-3. Their stated reason for pruning them was they were offered a good price to cut them as an additional service by the tree trimming company that performed the pruning on Trees 4-6. Trees 1-3 were not near a structure. They were not near power lines. [REDACTED] did not point out dead branches in these trees. It appears the objective for pruning these trees was limited to achieving an aesthetic goal of crown reduction. The [REDACTED] reduction of size was damaging to the health, structure, and form of each of these three trees.

The stated Intent and Purpose of the Tree Protection Ordinance stated in [REDACTED] is to “create favorable conditions for the *preservation* and propagation of irreplaceable plant heritage for the benefit of the current and future residents [emphasis added].” The pruning that was performed to these three trees was unfavorable to their preservation, and was therefore a violation of the intent of the Tree Protection Ordinance.

All six trees can be retained in the landscape. They each are showing evidence of having sufficient stored energy to potentially re-grow a canopy. All six of the trees will have a permanently damaged structure, but Trees 2 and 3 have the highest likelihood of being restored to natural form. Trees 1, 4, 5, and 6 may re-grow a new canopy from watersprouts, but these shoots will be weakly attached to their respective parent stems, resulting in a higher likelihood of branch failure in the future. Restoration management in the future for these trees will be significantly more costly and time consuming than if they had not been pruned so aggressively.

No pruning is recommended at this time because the biggest limiting factor for each of the trees is the lack of foliage. The trees must be allowed to re-grow a substantial amount of foliage before they can be pruned to train for structure. I estimate it will be 2-3 years before pruning will be recommended. Between now and then, I recommend continued annual monitoring by a Certified Arborist.

Trees 1 and 4 are protected trees because *Platanus racemosa* is explicitly named as a protected species in the City of [REDACTED]. The ordinance designates *Platanus racemosa* larger than 4 inches diameter at breast height (DBH) as protected trees. Trees 1 and 4 are larger than 4 inches DBH, so they are therefore protected by ordinance.

The ordinance also protects trees all species not found on the Unprotected Tree list that have a single stem larger than 12 inches DBH or at least two stems larger than 10 inches DBH. Trees 2, 5, and 6 are protected because *Platanus x hispanica* and *Fraxinus velutina* are not found on the Unprotected Tree list and each of these trees has a trunk diameter that exceeds 12 inches DBH.

Tree 3 is neither explicitly named as a protected species nor listed on the Unprotected Tree list. It has two trunks measuring 7.6 inches and 6.7 inches in diameter. Since neither trunk is larger than 10 inches in diameter, Tree 3 is not protected by ordinance.

It is common to mistake *Fraxinus uhdei* for *Fraxinus velutina* and vice versa in the field. The key difference between the two species is *F. uhdei* is evergreen and *F. velutina* is deciduous. This is an important distinction in the City of [REDACTED] because *F. uhdei* is on the list of Unprotected Trees and *F. velutina* is not. Trees 5 and 6 are dormant in the Google Maps image from December 2017, indicating they are the deciduous species. Since Trees 5 and 6 are *F. velutina* and are larger than 12 inches DBH, they are protected by ordinance.

## Appraisal Methodology

The approach I took for appraising the subject trees was the cost approach. Because the subject trees are larger than the largest commonly available transplantable tree, I deemed it appropriate to use an extrapolation formula to appraise the cost of procuring it, even if no comparable tree is available for sale. One of the reproduction cost method techniques provided in The Guide to Plant Appraisal 10<sup>th</sup> edition is the Trunk Formula Technique of appraisal, abbreviated here:

The theory of the Trunk Formula Technique is to scale up the cost of the largest commonly available transplantable tree relative to the total cross sectional area of the tree trunk. The unit cost per square inch of nursery stock is calculated for the Largest Commonly Available Nursery Tree (LCANT), and it is multiplied by the cross sectional area of the subject tree being appraised. This is the basic reproduction cost of the tree. It represents the cost to reproduce a defect-free copy of the tree with one of the same size and species.

After calculating the basic cost of the tree, depreciating factors are introduced. Since hand-selected nursery stock is in theory the best quality, the basic cost must be adjusted downward by a Condition rating to reflect any defects in health, structure, and form. The Condition rating is a subjective rating between 0% and 100% as determined by the appraising arborist. Guidance is given as a framework for general ratings in Table 4.1 of the Guide for Plant Appraisal 10<sup>th</sup> Edition (CTLA 2018, p. 44).

Functional Limitations reflect the features of the tree/site interaction that restrict or constrain growth or function due to poor placement or size. External Limitations reflect restrictions to the tree involving legal, biological, or environmental conditions external to the property (CTLA 2018, p. 9). Functional Limitations and External Limitations are also subjective ratings ranging between 0% and 100% as determined by the appraising arborist, with similar guidance provided.

The final appraised Trunk Formula Technique Reproduction Cost of the tree is the product of the total cross sectional area, the unit cost of trunk area, and the three depreciating factors: Condition, Functional Limitations, and External Limitations.

I appraised each of the six subject trees before and after the pruning, then I took the difference between the cost solutions to determine the amount of damage. See the appraisal table at the end of this report for detailed calculations.

### *Trunk Area*

First, the diameter of the subject trunk is measured. The height of the measurement is conventionally made at 4.5 feet above natural grade. If the subject tree has multiple trunks, the diameter of each individual trunk is measured. The cross sectional area (A) is calculated by the formula  $A = \pi/4 d^2$ . Then the cross sectional area of each trunk is added together to arrive at the total trunk cross sectional area.



### *Unit Cost*

The unit cost of nursery stock is published in the Western Chapter ISA Regional Species Classification Guide, and it varies based on the growth rate of the tree and its trunk size in various box sizes. This unit cost is expressed in dollars per square inch of trunk cross sectional area.

*Platanus racemosa* and *Platanus x hispanica* are from Nursery Group 3 in Southern California, having a unit cost of \$62 per square inch of trunk area. *Fraxinus velutina* is from Nursery Group 4 in Southern California, having a unit cost of \$45 per square inch of trunk area.

The WCISA Regional Guide was most recently published in 2004. One of its weaknesses is it has not been adjusted for inflation and current market pricing. As an alternative to using the published values in the guide, a more detailed analysis of the unit cost could be performed at a much greater expense: wholesale nursery pricing catalogs from many growers can be obtained and analyzed for size and price information to determine a more accurate unit cost. Due to budget and time limitations, that additional level of research was not undertaken for this appraisal report.

### *Condition Rating*

Condition has three subcomponents: health, structure, and form. Health rates the attributes that limit the ability of the tree to undergo the processes of photosynthesis, including attributes of the vascular system, leaf density, wound closure, insect infestation, and abiotic disorders. Structure is the ability of the tree to support itself from falling or breaking apart. Form describes the tree's habit, shape, or silhouette as it develops from the interaction between the tree's genetics, site, and management. Health, Structure, and Form are subjectively rated on a scale of 0% to 100% by the appraising arborist.

Since some attributes hold a greater relevance in determining the condition of a tree than other attributes, the arborist is given further discretion to assign a relative weighting of importance to each of these three factors.

My justification for each respective tree's pre- and post-loss depreciation ratings are provided in the following section.

### *Functional Limitations and External Limitations*

Functional Limitations reflect the restriction on tree growth or intended use in the landscape based on the interaction of site and species. Trees 1-4 did not have any significant functional limitations, so they received ratings of 100%. Trees 5 and 6 are rated as 50% species for Southern California Coastal Influence in the Western Chapter Regional Species Classification Guide. However, Trees 5 and 6 are well-placed for the intended function of shading the back yard from the southern and western sun. I rated the Functional Limitations for Trees 5 and 6 as 80%.

External Limitations are the restrictions on tree growth or intended use with respect to attributes outside the control of the property owner. Known fatal pests, drought restrictions, invasive species status, and utility easement conflict are all examples of external limitations. None of these six trees have any of these limitations. All six are protected species by ordinance, and they are all tolerant of the allowable irrigation per local drought restrictions. Trees 5 and 6 are growing adjacent to power lines, but not close enough that the necessary power line clearance pruning would limit their function, structure, or form. I assigned an External Limitations rating of 100% to each of the six trees.

The Functional Limitations and External Limitations of each of the respective trees did not change as result of the pruning.

### *Appraised Cost Solution*

The basic cost is then multiplied by the Condition, Functional Limitations, and External Limitations ratings. The calculated amount is then rounded to reflect the level of precision in the appraisal. If the amount is less than \$5000, then it is rounded to the nearest \$10. If the amount is greater than \$5000, then it is rounded to the nearest \$100. The rounded amount is the final appraised cost solution by using the Reproduction Cost Method, Trunk Formula Technique.

I appraised the pre-loss cost solution for the five protected trees to be \$51,900. I appraised the post-loss cost solution for the five trees to be \$19,000. This reflects a total diminution in value to the five protected trees of \$32,900 resulting from the pruning event on [REDACTED]

## **Other Appraisal Methods**

The City of [REDACTED] Tree Protection Ordinance [REDACTED] requires valuation according to the “tree evaluation formula.” The formula mentioned in the ordinance refers to the Trunk Formula Technique described in the 10<sup>th</sup> Edition Guide for Plant Appraisal, so I did not use any other methods of tree appraisal. I did not research the cost to procure a direct replacement of the subject tree. I did not calculate the present value of the income generated by the benefits provided by the tree. I did not calculate the difference in market value of the subject property before and after the loss.

Because I only used one method of appraisal, I did not include a reconciliation section in this report.

rees

Following section provides justification for each of the respective condition ratings for the trees. Ratings and justification are given for the condition of each tree both before and July 15, 2018 pruning event.



### Tree 1

*Platanus racemosa* – California Sycamore

#### Pre-Loss:

The health of the tree was *Good*. It had normal vigor for the species. There was minor dieback at the tip of the canopy. The foliage was still green and healthy in December of 2017 when the Google Maps Street View image was taken, indicating the tree was not significantly affected by the common foliar fungus *Antiracnose*.

The structure was *Good*. There was a well-developed structure with a minor co-dominant stem defect at a height of approximately 15 feet. Around the co-dominant stem union was ample response growth, so this union was not a significant structural concern. The co-dominant union was unlikely to fail in normal expected weather conditions.

The form was *Good*. There was a minor asymmetrical deviation towards the south, but overall, the function and aesthetics of the tree were not compromised as a specimen landscape asset.

#### Post-Loss:

The health of the tree is now *Fair*. It has significantly reduced vigor as a result of the removal of 90% of the living foliage. I observed evidence of re-sprouting beginning already, indicating the tree has energy reserves from which to draw, and it still has some vigor.

The structure of the tree is now *Poor*. Multiple significant topping cuts were made on the scaffold branches and trunk. These heading cuts will likely turn into decay sites, significantly limiting the structure of the tree in the long term. Re-growth sprouts will be weakly attached to the scaffold, increasing likelihood of branch failure.

The form of the tree is now *Poor*. It now has an abnormal form due to severe pruning. The pruning detracts to a significant degree from the tree's intended use of an aesthetic specimen tree and screening from street. I did not choose a rating of *Very Poor* because the tree still does provide some function in the landscape, albeit significantly limited.





## Tree 2

*Platanus x acerifolia* - London Planetree

### Pre-Loss:

The health of the tree was *Good*. Vigor was normal for the species. There was evidence in the Google Maps Street View image of a history of common *Anthraxnose* foliar fungus causing minor twig dieback. This amount of *Anthraxnose* infection did not negatively affect tree's ability to grow, it just detracted from the aesthetic appearance of the tree late in the growing season when the leaves began to turn brown.

The structure was *Fair*. There is a co-dominant stem defect at a height of about four feet. There is a ample response growth joining the two stems, so it was unlikely to fail in normal weather conditions before the pruning.

The form was *Good*. There were minor deviations from species norm, but it was mostly consistent with its intended landscape use.

### Post-Loss:

The health of the tree is now *Fair*. It has a significantly reduced vigor as a result of the loss of more than 50% of its living foliage.

The structure of the tree is now *Fair*. There are now multiple moderate topping cuts on the scaffold branches. The tree has the potential to recover with several years of restoration pruning management.

The form of the tree is now *Fair*. Its aesthetic function as a specimen tree has been compromised as a result of the topping.





### Tree 3

*Platanus x acerifolia* - London Planetree

This tree is not protected by ordinance because neither of its two trunks is larger than 10 inches in diameter. It was not appraised as part of this report.



#### Tree 4

*Platanus racemosa* – California Sycamore

##### Pre-Loss:

The health of the tree was *Fair*. It had a pre-existing history of the common *Anthraxnose* foliar fungus and minor dieback at tips. I observed minor bark beetle activity in the trunk, but it did not appear to be affecting the conductivity of water along the stem. From the Google Maps Street View image from December 2017, the tree had a dense canopy and normal vigor for species.

The structure was *Good*. It had a minor prevailing lean to southwest, away from a former neighboring tree that was removed between 2012 and 2017 for construction of the house. Although Tree 4 was leaning, the degree of lean was well within the tolerable range for this species. Just because a tree is leaning does not mean that it is likely to fail.

The form was *Good*. There was minor asymmetrical distribution of foliage due to phototropism away from former neighboring Sycamore tree. The function and aesthetics of the tree were not compromised by its prevailing lean.

##### Post-Loss:

The health of the tree is now *Fair*. It has a significantly reduced vigor as a result of the removal of 90% of its living foliage. I observed evidence of re-sprouting beginning already, indicating the tree has energy reserves from which to draw and still has some vigor.

The structure of the tree is now *Poor*. Multiple significant topping cuts were made on scaffold branches and trunk. These heading cuts will likely turn into decay sites, significantly limiting the structure of the tree in the long term. Re-growth sprouts will be weakly attached to the scaffold, increasing likelihood of branch failure.

The form of the tree is now *Poor*. It now has an abnormal form due to severe pruning. The pruning detracts to a significant degree from the tree's intended use of an aesthetic specimen tree and screening from street. I did not choose a rating of *Very Poor* because the tree still does provide some function in the landscape, albeit significantly limited.





## Tree 5

### *Fraxinus velutina* – Arizona Ash

#### Pre-Loss:

The health of the tree was *Good*. It had minor tip dieback and some deadwood present in the canopy, but overall normal vigor. This conclusion was based on a pre-loss image of the tree during its dormancy period. It is possible that deadwood could have been obscured in the image.

The structure was *Good*. It had a normal vase-shaped structure for the species. Co-dominant stem unions are known defects that tend to develop in this species.

The form was *Excellent*. The form of the tree was nearly ideal for the species. The crown was symmetrical, and the tree was consistent with its intended use of shading the rear yard from the southern and western sun.

#### Post-Loss:

The health of the tree is now *Poor*. The severe topping event resulted in an unhealthy and declining appearance for the tree. The tree now has a very low foliage density after 90% of its canopy was removed.

The structure of the tree is now *Poor*. The severe topping cannot be corrected, even with restoration pruning over a period of years. Re-sprouting will be weakly attached to the parent stems and will have an increased likelihood of failure.

The form of the tree is now *Very Poor*. The tree no longer provides its intended function of shading the rear yard from southern sun. The severe topping has left the tree visually unappealing.





## Tree 6

*Fraxinus velutina* – Arizona Ash

### Pre-Loss:

The health of the tree was *Fair*. It was partially suppressed by Tree 5. Dead branches were present in the canopy. Overall, vigor was only slightly reduced by the competition with its neighbor.

The structure was *Fair*. Its phototropic response growth towards the west out from under Tree 5 caused the tree to have a prevailing lean. I also observed several weakly attached and hanging branches in the December 2017 Google Maps Street View image.

The form was *Fair*. The crown was asymmetrical due to overcrowding and competition with Tree 5.

### Post-Loss:

The health of the tree is now *Poor*. The severe topping resulted in an unhealthy and declining appearance for the tree. There is low foliage density after 90% of the canopy was removed.

The structure of the tree is now *Poor*. The severe topping cannot be corrected, even with restoration pruning over a period of years. Re-sprouting will be weakly attached to the parent stems and will have an increased likelihood of failure.

The form of the tree is now *Very Poor*. The tree no longer provides its intended function of shading the rear yard from southern sun. The severe topping has left the tree visually unappealing.

## **Limits of Assignment**

My investigation was limited to above-ground observations of the subject tree and the surrounding site. My investigation was based solely upon my site inspection and on images obtained from Google Maps Street View. No excavation was performed. All of the information provided to me regarding the history of the site and the subject tree was assumed to be true. If any information is found to be false, the conclusions in this report may be invalidated.

This report is not a risk assessment, nor does it provide any estimates for the cost of remedies. My expertise in this matter is limited to arboriculture, and this report is not intended to be legal advice. I do not guarantee the safety, health, or condition of the subject tree. There is no warranty or guarantee, expressed or implied, that problems or deficiencies in the subject tree may not arise in the future.

Arborists are tree specialists who use their knowledge, education, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living 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 structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

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.

## **Works Cited**

Council of Tree and Landscape Appraisers. Guide for Plant Appraisal, 10<sup>th</sup> Edition. ©2018 CTLA.

Western Chapter of the International Society of Arboriculture. A Regional Supplement to the CTLA Guide for Plant Appraisal. ©2004 by WC-ISA

## Appraisal Calculations

	Tree 1: <i>Platanus racemosa</i>				
	Measurement	Source	Pre-Loss	Post-Loss	Difference
A	DBH	Field Measurement	19.7 in	19.7 in	
B	Trunk Area of Subject Tree	$\pi * (A/2)^2$	305 in <sup>2</sup>	305 in <sup>2</sup>	
C	Unit Cost	WCISA Regional Guide	\$ 62.00	\$ 62.00	
D	Basic Tree Cost	B*C	\$ 18,897.92	\$ 18,897.92	
E	Condition Rating	Arborist Opinion	80%	28%	
F	Functional Limitations	Arborist Opinion	100%	100%	
G	External Limitations	Arborist Opinion	100%	100%	
H	Depreciated Cost	D*E*F*G	\$ 15,118.34	\$ 5,291.42	
I	Final Appraised Cost Solution	Round to nearest \$1000	\$ 15,000.00	\$ 5,000.00	\$ 10,000.00
	Tree 2: <i>Platanus x hispanica</i>				
	Measurement	Source	Pre-Loss	Post-Loss	Difference
A	DBH	Field Measurement	10.2 in	10.2 in	
B	Trunk Area of Subject Tree	$\pi * (A/2)^2$	82 in <sup>2</sup>	82 in <sup>2</sup>	
C	Unit Cost	WCISA Regional Guide	\$ 62.00	\$ 62.00	
D	Basic Tree Cost	B*C	\$ 5,066.20	\$ 5,066.20	
E	Condition Rating	Arborist Opinion	71%	44%	
F	Functional Limitations	Arborist Opinion	100%	100%	
G	External Limitations	Arborist Opinion	100%	100%	
H	Depreciated Cost	D*E*F*G	\$ 3,597.00	\$ 2,213.93	
I	Final Appraised Cost Solution	Round to nearest \$100	\$ 3,600.00	\$ 2,200.00	\$ 1,400.00
	Tree 3: <i>Platanus x hispanica</i> - NOT PROTECTED				

**Figure 1:** Trunk Formula Technique appraisal calculations for Trees 1-2. Note that Tree 3 is not protected by ordinance, so the cost solution of the damage done to the tree was not included in the final total of this appraisal assignment.

	Tree 4: <i>Platanus racemosa</i>				
	Measurement	Source	Pre-Loss	Post-Loss	Difference
A	DBH	Field Measurement	24.8 in	24.8 in	
B	Trunk Area of Subject Tree	$\pi * (A/2)^2$	483 in <sup>2</sup>	483 in <sup>2</sup>	
C	Unit Cost	WCISA Regional Guide	\$ 62.00	\$ 62.00	
D	Basic Tree Cost	B*C	\$ 29,949.18	\$ 29,949.18	
E	Condition Rating	Arborist Opinion	71%	27%	
F	Functional Limitations	Arborist Opinion	100%	100%	
G	External Limitations	Arborist Opinion	100%	100%	
H	Depreciated Cost	D*E*F*G	\$ 21,263.92	\$ 8,086.28	
I	Final Appraised Cost Solution	Round to nearest \$1000	\$ 21,000.00	\$ 8,000.00	\$ 13,000.00
	Tree 5: <i>Fraxinus velutina</i>				
	Measurement	Source	Pre-Loss	Post-Loss	Difference
A	DBH	Field Measurement	20.0 in	20.0 in	
B	Trunk Area of Subject Tree	$\pi * (A/2)^2$	314 in <sup>2</sup>	314 in <sup>2</sup>	
C	Unit Cost	WCISA Regional Guide	\$ 45.00	\$ 45.00	
D	Basic Tree Cost	B*C	\$ 14,137.17	\$ 14,137.17	
E	Condition Rating	Arborist Opinion	82%	17%	
F	Functional Limitations	Arborist Opinion	80%	80%	
G	External Limitations	Arborist Opinion	100%	100%	
H	Depreciated Cost	D*E*F*G	\$ 9,273.98	\$ 1,877.42	
I	Final Appraised Cost Solution	Round to nearest \$1000	\$ 9,000.00	\$ 2,000.00	\$ 7,000.00
	Tree 6: <i>Fraxinus velutina</i>				
	Measurement	Source	Pre-Loss	Post-Loss	Difference
A	DBH	Field Measurement	14.0 in	14.0 in	
B	Trunk Area of Subject Tree	$\pi * (A/2)^2$	154 in <sup>2</sup>	154 in <sup>2</sup>	
C	Unit Cost	WCISA Regional Guide	\$ 45.00	\$ 45.00	
D	Basic Tree Cost	B*C	\$ 6,927.21	\$ 6,927.21	
E	Condition Rating	Arborist Opinion	60%	32%	
F	Functional Limitations	Arborist Opinion	80%	80%	
G	External Limitations	Arborist Opinion	100%	100%	
H	Depreciated Cost	D*E*F*G	\$ 3,325.06	\$ 1,773.37	
I	Final Appraised Cost Solution	Round to nearest \$100	\$ 3,300.00	\$ 1,800.00	\$ 1,500.00

**Figure 2:** Trunk Formula Technique appraisal calculations for Trees 4-6.



Tree 1: <i>Platanus racemosa</i>			
Condition Rating	Weight	Pre-Loss	Post-Loss
Health	20%	80%	50%
Structure	50%	80%	21%
Form	30%	80%	25%
	TOTAL	80%	28%

Tree 2: <i>Platanus x hispanica</i>			
Condition Rating	Weight	Pre-Loss	Post-Loss
Health	30%	70%	50%
Structure	30%	60%	41%
Form	40%	80%	41%
	TOTAL	71%	44%

Tree 4: <i>Platanus racemosa</i>			
Condition Rating	Weight	Pre-Loss	Post-Loss
Health	30%	60%	41%
Structure	30%	70%	21%
Form	40%	80%	21%
	TOTAL	71%	27%

Tree 5: <i>Fraxinus velutina</i>			
Condition Rating	Weight	Pre-Loss	Post-Loss
Health	40%	80%	21%
Structure	20%	70%	21%
Form	40%	90%	10%
	TOTAL	82%	17%

Tree 6: <i>Fraxinus velutina</i>			
Condition Rating	Weight	Pre-Loss	Post-Loss
Health	40%	60%	40%
Structure	20%	60%	40%
Form	40%	60%	20%
	TOTAL	60%	32%

**Figure 3:** Condition rating calculations for Trees 1, 2, 4, 5, and 6. Tree 3 was not included because it was not large enough to be a protected tree.

## Site Map



**Figure :** Site map showing the locations of each of the subject trees. *Platanus* trees are shown in blue. *Fraxinus* trees are shown in grey.

## Site Photos



**Figure 1:** Tree 1 Pre-Loss (left) and Post-Loss (right).



**Figure 1:** Tree 2 Pre-Loss (left) and Post-Loss (right).



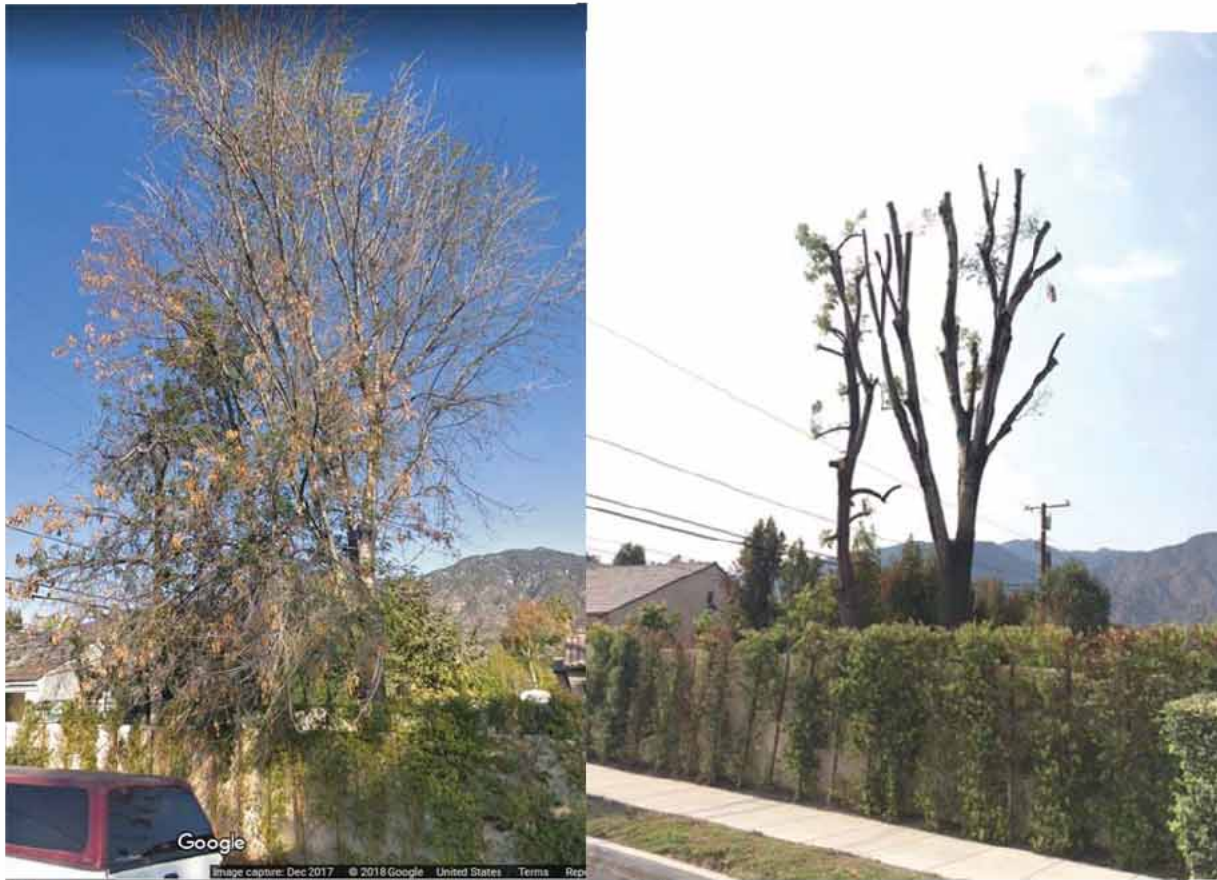


**Figure 1:** Tree 3 Pre-Loss (left) and Post-Loss (right). This tree is not large enough to be protected by ordinance.



**Figure 1:** Tree 4 Pre-Loss (left) and Post-Loss (right).





**Figure 1:** Tree 5 Pre-Loss (left) and Post-Loss (right).



**Figure 10:** Tree 6 Pre-Loss (left) and Post-Loss (right). As seen in the image at left, the branches of Tree 6 and Tree 5 were not touching the power lines prior to the pruning.



**Figure 11:** Close up of one branch on Tree 6 that [REDACTED] pointed out as being dead prior to the pruning. I observed a milky sap exuding from the pruning cut, indicating it was still alive.





**Figure 12:** Close up of another branch on Tree 6 [REDACTED] pointed out as being dead prior to pruning. I observed many small watersprouts emerging, indicating these branches were still alive. Note the 10-15 inches of torn bark on the pruning cut on the underside of the scaffold branch at left.



**Figure 13:** Close up of the bark of Tree 4. There was some minor bark beetle activity in the trunk prior to the pruning. The activity did not appear to be affecting the overall health or conductivity of water along the stem.