



City of Palo Alto City Manager's Report

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TO: HONORABLE CITY COUNCIL

FROM: CITY MANAGER

**DEPARTMENT: PLANNING AND
COMMUNITY ENVIRONMENT**

DATE: FEBRUARY 22, 1999

CMR:145:99

**SUBJECT: REQUEST FOR CITY COUNCIL TO CONSIDER AN APPLICATION
TO DESIGNATE A COAST REDWOOD AS A HERITAGE TREE BY
MR. AND MRS. OLMSTED, 3759 LA DONNA STREET, PALO ALTO**

RECOMMENDATION

Staff recommends that Council designate a Coast Redwood tree located at 3759 La Donna Street as Palo Alto Heritage Tree No. 2, as requested by the owners of the property (see Attachment A).

BACKGROUND

In 1996, the City Council enacted Ordinance No. 4362, effective January 1, 1997, in order to preserve and maintain specified native oak and heritage trees on private property and to protect them from removal, except in certain circumstances.

Provision for persons to nominate a tree on their property as a heritage tree is found in the Palo Alto Municipal Code Chapter 8.10.090, Designation of Heritage Trees. After City Council approval of such designation, the tree is included in a listing, including such information as specific location, overall size, canopy spread, etc., and kept by the Department of Planning and Community Environment. Once designated, a heritage tree will be subject to the provisions of the Tree Preservation and Management Regulations, unless removed from the list by subsequent action by the City Council.

To date, no heritage tree applications have been submitted by private citizens for City Council action. Heritage Tree designation No. 1 is reserved for the El Palo Alto Coast Redwood at El Palo Alto Park.

DISCUSSION

The Coast Redwood meets the standards for heritage tree designation set forth in Chapter 8.10.090 and heritage tree checklist (see Attachments C and D). Written request, consent and family history of the property owners, Franklin Olmsted, Jean Olmsted and Ann Olmsted (see Attachment A), has been received along with a written analysis supporting the application by Ray Morneau, a local arborist certified by the International Society of Arboriculture (see Attachment B). The Olmsteds are additionally requesting to include two adjacent smaller trees in the Heritage Tree designation. However, staff recommends that only the large tree qualifies as a heritage tree and should remain as the single candidate. The large Coast Redwood is healthy, estimated to be over 100 years old, over 125 feet in height, with a trunk diameter of nearly five and one half feet. The tree is located outside the buildable area along the northern property line; therefore, no impacts on the tree from future development are expected. Staff recommends this tree be designated as a heritage tree based upon findings that it is unique and of importance to the community due to the following factors:

- (1) It satisfies PAMC Section 8.10.090 requirements;
- (2) It is an outstanding specimen of a desirable species,
- (3) It is one of the largest and oldest in Palo Alto; and
- (4) It possesses distinctive form, size, age and location.

The Olmsted application will be designated Heritage Tree No. 2. Staff anticipates that if this initial application is approved, it will set the pattern to encourage other Palo Altans to nominate significant trees for heritage tree status and to enjoy the benefits of protecting property value and enjoyment that are associated with such a designation.

RESOURCE IMPACT

There are no resource impacts resulting from the designation.

POLICY IMPLICATIONS

The recommended action is consistent with existing City policies.

TIMELINE

After designation as a Heritage Tree by Council, the Heritage Tree will be recognized as such immediately.

ENVIRONMENTAL REVIEW

The Heritage Tree action is exempt from provisions of the California Environmental Quality Act (CEQA), Section 15061 (b)(3) because it can be seen with certainty that there is no possibility that the designation will have a significant effect on the environment.

ATTACHMENTS

- Attachment A: Olmsted Heritage Tree Request
- Attachment B: Ray Morneau, Arborist Report
- Attachment C: Tree Preservation and Management Regulations, Ordinance No. 4362 and 4538
- Attachment D: Heritage Tree Checklist

PREPARED BY: Dave Dockter, Planning Arborist

DEPARTMENT HEAD REVIEW: Ed Gawf
G. EDWARD GAWF
Director of Planning and Community Environment

CITY MANAGER APPROVAL: Emily Harrison
EMILY HARRISON
Assistant City Manager

cc: Franklin, Jean and Ann Olmstead
Canopy, Trees for Palo Alto

240 West Charleston Road
Palo Alto, California 94306
April 23, 1998

The City Council of the City of Palo Alto
250 Hamilton Avenue
Palo Alto, CA 94301

Subject: Request for Heritage Tree Status

Dear Council Members:

This is our letter of request for heritage status for a large and beautiful redwood tree that is growing on our property at 3759 La Donna in Barron Park.

We believe the tree meets the standards for a heritage tree set out in Municipal Code ordinance 8.10.090. It is an outstanding specimen of redwood tree. It is a very large tree. We do not know its age, although we do know that it was an impressive size in 1966 when Frank Olmsted (Franklin's father) purchased the property. Certainly the tree is unusually big.

If the tree ordinance is flexible enough, we would like to include two adjacent smaller trees, probably offspring of the larger tree, which are a part of this family group. They shade the larger tree and, we believe, help keep it healthy.

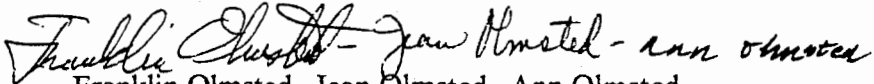
According to measurements taken on March 3, 1998 by David Dockter, City of Palo Alto Arborist, the main tree is 17 ft. 8 inches in circumference and 5 ½ feet in diameter at breast height. The crown spread is 57 feet. The height of the tree as measured by Franklin Olmsted is 125 feet.

We are attaching pictures of the tree, a page showing the location of this tree and other trees on the lot, and a report from an arborist supporting this application.

If any of you have time to visit the tree, you are very welcome. Please call us at 493-3468 to arrange a visit as the house is now rented while Ann is away at school.

We are seeking heritage status to secure as much protection as possible for this tree or tree family because we believe that it is both an asset to the City of Palo Alto and to ourselves.

Sincerely,


Franklin Olmsted--Jean Olmsted--Ann Olmsted

RAY MORNEAU

• ARBORIST •

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eMail: rmarborist@aol.com • <http://members.aol.com/RMArborist>

Coast Redwood Certified Arborist's Report

Property

Mr. & Mrs. Olmsted
3759 La Donna Street
Palo Alto, California

Date

April 20, 1998

Contents

- 0.1 Scope & Purpose
- 1.0 Brief Historical Perspective
- 2.0 Tree's Status Quo
- 3.0 Future Care

0.1 Scope & Purpose

Mr. and Mrs. Olmsted have contacted me as owners of the property at 3759 La Donna Street in the Barron Park area of Palo Alto. Growing on this property is a magnificent Coast Redwood tree which is being presented for "Heritage Tree" status since it meets several determining criteria.

The details observed and noted for this report would overwhelmingly support the City Council's acceptance of the subject Redwood tree as a Heritage Tree. We also address this tree's future care for any subsequent owners, neighbors, and citizens.



1.0 Brief Historical Perspective

Trees have been a thread running through the City of Palo Alto's history. For centuries, the local Native Americans gathered deadwood for fuel, ground acorns into meal, and used Poison Oak for several purposes (including dying, basketry, and food). In the early 1800's, sawyers harvested area oaks and redwoods. In recent decades, Palo Altans have enjoyed living in the shade of its neighborhoods' trees.

This city is a namesake of a Coast Redwood named "el Palo Alto". Now in the millennium-old range, that specimen still towers 125' above the top of the creekbank beside the Southern Pacific Railroad bridge. It may have been over 170' tall in 1769 when the Portola expedition set up its basecamp there and used it as a return reference point while exploring the area.

Before the Ice Age, more than forty species of Redwoods covered much of the northern hemisphere. Fossil records have been recovered in China, Russia, Europe, and across upper North America. The cold accompanying the glaciers drove the Coast Redwoods (the world's tallest trees) back to a 25-mile swath along the upper California coast.

Coast Redwood trees are in the genus *Sequoia*, named after Cherokee Chief Sequoyah, scholar and inventor of the written Cherokee language. Ironically, Chief Sequoyah never saw the tree named after him.

Barron Park is a sylvan neighborhood of Palo Alto which was not incorporated into the city until 1975. The "woody" atmosphere has been treasured by the community's residents both before and after annexation. When Edward Barron purchase the Sarah Wallis estate in 1878, he reportedly used the tract along La Donna Street for his arboretum nursery. Real estate agents were even said to be listing lots here in 1949 as being in "La Donna Gardens". Further research could easily hypothesize that the subject Redwood may be more than 100 years old.

Throughout Palo Alto, progress has brought development and pavement at the expense of trees and with the forfeiture of space required for their roots. Time has shown that trees help to preserve and protect a city's, and its neighborhood's, aesthetic and scenic beauty. Those are subjective merits.

Objective benefits include: improving climatic balance, providing shade; modification of flood hazards and the risk of landslides; diminishing effects of high winds; counteracting pollutants in the air; providing privacy; supplying habitat to a variety of wildlife species; preventing erosion of topsoil; and protecting valuable historical and community assets. All the while, trees increase property values.

Forward-looking Palo Alto joins other Bay Area municipalities with ordinances which help manage and preserve its urban forest resource. For instance, Sunnyvale lists trees important to the city on their website, calling out addresses of those declared heritage trees by council resolution (<http://www.jps.net/hwatease/REDWOOD.html>).

2.0 Tree's Status Quo (Description & Discussion)

2.1 Scientific (Botanical) Name: *Sequoia sempervirens*.
(Common Name: Coast Redwood.)

2.2 Size: Trunk Diameters (dbh): main = 64.2", southwest = 26.2", south = 17.9".
Root Crown Diameters: main = 92.0", southwest = 31.8", south = 23.5".
Foliage Crown Span (radius): 25' (except 12' over NW neighbor's driveway).
Height: 125'.

2.3 Location:

Backyard: trunk center is ~84' northeast back-of-curb (from La Donna Street);
trunk center is ~6' southeast of fence (base of trunk = 3.5' from fence);
trunk center is ~35' southwest of back fence line; and
trunk center is ~42' northwest of side fence line.

2.4 Condition:

Factor	Variation	Range	Mar 23
Leaves / Buds	"Normal size/color" to "Major problems."	20 to 0	15
Twigs/Branches	"Typical" to "Short / Misshapen."	20 to 0	16
Scaffold limbs	"No defects" to "Structural problems".	20 to 0	16
Trunk	"Solid; Clean" to "Insect or decay problems".	20 to 0	17
Roots	"Clean" to "Severe, obvious problems".	20 to 0	12
		Percentage	76%
		Category	"Good"

2.5 Major Characteristics & Discussion:

- ① Observed from a distance this Coast Redwood appears vigorous and robust. Its pyramidal form is relatively even. This is in contrast to some which, upon encountering a change in conditions several years ago, now show a stunted upper foliage crown.

This Redwood's status is now young, approaching maturity, and its vigor is robust, having slowed somewhat from its juvenile tempo. An important consideration for its future will be to maintain the density of green leaves to feed this tree to sustain its massive system, so it maintains that status quo rather than starting to decline.

- ② This Redwood tree's foliage crown density is moderately dense. The leaves and buds on the twigs are typical size for age. Recent years' growth is also average (3" to 7" annual average for past three years).

No significant deadwood has accumulated since the latest pruning. Although, it would be unusual for a Redwood to require much pruning. Rapid development of deadwood would be a flag pointing to a greater problem, a major stress.

A minor accumulation of deadwood is part of the phenomenon of shedding which is a natural process for all living things (like spent hair and skin cells for humans and

our pets). The rate of accumulation is a relative measure of a tree's rate of decline. This is not a declining specimen.

No disease was observable. There are very few diseases which are problems for Redwoods. A fungus disease named *Botryosphaeria* can infect Coast Redwoods, but in this area is much more likely to occur in Giant Sequoias (in the *Sequoiadendron* native to the Sierras rather than in the *Sequoia* of the coast range). That fungus was not seen on the subject Redwood.

- ③ This tree's structure for limb attachment is typical of redwoods. The trunk appears sound with no loose bark, scrapes, or wounds (other than old pruning of only the lowest branches). The sound trunk is further evidence of this tree's vigor.

The presence of the two smaller trunks beside the main trunk is important. These have foliage crowns which are interdependent with the one from the main stem. All three trunks in this stand should be considered part of the one tree for the purpose of the Heritage Tree designation.

- ④ A cursory root crown inspection finds the root flare at grade, well-buttressed, and intact. My cursory root crown excavation found no fungus under the bark in the root flare area. This is another very positive sign. This is likely a major contributor to this tree's vigor.

Limited root zone disturbance and only minimal stress from past projects (e.g., patio concrete years ago) have allowed this Redwood to thrive. It is still too early to assess the impact of the recent construction project just across the fence.

- ⑤ The concrete patio slabs were installed when this tree was younger. It was perhaps more resilient in its response to the construction than it would be today to the same level of activity.

One would not expect to undertake a project of such scope at this time in this tree's life (or attempt to renovate the current slabs). Such a job would require that special precautions be taken to minimize stress on this Redwood.

If this cement is to be removed, workers must be especially careful during the project. Tractors or other power equipment must not scrape, compact, or otherwise disturb the soil surface beneath this Redwood's foliage canopy. Much of the work might need to be done by hand, or at least implementing special tree protection measures.

If it becomes necessary to design and arrange for any construction in the vicinity of this tree (at least on any of the contiguous lots), the City of Palo Alto Planning Department Arborist must be consulted.

3.0 Future Care

The Redwoods lost to the Ice Age died a natural death. If we provide protection and care, this one might grace the earth until the next ice age.

3.1 Monitoring:

- 3.1.0 To have this statuesque Coast Redwood gracing the Palo Alto urban forest, this tree's environment would ideally be kept as much like a redwood forest as possible -- no introduced exotic plants within the dripline, surrounded by the softening effect of

other trees rather than more structures which artificially reflect heat, no root loss beneath the foliage canopy (grading, scraping, trenching, ...)

3.1.1 The people most consistently and frequently on site will be those living here.

They will be the front line in this tree's care and nurturing. It must be made easy for them to ask questions and to pass on information when they notice something about this Redwood needing attention.

3.1.2 A Certified Arborist should periodically inspect the tree. A typical inspection cycle for a redwood of this age and stature might be three to five years, but obviously shorter if there are changes in its condition or its environment.

3.1.3 Items which might be noted with particularity include:

Mulch: Trees benefit from a 3" to 4" deep layer of mulch spread evenly over their root zones, but not touching the trunk or root flare. To the extent that this tree is mulched, the mulch material can be kept relatively evenly distributed. It currently has an exquisite accumulation of redwood duff approximating the conditions of a forest floor.

Root zone moisture: During the driest, hottest times of summer, supplemental watering can be helpful. Depending on the water budget available, consider a couple of summer applications of 500 to 1000 gallons of water dispensed evenly over the area beneath the foliage canopy slowly enough to soak in without runoff. Ideally, these would occur about the first of August, September, and October.

Most plant material would prefer an evenly moist root zone so sections of roots do not dry out and die. Nevertheless, the Redwood will do best if irrigation water is not applied to the area immediately adjacent to the root flare, generally keeping it back at least two feet. A constantly moist root flare provides a hospitable site for fungi to thrive in a super-sensitive area.

Damage: Remember to look up into the tree. Any breakage should be removed to minimize weight added unexpectedly to other areas resulting in further breakage.

3.2 Maintenance:

Tree maintenance is difficult to schedule like clockwork, especially on mature sites. Some of the maintenance issues are discussed under the heading above (3.1 Monitoring).

3.2.1 Pruning: Any trimming must be done according to published standards. Several are combined as the basis for tree work in the United States, including:

Tree Pruning Guidelines (International Society of Arboriculture, ©1995),
American National Standard for Tree Care Operations -- Tree, Shrub, and Other Woody Plant Maintenance -- Standard Practices (a.k.a.: ANSI A300-1995), and

American National Standard for Tree Care Operations -- Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush -- Safety Requirements (a.k.a.: ANSI Z133.1-1994).

Cut placement (positioning), selection, and technique are so important to the final result -- longevity of the tree, that it is important to have certified tree workers (or equivalent staff) doing the hands-on tree work, supervised by a certified arborist. Another important concept which pruning personnel must understand is that a tree's leaves are its food producers. By photosynthesis, its leaves/needles manufacture carbohydrates. Pruning puts a tree on a diet -- over-pruning puts it on a starvation diet.

Over-pruning encourages a wide variety of other problems, too, including but not limited to:

- destruction of the canopy micro-environment,
- exposure of once-shaded tissue to sunscald (desiccation),
- stimulation of latent buds to grow as watersprouts (colloquially called "suckers"),
- reduction of the tree's ability to protect and defend itself against insect and pathogen attack,
- likely loss of structural strength, and
- general deterioration of the tree's health and vigor.

Typically, mature Redwoods require very little pruning. Older trees slow down in vigor. They produce fewer green leaves (needles) for the amount of wood to be supported. This naturally shifts the foliage canopy ratio from high-nitrogen leaves more toward high-carbon woody tissue.

Considering all of the above, it would be easy to over prune this particular Redwood tree. As a guideline, no more than five to ten percent (5% to 10%) of the green foliage should be removed from this tree overall (or from any area of the foliage crown). Also, it should not need trimming every year or two; trees of this size often can go five to ten years between trimmings.

3.2.2 Fertilization: Care must be taken to avoid over-fertilization. It is not a good reason to fertilize merely because it is on sale or a tree care firm is aggressively marketing it. Ideally, one follows the recommendations of a reputable lab performing a soil analysis. Nevertheless, sometimes a general rule is adopted to apply, in alternating years, one-quarter to one-half (0.25 to 0.5) pounds of actual nitrogen per 1000 square feet of soil surface beneath a mature tree's foliage canopy.

3.2.3 Approximately 8' by 10' concrete patio slabs now cover about 30% of this Redwood's root system. Consider that the new construction across the fence has disabled a substantial portion of roots, maybe 40%.

Removal of (some of) the concrete slabs would be a positive step for the tree. Perhaps a relatively even surface comparable to the slabs is preferred. Water- and gas-permeable options for an alternative surface could include: bricks, pavers, flagstones, or such set on a couple of inches of sand placed on grade (no excavation

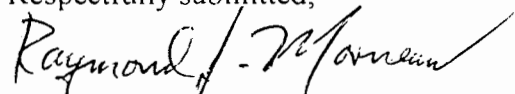
into upper soil horizon and no mortar joints); a deck suspended on pier blocks; crushed rock.

- 3.2.4 As long as we are talking about surfaces with exclude oxygen and water needed by roots, this tree would also appreciate a more-root-friendly surface in place of the new driveway across the fence. Although it is not likely to be replaced within the next decade or two, when even partial replacement could be considered, discuss using an alternative surface near the tree (at least for any area beneath the branches).
- 3.2.5 Any time an impervious surface is removed (patio slabs or driveway), the soil compaction beneath should be evaluated by an arborist and soil aeration considered. Remediation is often attempted by drilling 2" diameter holes, 18" deep, on 24"- to 36"-centers, backfilling with horticultural perlite.
- 3.2.6 Basal sprouts are a natural common phenomenon for some Redwood trees. Indeed the two smaller trunks here could have originated as basal "suckers" years ago. Industry literature shows no clear cut reason for either keeping or removing them. There is the risk that some will grow larger and larger over the years and eventually become substantial. How much to prune down such growth can be assessed from time to time, but for now nothing appears to be needed as the level of attention in recent years seems to be keeping the sprouts from being a problem for the general area.
- 3.2.7 Other: Additional maintenance issues like watering and mulching are addressed in the "3.1 Monitoring" section, above.

3.3 Future Projects:

- 3.3.1 Retaining the community's Heritage Trees sometimes exceeds a single individual's efforts. It will be encouraging to see neighbors and adjacent property owners obviously taking this part of the urban forest into account in their development of their properties.
- 3.3.2 Tree protection measures are essential on jobs in the vicinity of trees to be retained after the completion of the project. Sometimes, it is necessary to re-draw and re-design in order to save trees on construction sites -- obviously, special situations like this would call for special tree protection measures. The Municipal Planning Arborist and the Project Arborist must be brought into any project at the earliest planning stages.

Respectfully submitted,



Raymond J. Morneau
ISA Certified Arborist #WC-0132