

Arborist Report

Prepared at the request of:

CMG LANDSCAPE ARCHITECTS

TREE SURVEY FACEBOOK WEST CAMPUS

DATE: 5/18/2011

Prepared by:

SBCA TREE CONSULTING

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Assignment: SBCA Tree Consulting was asked to survey all trees on the parcel having diameters of four inches or more, (less when appropriate). Information collected includes: Species, diameter, height, health, structural condition and pertinent comments where appropriate.

Introduction

The tree survey was conducted on May 5th and 6th. The site, referred to as Facebook West, is located on the south side of Bayfront Expressway and on the west side of Willow Road. The west side of the parcel is bordered by the Union Pacific Railroad. The tree survey was conducted primarily to collect data to be submitted to the City of Menlo Park in preparation for site development.

The tree survey entailed tagging and data collection for most all trees on the property. Heritage status trees are noted in Appendix 1-Survey Data and Appendix 2 –Tree Location Map. This report provides data for 575 trees on the site. Discussion and preliminary analysis of the survey results are provided to aid in planning for landscape renovation.

City Requirements

The City of Menlo Park requires a permit to remove or heavily prune “Heritage Trees”. Heritage Tree designation includes the following:

1. Any tree having a trunk with a circumference of 47.1 inches (diameter of 15 inches) or more, measured at 54 inches above natural grade.
2. Any oak tree native to California, with a circumference of 31.5 inches (diameter of 10 inches)...
3. Any tree or group of trees specifically designated by the City Council...

Summary

The tree survey identified 200 trees that qualify as Heritage Trees under City of Menlo Park Ordinance. The total number of trees surveyed was 575. Total number of species was 34.

Most trees were in fair to poor condition. Forty-nine trees surveyed were dead; Twenty one trees were recorded as being in Poor to Dead health. The most likely reasons for the poor health of the trees include: lack of irrigation in recent years; possible brackish water intrusion; soil compaction and limited soil volumes; topping for power line clearance.

The health conditions of many of the trees differ depending upon the surrounding soil conditions. Trees that appear to be doing better include: Brazilian Pepper, Blue Gum Eucalyptus, Mexican Fan Palm (only one), Aleppo Pine, and Eldarica Pine.

There are significant differences in the performance of some trees based upon location. The most notable examples of this can be found when comparing the Blue Gum Eucalyptus trees below the power lines with those in open areas; the pears located in parking lot cutouts compared with Calleryana Pear trees #528-531; the rows of London Plans adjacent to streets compared with tree #567 growing in the open space. Trees planted on mounded areas were doing noticeably better than those planted at grade.



Species List

	Species	Amount	Heritage Trees	Dead, Poor-Dead
1	<i>Acacia sp.</i>	1		1
2	<i>Afrocarpus gracilior</i>	1		
3	<i>Alnus cordata</i>	17	2	
4	<i>Alnus rhombifolia</i>	3	3	1
5	<i>Betula jacquemontii</i>	4	4	4
6	<i>Betula pendula</i>	12		4
7	<i>Cinnamomum camphora</i>	1		
8	<i>Cupressus sempervirens</i>	5		
9	<i>Dodonaea viscosa 'Purpurea'</i>	3		
10	<i>Eucalyptus conferruminata</i>	1	1	
11	<i>Eucalyptus globulus</i>	3	3	
12	<i>Eucalyptus globulus 'Compacta'</i>	61	58	1
13	<i>Eucalyptus nicholii</i>	1	1	1
14	<i>Euonymus japonicus</i>	2		
15	<i>Ficus carica</i>	1		
16	<i>Ginkgo Biloba</i>	2		
17	<i>Gleditsia triacanthos</i>	13		
18	<i>Gleditsia triacanthos var. inermis 'Sunburst'</i>	28		1
19	<i>Ligustrum lucidum</i>	1		
20	<i>Liquidambar styraciflua</i>	10		
21	<i>Liriodendron tulipifera</i>	1		1
22	<i>Myoporum laetum</i>	35	32	
23	<i>Olea europaea</i>	8	7	2
24	<i>Pinus eldarica</i>	10	4	
25	<i>Pinus halepensis</i>	84	60	
26	<i>Pittosporum undulatum</i>	1		
27	<i>Platanus x acerifolia</i>	160		15
28	<i>Platanus racemosa</i>	1		
29	<i>Populus nigra 'Italica'</i>	19	5	17
30	<i>Prunus cerasifera 'Krauter Vesuvius'</i>	31		22
31	<i>Prunus serrulata sp.</i>	2		
32	<i>Pyrus calleryana 'Aristocrat'</i>	33		
33	<i>Schinus terebinthifolius</i>	19	19	
34	<i>Washingtonia robusta</i>	1	1	



Survey Procedure

Both heritage and non-heritage trees were tagged with aluminum number tags. The corresponding numbers were noted on an overhead map of the site. Trees that qualified as “Heritage Trees” under City Ordinance Chapter 13.24, were identified with orange flagging tape attached to the number tag nail. Dead trees immediately surrounding structures or large enough to qualify as “Heritage Trees” were also surveyed, tagged and flagged.

Data collected included: tree species, diameter (as per City guidelines), height, health, structure and pertinent comments. Heritage qualifying trees are noted in bold in the survey data and in red on the tree location map.

Procedure for recording diameters of multi-stemmed trees emanating from ground level entailed taking measurements in two directions at ground level with the average taken as the diameter.

Site Conditions

Observations are as follows:

- The western end of the site is occupied by two structures, parking lots and recreational facilities, as well as open space. The eastern end of the site is mostly open space with most trees existing on the perimeter.
- The site is relatively flat.
- Imported sandy topsoil in beds.
- Raised beds surrounding structures.
- Power lines run along the southern and northern border. Main trees affected by clearance pruning include Aleppo Pine, Dwarf Blue Gum, and London Plane.
- Pear trees in parking lot are performing poorly.
- Trees in open areas are performing noticeably better than those with confined root zones.
- In general, trees growing on mounded areas appear to be doing better than those planted at grade.
- Judging by the shape and lean of some of the trees, wind is likely a factor, especially on the northern property border.
- Termination of supplemental irrigation appears to be a factor, affecting some species more than others.

Soil Conditions

According to the United States Department of Agriculture: Soil Conservation Service, site soil falls within the categories: Novato clay, 0-1 percent slopes; Novato clay, 0 to 1 percent slopes, ponded. The soil conditions favor plants having good salt tolerance. Previously disturbed sites are described as Urban land-Orthents, reclaimed complex, 0 to 2 percent slopes. These soils are generally poorly drained, contain imported materials, and are often highly compacted.



Discussion of Tree Species and Preliminary Analysis of Data

Italian Alder (*Alnus cordata*) – 17 trees tagged

Almost all Italian Alders are in poor health; Lack of moisture is the likely reason. Two specimens are Heritage Trees.

White Alder (*Alnus rhombifolia*) – 3 trees tagged

This California native species contributed three specimens to the Heritage Tree group. One is dead and two are in fair to poor health. Lack of moisture is the most likely reason for the health decline.

Whitebarked Himalayan Birch (*Betula jacquemontii*) – 4 trees tagged

European White Birch (*Betula pendula*) – 12 trees tagged

The birch are mostly in poor to dead condition. All Himalayan Birch reached Heritage Tree size before dying.

Italian Cypress (*Cupressus sempervirens*) – 5 trees tagged

The cypress are located in the eastern building's eastern courtyard. All are in good condition. Soil conditions of the courtyards is unknown.

Tasmanian Blue Gum (*Eucalyptus globulus*) – 3 trees tagged

Dwarf Tasmanian Blue Gum (*Eucalyptus globulus* 'Compacta') – 61 trees tagged

The Blue Gums trees are well suited to the site. The 'Compacta' along the southern fence located under the power lines have all been topped, and the heavy pruning has had an effect on vigor. Sixty-one of the 63 Blue Gums are Heritage Trees. Most display the chewed foliage caused by the Tortoise Shell Beetle (*Trachymela sloanei*).

Honey Locust (*Gleditsia triacanthos* var. *inermis* 'Sunburst') – 28 trees tagged

Honey Locust (*Gleditsia triacanthos* var. *inermis*) – 13 trees tagged

The Honey Locust trees are located in the courtyard between the two structures and to the north between the ball courts. None are thriving but many are alive and salvageable.

American Sweet Gum (*Liquidambar styraciflua*) – 10 trees tagged

All specimens are in fair to poor health and are located by the western recreation area.

Myoporum (*Myoporum laetum*) – 35 tree tagged

All Myoporum, save for the few growing along the fence east of the main entrance, are infected with Myoporum Thrips (*Klambothrips myopori*). The Myoporum Thrips is a relatively new pest to California, first observed in Southern California in 2005 and reported in the San Francisco Bay area in the 2008 summer. The Thrips feed on Myoporum foliage, distorting leaves and creating galls in the process.



There is presently no control available for the Myoporum Thrips. If populations become large enough, host trees can die.

Thirty-two specimens were marked as Heritage Trees. Almost all have poor structures and are multi-stemmed from the base.

Olive (*Olea europaea*) – 8 trees tagged

Seven olives are Heritage Trees. The olives are all in fair to poor health. The high water table and limited soil volumes due to compaction are the likely reasons for poor conditions.

Mondell Pine (*Pinus eldarica*) – 10 trees tagged

Four Eldarica Pines are Heritage Trees. All are in fair condition and seem to be well suited for the site.

Aleppo Pine (*Pinus halepensis*) – 84 trees tagged

The Aleppo Pines exist along the northern border of the property. Sixty are listed as Heritage Trees. The trees seem to be well suited for the site, as most are in fair to good condition of health. Many have significant leans due to wind and phototropic growth.

London Plane (*Platanus x acerifolia* 'Bloodgood') – 160 trees tagged

California Sycamore (*Platanus racemosa*) – 1 tree tagged

- Health – Most trees were observed having poor health and fair to poor structures.
- Limitations –
 1. Power line related topping – The poor structures of many of the trees are due to past pruning (topping) for power line clearances.
 2. Sycamore Scale – Sycamore scale (*Stomacoccus platani* Ferris) was present on most trees. Information has been provided.
 3. Anthraxnose- The poor health likely reflects the presence of sycamore anthracnose (*Apiognomonina platani*). This is especially prevalent in years with moist spring.
 4. Soil – It is clear that soil conditions are limiting. Tree #567 is the only specimen in good health and exists in an open space and not in the uniform rows with pavement on one or both sides.
 5. Wind and Exposure – The London Plane tree is normally tolerant of wind and full sun. However, limitations in soil moisture and chemistry reduce the trees' abilities to thrive.

Lombardy Poplar (*Populus nigra* 'Italica') – 19 trees tagged

These trees were planted in rows north of the western parking lot. All poplars are in poor or dead conditions, but reached heights of 60-70 feet before declining. Lack of irrigation appears to be the reason for the decline. Five trees were flagged as Heritage Trees.



Purple Plum (*Prunus cerasifera* 'Krauter Vesuvius') – 31 trees tagged

These trees are located mostly along the west, south and east sides of the two buildings. Twenty-two trees were dead. Reasons for death and poor health are likely due to insufficient water.

Aristocrat Pear (*Pyrus calleryana* 'aristocrat') – 33 trees tagged

The pear trees in the 4x4 planting sites in the parking lot have failed to thrive. The four trees planted in more open space have become quite large and, with the exception of some fire blight (*Erwinia amylovora*), appear to be thriving.

It is likely that the soil conditions in the parking lot locations limit the ability of roots to develop. When this tree species does not perform well, it is unlikely that any tree species will thrive in these locations without significant planting site modification.

Brazilian Pepper (*Schinus terebinthifolius*) –19 trees tagged

This tree species, with a few exceptions, appears to be among the healthiest due its adaptability and salt tolerance. All are multi-stemmed and were placed in entrance locations. All are Heritage Trees.

Mexican Fan Palm (*Washingtonia robusta*) – 1 tree surveyed

Only one tree exists on the property and appears to be in fair condition and qualifies as a Heritage Tree.

End Report

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Supplemental Material:

- Appendix 1- Tree Survey Data
- Appendix 2- Tree Location Map

