

**Alamo Square Neighborhood
Association**

**Tree Report and Risk Assessment
Alamo Square**

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October 2011



Tree Report and Risk Assessment

Alamo Square
San Francisco CA

Table of Contents

	Page
Introduction and Overview	1
Survey Methods	1
Description of Trees	1
Suitability for Preservation	4
Tree Risk Assessment	5
Species Performance	14
Summary and Recommendations	20

List of Tables

Table 1. Tree condition & frequency of occurrence.	2
Table 2. Suitability for preservation.	5
Table 3. Tree risk ratings.	7
Table 4. Species performance.	15

Attachments

Tree Location Map

Tree Survey Form

Introduction and Overview

Alamo Square was established in 1857. In the 1960s the Alamo Square Neighborhood Association was formed to provide local support for the property. The Association provides funds for park improvements as well as volunteers for park maintenance activities. The Association requested that HortScience, Inc. assess the trees in the Square. This report presents the following information:

1. Evaluation of tree health and structural condition.
2. Assessment of the risk of tree failure.
3. Evaluation of species performance and future planting.
4. Recommendations for action.

Survey Methods

Trees were evaluated in June 2011. The survey method consisted of the following steps:

1. Identifying the species.
2. Measuring the diameter of the trunk at 54" above grade. Where trees had more than one stem, the diameter of each stem was measured.
3. Attaching a numerically coded metal tag to the trunk.
4. Visually assessing tree health and structural condition using a 6-point scale where 0=dead, 1=poor and 5=excellent condition.
5. Identifying trees that met the Department of Public Works criteria as street, significant or Landmark trees.
6. Asses the tree's age as young, semi-mature, mature and over-mature.
7. Assessing the suitability for preservation as poor, moderate or good.
8. Rating the risk associated with the failure of each tree. The assessment method is detailed in the ***Risk Assessment*** section.
9. Recording the presence of defects in structure, insects or diseases and other aspects of development.
10. Verifying the tree's dripline and recording its location on a map.

Results for individual trees are located in the ***Tree Survey Form*** (see ***Attachments***). Tree locations are noted by tree tag number in the ***Tree Location Map***.

Description of Trees

One hundred sixty-six (166) trees were evaluated, representing 21 species (Table 1, following page). All trees had been planted as part of the landscape development for either the playground or adjacent streets. None of the species present is native to the San Francisco area and no trees appeared to be indigenous to the site.

The most frequently occurring species was Monterey cypress with 79 trees (48%) (Photo 1, page 3). Trees were a diverse mix of size, age and condition. Trunk diameter ranged from 8" to 98" with the largest cypresses being #101 (98") and #79 (94"). Over half the cypresses had trunk diameters of 40" or greater. Tree age was similar with 56 of 79 trees in the mature category. Also present were 6 young, 9 semi-mature and 8 over-mature trees.

Young and semi-mature cypresses were more likely to be in good and excellent condition. Condition declined with age and size. Trees in good condition typically had dense canopies, symmetric form and vertically-oriented trunks. Trees in poor condition had decay, a history of failure, small canopies with twig dieback and other defects. Those in fair condition were intermediate.

Table 1. Tree condition and frequency of occurrence. Alamo Square. San Francisco CA.

Common name	Scientific name	Condition				No. of Trees
		Poor	Fair	Good	Excel- lent	
Blackwood acacia	<i>Acacia melanoxylon</i>	1	1	--	--	2
Agonis	<i>Agonis flexuosa</i>	1	2	--	--	3
She-oak	<i>Casuarina</i> sp.	1	1	--	1	3
Lawson's cypress	<i>Chamaecyparis lawsoniana</i>	3	4	--	--	7
Cordyline	<i>Cordyline australis</i>	--	--	1	--	1
Hawthorn	<i>Crataegus</i> sp.	--	1	--	--	1
Monterey cypress	<i>Cupressus macrocarpa</i>	14	36	25	4	79
Blue gum	<i>Eucalyptus globulus</i>	--	4	--	--	4
Mayten	<i>Maytenus boaria</i>	--	1	--	--	1
Myoporum	<i>Myoporum laetum</i>	3	--	--	--	3
Canary Island date palm	<i>Phoenix canariensis</i>	--	--	2	2	4
Italian stone pine	<i>Pinus pinea</i>	1	1	--	--	2
Monterey pine	<i>Pinus radiata</i>	9	1	--	--	10
Victorian box	<i>Pittosporum undulatum</i>	--	2	4	--	6
Lombardy poplar	<i>Populus nigra</i> 'Italica'	--	8	1	--	9
Flowering cherry	<i>Prunus serrulata</i>	1	3	2	--	6
Weeping willow	<i>Salix alba</i> 'Tristis'	2	2	4	2	10
Corkscrew willow	<i>Salix matsudana</i> 'Tortuosa'	--	--	1	--	1
Giant sequoia	<i>Sequoiadendron giganteum</i>	2	1	--	--	3
Eugenia	<i>Syzygium paniculatum</i>	--	1	--	--	1
Windmill palm	<i>Trachycarpus fortunei</i>	1	9	--	--	10
Total, all trees		39	78	40	9	166

Four species were represented by either 9 or 10 trees:

- Weeping willows were a mix of age, size and condition. Willow #163 was 36" in diameter, over-mature in development and in poor condition due to extensive decay, history of failure and dieback. In contrast, willow #144 was 9", semi-mature and in excellent condition. Remaining trees were intermediate between these two.
- Windmill palms were concentrated near the center of the Square. Most were in fair condition and semi-mature in development. Although no obvious disease or insect problem was observed, these palms simply were not vigorous.
- Among the 10 Monterey pines, 9 were in poor condition due to infestations of pine pitch canker and red turpentine beetle as well as history of failure and poor structure. Pines #145 to 149 were failing at the base of the trunk. Monterey pine #151 was 8" and in fair condition but had poor overall form.



Photo 1. Monterey cypress was represented by trees in good (left photo #37) and poor condition (red arrow, right photo #58).

- Nine Lombardy poplars were located in the center of the Square, facing north. All appeared to have been planted at the same time. While overall tree condition was fair, I did not find trees to have the vigor that is typical of the species.

None of the remaining species was represented by more than 7 trees. Included among this group were:

- 7 Lawson's cypress on the east side of the Square. Trees were mature and over-mature in development with multiple stems and thin crowns. Condition was a mix of fair and poor.
- 6 Victorian box trees were scattered through the property with several located in the northeast area. Tree condition was generally good.
- 6 flowering cherry were located on the Fulton Street side. Trees were rather typical of the species with a mix of condition and age.
- 4 mature blue gums were in fair condition. All were mature in development and in fair condition. Tree #117 was 85" in diameter.
- 4 Canary Island date palms were developing nicely. Palms #64 and 124 were mature in development and in good condition; #118 and 123 were young and in excellent condition.
- 3 giant sequoias were located on the east side of the Square. All were over-mature in development. All had been infested with the fungal organism *Botryosphaeria* which causes the dieback of branches.
- 3 she oaks included #54 (semi-mature, fair condition), #141 (mature, poor condition) and #142 (semi-mature, excellent condition).

- 3 myoporums were in poor condition.
- 2 blackwood acacias included #39 which was 28" in diameter and in poor condition, ready to fail at any time. Blackwood acacia #44 was 21", over-mature and in fair condition.
- Corkscrew willow #38 was located in the southeast corner of the Square. The tree was a fine representative of the species, in good condition with a trunk diameter of 24".

A number of trees smaller than 6" diameter were noted including:

- 8 flowering cherry
- 7 ginkgo
- 6 Italian stone pine
- 4 Canary Island pine
- 3 Idaho locust
- 2 Calif. incense cedar
- 1 magnolia
- 1 Douglas-fir

The pines, cedar and Douglas-fir were part of a planting on the southwest section of the Square. Trees appeared to lack vigor.

The Department of Public Works categories trees in three ways:

1. **Street tree.** A tree of any size located within the street right of way. Non of the surveyed trees met this criterion.
2. **Significant tree.** Tree located within 10' of a lot line abutting the public right-of-way that: 1) are greater than 20' in height, 2) have a canopy spread greater than 15', or 3) have a trunk diameter of 12" or greater (measured at 54" above grade). A tree attains significant status if any one of the three size criteria is met. Based on our observations, Monterey pine #155 and Monterey cypress #156 may meet these criteria.
3. **Landmark tree.** A tree so designated by the City's Urban Forestry Council and Board of Supervisors. None of the trees surveyed had this status.

Suitability for Preservation

Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape. Our goal is to identify trees that have the potential for long-term health, structural stability and longevity. Evaluation of suitability for preservation considers several factors:

- **Tree health**
Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.
- **Structural integrity**
Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely.

- **Species response**
There is a wide variation in the response of individual species to construction impacts and changes in the environment. For example, Canary Island date palm is relatively tolerant of construction impacts while Monterey pine is sensitive.
- **Tree age and longevity**
Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change.
- **Species invasiveness**
Species which spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. Blackwood acacia and blue gum are considered invasive.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment (Table 2).

Table 2. Tree suitability for preservation. Alamo Square. San Francisco CA.

Good	Trees with good health and structural stability that have the potential for longevity at the site. Eleven (11) trees had good suitability for preservation.
Moderate	Trees in fair health and/or possessing structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring, and may have shorter life-spans than those in the "good" category. Fifty (50) trees were rated as having moderate suitability for preservation.
Poor	Trees in poor health or possessing significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. One hundred five (105) trees were rated as having poor suitability for preservation.

We consider trees with good suitability for preservation to be the best candidates for preservation. We do not recommend retention of trees with low suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

Tree Risk Assessment

Tree risk assessment is the systematic process of evaluating the potential for a tree or one of its parts to fail and, in so doing, injure people or damage property. All trees have the potential to fail. The degree of risk will vary with the size of the tree, type and location of the defect, tree species, and the nature of the target. Tree risk assessment involves three components:

1. a tree with the potential to fail,
2. an environment that may contribute to that failure, and
3. a person or object that would be injured or damaged (i.e. the target).

Tree Risk Rating System

All of the surveyed trees were assessed using the procedure contained in *A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas* (N. Matheny & J. Clark. 1994 (2nd edition. International Society of Arboriculture. Champaign IL). Following a visual inspection of tree health and structural condition, the part of the tree most likely fail within the next year was identified (e.g. branch, stem, whole tree). The target that would be impacted by this part of the tree was then identified.

The risk associated with the tree was evaluated using the following components:

- **Failure potential** (4 points) - identifies the most likely failure and rates the likelihood that the structural defect(s) will result in failure within the next year. The part of the tree most likely to fail was assessed using the following scale:
 - 1 - low - defects are minor (e.g. dieback of twigs, small wounds with good woundwood development)
 - 2 - medium - defects are present and obvious (e.g. lean or bow that has developed over time, cavity encompassing 10-25% of the circumference of the stem, codominant stems without included bark)
 - 3 - high - compounding and/or significant defects present (e.g. severe lean, cavity encompassing 30-50% of the circumference of the stem, multiple pruning wounds with decay along a branch)
 - 4 - severe - defects are very severe (e.g. partial uprooting of leaning tree, decay conks along the main stem, cavity encompassing more than 50% of the stem)
- **Size of defective part** (4 points) - rates the size of the part most likely to fail. Larger parts present a greater potential for damage. Therefore, the size of the failure affects the potential for injury or damage. The scoring system was as follows:
 - 1 - most likely failure less than 6" in diameter
 - 2 - most likely failure 6 - 18" in diameter
 - 3 - most likely failure 18 - 30" in diameter
 - 4 - most likely failure greater than 30" in diameter
- **Target rating** (4 points) - rates the use and occupancy of the area that would be struck by the defective part. For the project areas, the following scoring was employed:
 - 1 - occasional use (e.g. lawn area, landscape)
 - 2 - intermittent use (e.g. sidewalk, benches, tennis court)
 - 3 - frequent use (e.g. street parking)
 - 4 - constant use (e.g. playground, structures).

The points in each category were added to obtain the overall hazard rating, with 3 being the minimum and 12 being the maximum value.

Risk rating = failure potential + size of defective part + target rating

Among trees at Alamo Square, the most likely failure included a branch (87 trees), a palm frond (15) the entire tree (27) and a stem (37 trees) (Table 3, following page). The potential target included the sidewalk (65), bench (5), children's play area (5), tennis courts (4), bathrooms (1), steps (1), and a picnic table (1). No target (typically lawn and other landscape areas) was identified for 84 trees.

Risk rankings ranged from 3 to 9. Five trees received rankings of 9: Monterey cypress #43, 81, 86, 89, and 132. Five trees received ranking of 8: Monterey cypress #12, 58 and 79; blackwood acacia #39, and blue gum #117.

Table 3. Tree risk rankings. Alamo Square. San Francisco CA.

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excel.	Most likely failure	Risk Ranking			Sum	
					Target	Failure potential	Size of part		
1	Flowering cherry	12	4	Branch	None	2	1	1	4
2	Flowering cherry	8	2	Branch	None	2	1	1	4
3	Weeping willow	21	4	Branch	None	2	2	1	5
4	Weeping willow	7	2	Whole tree	None	3	2	1	6
5	Monterey cypress	38	4	Branch	Sidewalk	2	1	2	5
6	Monterey cypress	55	3	Branch	Sidewalk	2	2	2	6
7	Monterey cypress	80	3	Branch	Sidewalk	3	2	2	7
8	Monterey cypress	87	3	Branch	Sidewalk	2	2	2	6
9	Monterey cypress	8	3	Whole tree	None	2	2	1	5
10	Monterey cypress	58	3	Stem	Sidewalk	2	2	2	6
11	Monterey cypress	32	3	Stem	Sidewalk	2	1	2	5
12	Monterey cypress	53	3	Stem	Steps	3	3	2	8
13	Lawson's cypress	16,15	2	Whole tree	None	3	2	1	6
14	Victorian box	14	4	Stem	Sidewalk	2	1	2	5
15	Victorian box	8	3	Branch	Sidewalk	2	1	2	5
16	Victorian box	8	3	Branch	Sidewalk	2	1	2	5
17	Victorian box	7	4	Branch	Sidewalk	2	1	2	5
18	Victorian box	12	4	Branch	Sidewalk	2	1	2	5
19	Victorian box	9	4	Branch	None	2	1	1	4
20	Windmill palm	8	2	FronD	None	4	1	1	6
21	Lawson's cypress	20,18,15,8	2	Stem	Play area	2	1	4	7
22	Lawson's cypress	55,26	3	Stem	Sidewalk	2	2	2	6
23	Lawson's cypress	15,14,14,10,6,6	3	Stem	Sidewalk	2	1	2	5
24	Lawson's cypress	20,16	3	Stem	Sidewalk	2	2	2	6
25	Lawson's cypress	13,9	2	Stem	Sidewalk	3	2	2	7

Table 3, continued. Tree risk rankings. Alamo Square. San Francisco CA.

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excel.	Most likely failure	Risk Ranking			Sum	
					Target	Failure potential	Size of part		
26	Lawson's cypress	27	3	Whole tree	Sidewalk	3	2	2	7
27	Giant sequoia	36	1	Stem	Sidewalk	3	2	2	7
28	Giant sequoia	42	3	Branch	Sidewalk	2	2	2	6
29	Giant sequoia	31	2	Branch	None	3	1	1	5
30	Myoporum	10	2	Whole tree	Sidewalk	3	2	2	7
31	Flowering cherry	10	3	Whole tree	Sidewalk	2	1	2	5
32	Monterey cypress	35	3	Stem	Picnic table	3	1	2	6
33	Monterey cypress	26	3	Branch	None	3	1	1	5
34	Monterey cypress	22	3	Whole tree	None	2	3	1	6
35	Monterey cypress	36	2	Stem	None	3	2	1	6
36	Monterey cypress	18	2	Stem	Sidewalk	2	2	2	6
37	Monterey cypress	43	4	Branch	Sidewalk	2	1	2	5
38	Corkscrew willow	24	4	Branch	Sidewalk	2	1	2	5
39	Blackwood acacia	28	1	Stem	None	4	3	1	8
40	Monterey cypress	36	2	Branch	Sidewalk	2	1	2	5
41	Monterey cypress	77	3	Branch	None	2	2	1	5
42	Myoporum	7,7	2	Branch	None	2	1	1	4
43	Monterey cypress	88	2	Stem	Sidewalk	3	4	2	9
44	Blackwood acacia	21	3	Whole tree	None	3	3	1	7
45	Mayten	8,8,7,7,7,7	3	Stem	Sidewalk	2	1	2	5
46	Monterey cypress	46	4	Branch	Sidewalk	2	1	2	5
47	Monterey cypress	31	3	Branch	Bench	2	2	2	6
48	Agonis	11	3	Stem	None	2	1	1	4
49	Agonis	7	2	Branch	None	2	1	1	4
50	Monterey cypress	48	3	Heavy lateral branch	Bench	3	2	2	7

Table 3, continued. Tree risk rankings. Alamo Square. San Francisco CA.

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excel.	Most likely failure	Risk Ranking			Sum	
					Target	Failure potential	Size of part		
51	Windmill palm	9	3	Fron	None	4	1	1	6
52	Windmill palm	8	3	Fron	None	4	1	1	6
53	Windmill palm	8	3	Fron	None	4	1	1	6
54	She oak	14	3	Stem	None	2	1	1	4
55	Monterey cypress	53	4	Fron	None	4	1	1	6
56	Agonis	16,12,9	3	Branch	Sidewalk	2	2	2	6
57	Monterey cypress	58	4	Branch	Sidewalk	2	2	2	6
58	Monterey cypress	37	2	Whole tree	Sidewalk	3	3	2	8
59	Windmill palm	8	3	Fron	None	4	1	1	6
60	Windmill palm	9	3	Fron	None	4	1	1	6
61	Windmill palm	8	3	Fron	None	4	1	1	6
62	Windmill palm	9	3	Fron	None	4	1	1	6
63	Hawthorn	18,14,13	3	Stem	None	2	2	1	5
64	Canary Island date palm	33	4	Fron	None	2	1	1	4
65	Monterey cypress	70	4	Branch	Bathrooms	2	2	3	7
66	Eugenia	9	3	Whole tree	Sidewalk	2	1	2	5
67	Monterey cypress	55	4	Branch	Sidewalk	2	1	2	5
68	Monterey cypress	51	3	Branch	Sidewalk	3	2	2	7
69	Monterey cypress	41	3	Branch	Sidewalk	2	1	2	5
70	Monterey cypress	35	2	Branch	Sidewalk	2	1	2	5
71	Monterey cypress	54	4	Heavy lateral branch	Sidewalk	3	2	2	7
72	Monterey cypress	9	5	Branch	None	1	1	1	3
73	Monterey cypress	11	4	Branch	None	1	1	1	3
74	Monterey cypress	8	3	Branch	None	1	1	1	3

Table 3, continued. Tree risk rankings. Alamo Square. San Francisco CA.

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excel.	Most likely failure	Risk Ranking			Sum	
					Target	Failure potential	Size of part		
75	Monterey cypress	69	4	Branch	Sidewalk	2	2	2	6
76	Monterey cypress	65	4	Branch	Sidewalk	2	2	2	6
77	Monterey cypress	11	5	Branch	None	1	1	1	3
78	Monterey cypress	48	3	Branch	None	2	2	1	5
79	Monterey cypress	94	3	Stem	Tennis	3	3	2	8
80	Monterey cypress	9	4	Branch	None	1	1	1	3
81	Monterey cypress	36	1	Whole tree	Play area	4	1	4	9
82	Monterey cypress	28	3	Branch	None	2	1	1	4
83	Monterey cypress	43	3	Stem	Tennis	3	2	2	7
84	Myoporum	14	2	Branch	None	2	2	1	5
85	Monterey cypress	41	3	Whole tree	Tennis	2	3	2	7
86	Monterey cypress	23,17,8	3	17" stem	Play area	3	2	4	9
87	Monterey cypress	15	3	Whole tree	Tennis	2	1	2	5
88	Monterey cypress	24	4	Branch	None	1	1	1	3
89	Monterey cypress	22,12,10	2	Whole tree	Play area	3	2	4	9
90	Monterey cypress	14,13	3	Stem	Play area	2	1	4	7
91	Monterey cypress	51	3	Stem	None	3	2	1	6
92	Monterey cypress	17	4	Branch	None	1	1	1	3
93	Monterey cypress	15	5	Branch	None	1	1	1	3
94	Monterey cypress	50	3	Branch	None	2	2	1	5
95	Monterey cypress	79	3	Branch	Sidewalk	2	2	2	6
96	Monterey cypress	57	3	Heavy lateral branch	None	3	2	1	6
97	Monterey cypress	45	2	Branch	None	2	2	1	5
98	Monterey cypress	39	2	Whole tree	Sidewalk	3	2	2	7
99	Monterey cypress	42	2	Branch	None	2	2	1	5

Table 3, continued. Tree risk rankings. Alamo Square. San Francisco CA.

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excel.	Most likely failure	Risk Ranking			Sum	
					Target	Failure potential	Size of part		
100	Monterey cypress	76	3	Heavy lateral branch	Sidewalk	3	2	2	7
101	Monterey cypress	98	3	Branch	None	2	2	1	5
102	Monterey pine	36	2	Stem	None	3	2	1	6
103	Italian stone pine	10,9,8,7	3	Branch	Sidewalk	2	1	2	5
104	Italian stone pine	13	2	Whole tree	Sidewalk	3	2	2	7
105	Lombardy poplar	17	3	Branch	Sidewalk	2	1	2	5
106	Lombardy poplar	14	3	Branch	Sidewalk	2	1	2	5
107	Lombardy poplar	14	3	Stem	None	2	1	1	4
108	Lombardy poplar	11	3	Stem	None	2	1	1	4
109	Lombardy poplar	19	4	Stem	None	2	2	1	5
110	Lombardy poplar	15	3	Stem	None	2	1	1	4
111	Lombardy poplar	16	3	Stem	None	2	1	1	4
112	Lombardy poplar	12	3	Stem	None	2	2	1	5
113	Lombardy poplar	15	3	Stem	None	2	2	1	5
114	Blue gum	57	3	Branch	Sidewalk	2	2	2	6
115	Blue gum	38	3	Branch	None	2	2	1	5
116	Blue gum	42	3	Branch	Sidewalk	2	1	2	5
117	Blue gum	85	3	Whole tree	Sidewalk	2	4	2	8
118	Canary Island date palm	29	5	FronD	None	1	1	1	3
119	Monterey pine	15	2	Whole tree	None	2	2	1	5
120	Monterey cypress	74	4	Branch	Bench	3	2	2	7
121	Monterey cypress	46	4	Branch	Sidewalk	2	2	2	6
122	Cordyline	12,9	4	Stem	None	2	1	1	4
123	Canary Island date palm	37	5	FronD	None	1	1	1	3

Table 3, continued. Tree risk rankings. Alamo Square. San Francisco CA.

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excel.	Most likely failure	Risk Ranking			Sum	
					Target	Failure potential	Size of part		
124	Canary Island date palm	30	4	FronD	Sidewalk	1	1	2	4
125	Windmill palm	17	3	FronD	None	4	1	1	6
126	Monterey cypress	16	4	Stem	None	2	1	1	4
127	Monterey cypress	16	5	Branch	None	2	1	1	4
128	Monterey cypress	64	4	Branch	None	2	2	1	5
129	Windmill palm	8	3	FronD	None	4	1	1	6
130	Monterey cypress	72	4	Branch	Sidewalk	2	1	2	5
131	Monterey cypress	51	3	Heavy lateral branch	Bench	3	1	2	6
132	Monterey cypress	62	2	Whole tree	Bench	3	4	2	9
133	Monterey cypress	30	3	Branch	Sidewalk	2	1	2	5
134	Monterey cypress	23	1	Whole tree	None	3	3	1	7
135	Monterey cypress	48	3	Heavy lateral branch	Sidewalk	3	2	2	7
136	Monterey cypress	82	3	Branch	Sidewalk	2	2	2	6
137	Monterey pine	48	2	Heavy lateral branch	Sidewalk	3	1	2	6
138	Weeping willow	9	4	Branch	None	2	1	1	4
139	Weeping willow	15	3	Branch	None	2	1	1	4
140	Weeping willow	14	3	W. scaffold branch	None	4	2	1	7
141	She oak	14	1	Branch	None	1	1	1	3
142	She oak	17,7	5	Branch	Sidewalk	2	1	2	5
143	Weeping willow	9	5	Branch	None	2	1	1	4
144	Weeping willow	9	5	Branch	None	2	1	1	4

Table 3, continued. Tree risk rankings. Alamo Square. San Francisco CA.

Tree No.	Species	Trunk Diameter (in.)	Condition 1=poor 5=excel.	Most likely failure	Risk Ranking			Sum	
					Target	Failure potential	Size of part		
145	Monterey pine	31	2	Whole tree	None	3	3	1	7
146	Monterey pine	22	1	Branch	Sidewalk	2	2	2	6
147	Monterey pine	29	2	Whole tree	None	3	3	1	7
148	Monterey pine	24,22,16	2	Whole tree	Sidewalk	3	2	2	7
149	Monterey pine	19,16	1	Whole tree	None	3	3	1	7
150	Weeping willow	10	4	Branch	None	2	1	1	4
151	Monterey pine	8	3	Whole tree	None	2	2	1	5
152	Monterey cypress	52	3	Heavy lateral branch	Sidewalk	2	2	2	6
153	Monterey cypress	57	3	Stem	Sidewalk	3	2	2	7
154	Monterey cypress	54	4	Branch	None	2	2	1	5
155	Monterey pine	20	2	Whole tree	Sidewalk	2	2	2	6
156	Monterey cypress	61	4	Branch	Sidewalk	2	1	2	5
157	Monterey cypress	43	4	Branch	Sidewalk	2	1	2	5
158	Monterey cypress	54	4	Heavy lateral branch	None	3	2	1	6
159	Monterey cypress	31,23	2	Whole tree	Sidewalk	3	1	2	6
160	Monterey cypress	71	4	Stem	Sidewalk	3	2	2	7
161	Weeping willow	16	4	Branch	None	2	2	1	5
162	Monterey cypress	51	4	Branch	None	2	2	1	5
163	Weeping willow	36	2	Stem	None	3	3	1	7
164	Flowering cherry	9	3	Branch	None	2	1	1	4
165	Flowering cherry	7	3	Branch	None	2	1	1	4
166	Flowering cherry	16	4	Branch	None	2	1	1	4

Species Performance

One of the questions raised by the Association about trees at the Square dealt with the appropriateness of the 21 species presently on-site. Are the species of trees adapted to the growing conditions of Alamo Square? Based on my observations, the answer is “yes” (Table 4). Most species have performed adequately and could be replanted as part of a removal and replacement program.

The major exceptions to this general observation include:

- **Lawson’s cypress.** The species should have a well-developed dense crown. Trees were located on the leeward side of the site, in an area of adequate irrigation. It is probably worth trying this species again, as it performs well in other parks. Alternative species include Atlas cedar and Japanese cryptomaria.
- **Lombardy poplar** should be a large vigorous tree. Individuals at the Square were not. If a narrow columnar species is desired, the upright English oak should be evaluated.
- **Monterey pines** throughout San Francisco have been subject to several debilitating insect and disease problems, not notably pine pitch canker, engraver beetles and red turpentine beetle. At the same time, the species is well-adapted to conditions at the Square. An alternative species in Canary Island pine.
- **Blue gum** has been regarded as a difficult tree to manage in many area of the City, due largely to its size and reputation for dropping branches. There are only 4 trees at Alamo Square. It is well-adapted to windy condition. Alternative species that are smaller in stature include red-flowering gum and willowleaf peppermint.
- **Giant redwood** should be replaced with a species such as coast redwood. *Botryosphaeria* canker limits its use in San Francisco.
- **Windmill palm** has just not performed at Alamo Square. The 10 trees could be removed without any park users noticing.

In summary, species performance at Alamo Square has been generally good. Even species though some species are not as vigorous as they might be, trees have survived to a mature state.

Table 4. Species performance and recommendations for use in the future. Alamo Square. San Francisco CA

Common name	Scientific name	Continue to use?	Alternate Species	Pest Problems and/or Cultural Requirements	Alamo Square?
Blackwood acacia	<i>Acacia melanoxylon</i>	Yes		Requires irrigation but tolerates drought. No significant pest problems. Short-lived (30 years?).	Branch failure associated with poor branch attachments. 2 trees at site were over-mature.
Agonis	<i>Agonis flexuosa</i>	Yes		Requires irrigation but tolerates drought. No significant pest problems.	No particular problems. Trees on-site are marginal.
She-oak	<i>Casuarina</i> sp.	Yes		Requires irrigation but tolerates drought. No significant pest problems other than <i>Armillaria</i> . Good in wind.	No particular problems. 1 great. 1 fair. 1 poor.
Lawson's cypress	<i>Chamaecyparis lawsoniana</i>	No?	Japanese cryptomaria (<i>Cryptomaria japonica</i>). Atlas cedar (<i>Cedrus atlantica</i>).	Performs well in other parks. May be worthwhile to try again. Requires irrigation. Susceptible to root rots such as <i>Phytophthora</i> . Not good in the wind.	Declining and lacking vigor.
Cordyline	<i>Cordyline australis</i>	Yes		Requires irrigation. No significant pest problems other than <i>Armillaria</i> and <i>Verticillium</i> . Trunk decay may be problematic as plant ages.	No particular problems. One tree in good condition.

Table 4, continued. Species performance and recommendations for use in the future. Alamo Square. San Francisco CA

Common name	Scientific name	Continue to use?	Alternate Species	Pest Problems and/or Cultural Requirements	Alamo Square?
Hawthorn	<i>Crataegus</i> sp.	Yes		Requires irrigation. Host to a wide range of insect and disease problems, most notably leaf spot fungi that may defoliate the tree. Not life-threatening. Do not require treatment.	No particular problems. One tree.
Monterey cypress	<i>Cupressus macrocarpa</i>	Yes		Pest problems such as cypress canker are not life-threatening and do not normally warrant treatment. Requires irrigation. Tolerates windy sites once established.	No pests or disease. Major management issues related to tree structure. Wide mix of size, age and condition.
Blue gum	<i>Eucalyptus globulus</i>	Yes	Red-flowering gum (<i>Corymbia ficifolia</i>) and willowleaf peppermint (<i>E. nicholii</i>) are smaller in overall size.	Pest problems such as tortoise beetle are not life-threatening and do not normally warrant treatment. Subject to decay as tree ages. Requires irrigation. Tolerates windy sites.	No pests or disease. Major management issues related to tree structure. All 4 trees in fair condition.

Table 4, continued. Species performance and recommendations for use in the future. Alamo Square. San Francisco CA

Common name	Scientific name	Continue to use?	Alternate Species	Pest Problems and/or Cultural Requirements	Alamo Square?
Mayten	<i>Maytenus boaria</i>	Yes		Requires irrigation. Pest problems are not usually life-threatening and do not normally warrant treatment except for <i>Verticillium</i> wilt. Subject to trunk decay in advanced age.	No particular problems. One multi-stem tree partly suppressed.
Myoporum	<i>Myoporum laetum</i>	Yes		Requires irrigation. Does well in windy conditions. Pest problems are not usually life-threatening and do not normally warrant treatment. Subject to trunk decay in advanced age.	Trees are old; several with decay at the base of the trunk.
Canary Island date palm	<i>Phoenix canariensis</i>	Yes		Requires irrigation but tolerates drought once established. Several insect pests and fungal diseases may kill be life-threatening.	No particular problems. Four trees: 2 good and 2 excellent condition.
Italian stone pine	<i>Pinus pinea</i>	Yes		Requires irrigation but tolerates drought once established. Insect and disease pests usually not problematic. Tree developed structural problems with age.	Young trees have not performed. No clear explanation why.

Table 4, continued. Species performance and recommendations for use in the future. Alamo Square. San Francisco CA

Common name	Scientific name	Continue to use?	Alternate Species	Pest Problems and/or Cultural Requirements	Alamo Square?
Monterey pine	<i>Pinus radiata</i>	Yes. But expect to have pest problems.	Canary Island pine (<i>P. canariensis</i>).	Significant pest problems including pine pitch canker, red turpentine beetle and engraver beetles. Requires irrigation.	Red turpentine beetle and pitch canker present. Trees on west side of Square failing. 9 of 10 trees in poor condition.
Victorian box	<i>Pittosporum undulatum</i>	Yes		Requires irrigation. Insect and disease problems do not normally require treatment.	No particular problems. 4 of 6 trees in good condition.
Lombardy poplar	<i>Populus nigra</i> 'Italica'	No	Columnar form? Upright English oak (<i>Quercus robur</i> 'Fastigiata'). Test with 1 or 2 trees.	Requires irrigation. Relatively short-lived (25 to 30 years) due to infection by a number of fungi that cause cankers on branches (leading to dieback and death of the limb).	No particular problems other than a lack of vigor.
Flowering cherry	<i>Prunus serrulata</i>	Yes	A wide range of species & cultivars can be used.	Requires irrigation. Does not tolerate windy locations. A wide range of fungal diseases may be problematic.	No particular problems.

Table 4, continued. Species performance and recommendations for use in the future. Alamo Square. San Francisco CA

Common name	Scientific name	Continue to use?	Alternate Species	Pest Problems and/or Cultural Requirements	Alamo Square?
Weeping willow	<i>Salix alba</i> 'Tristis'	Yes		Requires irrigation. Host to a wide range of insect and disease problems, often associated with advanced age.	Bacterial crown gall but is normal on older trees. Mix of size, age and condition among the 10 trees on-site.
Corkscrew willow	<i>Salix matsudana</i> 'Tortuosa'	Yes		Requires irrigation. Host to a wide range of insect and disease problems, often associated with advanced age.	Bacterial crown gall but is normal on older trees. 1 nice mature tree.
Giant sequoia	<i>Sequoiadendron giganteum</i>	No	Coast redwood (<i>Sequoia sempervirens</i>) is better where irrigated and out of the wind.	Requires irrigation. <i>Botryosphaeria</i> is a significant fungal pest which will kill branches.	<i>Botryosphaeria</i> is the primary reason for the decline of trees at Alamo Square.
Eugenia	<i>Syzygium paniculatum</i>	Yes		Requires irrigation. <i>Eugenia</i> psyllid is sometimes a significant pest that requires treatment.	No particular problems but the 1 tree on-site is unremarkable.
Windmill palm	<i>Trachycarpus fortunei</i>	No	Substitute <i>Phoenix</i> or <i>Washingtonia</i>	Requires irrigation.	No particular problems other than a lack of vigor.

Summary and Recommendations

The 166 trees at Alamo Square are a mix of 21 species that vary in number, condition and size. The most frequently occurring species was Monterey cypress with approximately 60% of all trees at the site. Cypressess were generally mature in development and in fair condition.

Overall, approximately 25% of the surveyed trees were in poor condition while about 30% were in good and excellent condition. Tree condition varied by species. For example, Canary Island date palms and weeping willows were in good condition while Monterey pine was dominated by trees in poor condition.

Pest problems appeared to be a minor for most trees. The exceptions were *Botryosphaeria* canker on giant redwood, and pine pitch canker and red turpentine beetle on Monterey pine. In both cases, the problem was significant.

Tree risk was assessed using a scale where 3 represents low risk and 12 represents the highest risk. The City's Recreation and Park Department policy is to abate those trees with risk rankings of 9 or above. Among the 166 trees, risk rankings ranged from 3 to 9. Five trees received rankings of 9; another 5 were ranked as 8.

Based on my observations, I recommend the following:

1. Request that the Recreation and Park Department remove Monterey cypress #43, 81, 89 and 132 due to risk rankings of 9.
2. Request that the Recreation and Park Department remove blackwood acacia #39 and Monterey cypress #12 and #58 due to risk rankings of 8.
3. Request that the Recreation and Park Department prune Monterey cypress #86 to remove the 17" diameter stem that extends towards the Children's play area.
4. Request that the Recreation and Park Department prune Monterey cypress #79 to remove the stems that extend over the tennis courts as well as to clean the crown of dead, dying and diseased branches.
5. Request that the Recreation and Park Department prune blue gum #117 to clean the crown and reduce the length and weight on any long heavy branches.
6. Request that the Recreation and Park Department monitor both the health and development of decay at the base of blue gum #117.
7. Discuss the potential to initiate a program of tree removal and replacement with the Recreation and Park Department gardening and reforestation staff. A good starting point would be the east area of the Square where the Lawson's cypress and giant sequoia are located. A second area would be on the west side near Monterey pines #145 – 149.
8. Request that the Recreation and Park Department install another corkscrew willow near tree #38 to serve as it "understudy." Planting a replacement now will allow the new tree to grow and development before the existing tree must be removed.

9. Discuss with gardening staff the potential to install and/or enlarge mowing circles around the base of trees in turf. A mowing circle is a turf-free area 1' to 2' in radius. Such circles reduce the likelihood that tree trunks and surface roots will be damaged by equipment.
10. Ask the Recreation and Park Department to determine if there is a landscape plan for the Square. Such a plan may form the basis for a replanting program.
11. A replanting program should build on the existing species, replanting those that have performed well (see Table 4) and replacing those that have done poorly (Lawson's cypress, Lombardy poplar, Monterey pines, blue gum, giant redwood and windmill palm). Monterey cypress should continue to be the primary species as the site. Removal of trees in poor condition and planting young vigorous trees of this species will ensure its presence in the years to come.
12. Request that the Recreation and Park Department remove the conifer planting in the southwest corner of the Square. These trees were too small to be included in our survey. They lack vigor and have failed to establish. There is no obvious reason for the poor performance. I believe that they will never become good trees and a plan to remove and replace them is a high priority.
13. Consult with the Recreation and Park Department regarding proposed plans to renovate the area near bathroom and tennis courts. Recommend that the area west of the children's play area be included in any project.

In summary, trees at Alamo Square are well-adapted to the site. The population is generally mature in development, suggesting that a program of tree removal and replacement should be initiated. That said, park users will enjoy the existing trees for many years to come.

HortScience, Inc.



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Attachments

Tree Survey Form

Tree Location Map

Tree Assessment

Alamo Square
 Alamo Square Neighborhood Association
 San Francisco CA
 June 2011



TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	STATUS	CONDITION 1=poor 5=excell.	AGE	SUITABILITY for PRESERVATION	COMMENTS	
1	Fulton	N.	Flowering cherry	12	--	4	Mature	Moderate	Codominant trunks @ 4'; wide attachment; one-sided to S.
2	Fulton	N.	Flowering cherry	8	--	2	Mature	Poor	Large trunk wound on W. from base to 4'; one-sided to E.
3	Fulton	N.	Weeping willow	21	--	4	Mature	Moderate	Multiple attachments @ 10'; heavy to W.
4	Fulton	N.	Weeping willow	7	--	2	Semi-mature	Poor	Failed @ base to N.
5	Fulton	N.	Monterey cypress	38	--	4	Semi-mature	Moderate	Codominant trunks @ 10'; upright; dense canopy.
6	Fulton	N.	Monterey cypress	55	--	3	Mature	Moderate	High crown due to pruning; lost central leader high in crown yielding several stems; flat-topped.
7	Fulton	N.	Monterey cypress	80	--	3	Mature	Poor	High crown; lost central leader high in crown; several large stems; flat-topped; history of branch failure.
8	Fulton	N.	Monterey cypress	87	--	3	Mature	Poor	Multiple attachments @ 6'; several vertical stems; heavy lateral limbs to NE.; dense canopy.
9	Fulton	N.	Monterey cypress	8	--	3	Semi-mature	Poor	Leans E. with rangy form.
10	Fulton	NE.	Monterey cypress	58	--	3	Mature	Poor	Multiple attachments @ 4' with included bark; bowed S.; thin canopy.
11	Fulton	NE.	Monterey cypress	32	--	3	Mature	Poor	Multiple attachments @ 12' with included bark; 1 dominant; several smaller to S.

Tree Assessment

Alamo Square
Alamo Square Neighborhood Association
San Francisco CA
June 2011



TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	STATUS	CONDITION 1=poor 5=excell.	AGE	SUITABILITY for PRESERVATION	COMMENTS	
12	Steiner	NE.	Monterey cypress	53	--	3	Mature	Poor	Codominant trunks @ 4'; 1 vertical; 1 to W. with elbow & sweep; thin canopy.
13	Steiner	E.	Lawson's cypress	16,15	--	2	Over-mature	Poor	Codominant trunks @ 2'; partial failure to S.; long cavity on 16"; base @ 7'; 15" poor.
14	Steiner	E.	Victorian box	14	--	4	Mature	Moderate	Multiple attachments @ 7'.
15	Steiner	E.	Victorian box	8	--	3	Mature	Poor	Suppressed; small crown.
16	Steiner	E.	Victorian box	8	--	3	Mature	Poor	Umbrella form.
17	Steiner	E.	Victorian box	7	--	4	Mature	Moderate	Wide crown.
18	Steiner	E.	Victorian box	12	--	4	Mature	Moderate	Multiple attachments @ 7'; good form.
19	Steiner	E.	Victorian box	9	--	4	Mature	Moderate	Codominant trunks @ 6'.
20	Steiner	E.	Windmill palm	8	--	2	Mature	Poor	No tag ; just poor; very small crown.
21	Steiner	E.	Lawson's cypress	20,18,15,8	--	2	Over-mature	Poor	Codominant trunks @ 1'; multiple attachments @ 3'; upright but very thin canopy; one-sided W., to play area.
22	Steiner	E.	Lawson's cypress	55,26	--	3	Over-mature	Poor	Codominant trunks @ 3', 5' & 7'; upright but thin canopy.
23	Steiner	E.	Lawson's cypress	15,14,14,10,6,6	--	3	Over-mature	Poor	Multiple attachments @ 3'; NE. side of tree x'd.
24	Steiner	E.	Lawson's cypress	20,16	--	3	Mature	Poor	Codominant trunks @ 1'; rangy form; history of branch failure.
25	Steiner	E.	Lawson's cypress	13,9	--	2	Over-mature	Poor	Codominant trunks @ 1'; long trunk wounds on both.
26	Steiner	E.	Lawson's cypress	27	--	3	Mature	Poor	Leans S.; codominant stem on N. x'd @ base; one-sided to S.

Tree Assessment

Alamo Square
Alamo Square Neighborhood Association
San Francisco CA
June 2011



TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	STATUS	CONDITION 1=poor 5=excell.	AGE	SUITABILITY for PRESERVATION	COMMENTS	
27	Steiner	E.	Giant sequoia	36	--	1	Over-mature	Poor	All but dead; leans N.
28	Steiner	E.	Giant sequoia	42	--	3	Over-mature	Poor	Lost central leader high in crown, resulting in multiple attachments; slight lean S.; <i>Botryosphaeria</i> .
29	Steiner	E.	Giant sequoia	31	--	2	Over-mature	Poor	Ext. twig dieback due to <i>Botryosphaeria</i> .
30	Interior	play	Myoporum	10	--	2	Over-mature	Poor	Leans SE; thin canopy; decay @ base.
31	Interior	play	Flowering cherry	10	--	3	Mature	Poor	Bowed E.; flat-topped; wounds @ graft union.
32	Interior	play	Monterey cypress	35	--	3	Over-mature	Poor	Multiple attachments @ 6' with decay in attachment; one-sided W.
33	Interior	play	Monterey cypress	26	--	3	Mature	Poor	Corrected lean S.; codominant trunks @ 8' & 10'; upright.
34	Interior	play	Monterey cypress	22	--	3	Mature	Poor	Leans SW.; sinuous trunk.
35	Interior	play	Monterey cypress	36	--	2	Mature	Poor	Codominant trunks @ 4'; 1 vertical; 1 with wide sweep; numerous trunk wounds.
36	Interior	play	Monterey cypress	18	--	2	Mature	Poor	Codominant trunks @ 5' & 7'; suppressed.
37	Interior	play	Monterey cypress	43	--	4	Mature	Moderate	Multiple attachments @ 6'; upright; dense canopy; slightly one-sided to S.
38	Hayes	SE.	Corkscrew willow	24	--	4	Mature	Moderate	Multiple attachments @ 12'; good form.
39	Hayes	S.	Blackwood acacia	28	--	1	Over-mature	Poor	Couldn't be worse; stem failures; bowed SW. with base outside of dripline.

Tree Assessment

Alamo Square
 Alamo Square Neighborhood Association
 San Francisco CA
 June 2011



TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	STATUS	CONDITION 1=poor 5=excell.	AGE	SUITABILITY for PRESERVATION	COMMENTS	
40	Hayes	S. Monterey cypress	36	--	2	Over-mature	Poor	Good form; no vigor; very thin canopy; one-sided.	
41	Hayes	S. Monterey cypress	77	--	3	Over-mature	Poor	Good form; no vigor; very thin canopy.	
42	Hayes	S. Myoporum	7,7	--	2	Over-mature	Poor	Codominant trunks @ 1'; leans NE.	
43	Hayes	S. Monterey cypress	88	--	2	Over-mature	Poor	Codominant trunks @ 6' with included bark; 2 large stems x'd on W.; high crown; flat-topped; decay in buttress roots on S. E. & N.	
44	Hayes	S. Blackwood acacia	21	--	3	Over-mature	Poor	Leans SE.; trunk wounds; codominant trunks @ 7'.	
45	Hayes	S. Mayten	8,8,7,7,7,7	--	3	Mature	Poor	Multiple attachments @ base. bowed flat to SW.; suppressed.	
46	Interior	Bathroo m/tennis	Monterey cypress	46	--	4	Mature	Moderate	High crown; history of branch failure; flat-topped.
47	Interior	Bathroo m/tennis	Monterey cypress	31	--	3	Mature	Poor	Slight lean NE.; very high crown; one-sided to NE.
48	Interior	Bathroo m/tennis	Agonis	11	--	3	Mature	Poor	Codominant trunks @ 5'; poor form; bowed E.
49	Interior	Bathroo m/tennis	Agonis	7	--	2	Semi-mature	Poor	Trunk cavity; small asymmetric crown.
50	Interior	Bathroo m/tennis	Monterey cypress	48	--	3	Over-mature	Poor	Heavy lateral limb @ 35' to W.; very high crown; bowed E.; poor form.
51	Interior	Bathroo m/tennis	Windmill palm	9	--	3	Semi-mature	Moderate	18' clear trunk.

Tree Assessment

Alamo Square
 Alamo Square Neighborhood Association
 San Francisco CA
 June 2011



TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	STATUS	CONDITION 1=poor 5=excell.	AGE	SUITABILITY for PRESERVATION	COMMENTS	
52	Interior	Bathroo m/tennis	Windmill palm	8	--	3	Semi-mature	Moderate	22' clear trunk.
53	Interior	Bathroo m/tennis	Windmill palm	8	--	3	Semi-mature	Moderate	28' clear trunk.
54	Interior	Bathroo m/tennis	She oak	14	--	3	Semi-mature	Poor	Poor form & structure; history of branch failure; bowed S.
55	Hayes	S.	Monterey cypress	53	--	4	Mature	Moderate	High crown; upper crown seems thin; flat-topped.
56	Hayes	S.	Agonis	16,12,9	--	3	Mature	Poor	Multiple attachments @ 1'; bowed SE.
57	Hayes	S.	Monterey cypress	58	--	4	Mature	Moderate	Good form; flat-topped.
58	Hayes	S.	Monterey cypress	37	--	2	Mature	Poor	Leans SW.; base outside of dripline; lots of bark action on tension side of trunk; thin canopy.
59	Hayes	S.	Windmill palm	8	--	3	Semi-mature	Moderate	16' clear trunk.
60	Interior	Bathroo m/tennis	Windmill palm	9	--	3	Semi-mature	Moderate	24' clear trunk.
61	Interior	Bathroo m/tennis	Windmill palm	8	--	3	Semi-mature	Moderate	18' clear trunk.
62	Interior	Bathroo m/tennis	Windmill palm	9	--	3	Semi-mature	Moderate	24' clear trunk.
63	Interior	Bathroo m/tennis	Hawthorn	18,14,13	--	3	Mature	Moderate	Codominant trunks @ 2' & 3'; 2' with included bark; 2 small stems suppressed.
64	Interior	Bathroo m/tennis	Canary Island date palm	33	--	4	Mature	Moderate	30' clear trunk; trunk pencils near crown.

Tree Assessment

Alamo Square
 Alamo Square Neighborhood Association
 San Francisco CA
 June 2011



TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	STATUS	CONDITION 1=poor 5=excell.	AGE	SUITABILITY for PRESERVATION	COMMENTS	
65	Interior	Bathroo m/tennis	Monterey cypress	70	--	4	Mature	Moderate	Good form; flat-topped; lifted; thinning canopy?
66	Interior	Bathroo m/tennis	Eugenia	9	--	3	Mature	Poor	Leans NE.; small crown.
67	Interior	Bathroo m/tennis	Monterey cypress	55	--	4	Mature	Moderate	Multiple attachments @ 14'; upright but thin canopy.
68	Interior	Bathroo m/tennis	Monterey cypress	51	--	3	Mature	Poor	Codominant trunks @ 28'; poor form; high crown.
69	Interior	Bathroo m/tennis	Monterey cypress	41	--	3	Mature	Poor	Small high crown.
70	Interior	Bathroo m/tennis	Monterey cypress	35	--	2	Mature	Poor	Codominant trunks @ 6'; small high crown.
71	Interior	Bathroo m/tennis	Monterey cypress	54	--	4	Mature	Moderate	High crown; flat-topped; heavy lateral limbs.
72	Interior	Bathroo m/tennis	Monterey cypress	9	--	5	Young	Good	Good tree.
73	Interior	Bathroo m/tennis	Monterey cypress	11	--	4	Young	Moderate	Flat-topped; lost central leader; otherwise okay.
74	Interior	Bathroo m/tennis	Monterey cypress	8	--	3	Young	Moderate	Okay form; thin canopy.
75	Interior	Bathroo m/tennis	Monterey cypress	69	--	4	Mature	Moderate	One-sided to W.; flat-topped; thinning?
76	Interior	Bathroo m/tennis	Monterey cypress	65	--	4	Mature	Moderate	High crown; good form; thinning.

Tree Assessment

Alamo Square
 Alamo Square Neighborhood Association
 San Francisco CA
 June 2011



TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	STATUS	CONDITION 1=poor 5=excell.	AGE	SUITABILITY for PRESERVATION	COMMENTS	
77	Interior	Bathroo m/tennis	Monterey cypress	11	--	5	Young	Good	Good tree.
78	Interior	Bathroo m/tennis	Monterey cypress	48	--	3	Mature	Poor	Poor form & structure; high crown; top bowed N.; one-sided NW.
79	Interior	Bathroo m/tennis	Monterey cypress	94	--	3	Mature	Poor	Multiple attachments @ 4'; generally upright; stem to tennis a tall big stub; 2nd stem bowed N.
80	Interior	Bathroo m/tennis	Monterey cypress	9	--	4	Young	Good	Losing central leader; otherwise good.
81	Interior	Bathroo m/tennis	Monterey cypress	36	--	1	Mature	Poor	High crown; trunk wound with crack on W.
82	Interior	Bathroo m/tennis	Monterey cypress	28	--	3	Mature	Poor	High crown.
83	Interior	Bathroo m/tennis	Monterey cypress	43	--	3	Mature	Poor	High crown; multiple attachments @ 40'; history of branch failure; 1 stem with crook over tennis.
84	Interior	Bathroo m/tennis	Myoporum	14	--	2	Over-mature	Poor	Crook @ 6' where stem was x'd; codominant trunks @ 7'.
85	Interior	Bathroo m/tennis	Monterey cypress	41	--	3	Mature	Poor	Multiple attachments @ 6' with included bark; vertical; high crown; one-sided & leaning to S.
86	Interior	Bathroo m/tennis	Monterey cypress	23,17,8	--	3	Semi-mature	Poor	Multiple attachments @ base; 17" with strong bow.
87	Interior	Bathroo m/tennis	Monterey cypress	15	--	3	Semi-mature	Poor	Slender.

Tree Assessment

Alamo Square
 Alamo Square Neighborhood Association
 San Francisco CA
 June 2011



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88	Interior	Bathroo m/tennis	Monterey cypress	24	--	4	Semi-mature	Moderate	Slender.
89	Interior	Bathroo m/tennis	Monterey cypress	22,12,10	--	2	Mature	Poor	Failing @ base to E.; uplifted roots; one-sided crown.
90	Interior	Bathroo m/tennis	Monterey cypress	14,13	--	3	Semi-mature	Poor	Codominant trunks @ 3'; poor attachment; small crown.
91	Interior	Bathroo m/tennis	Monterey cypress	51	--	3	Mature	Poor	Multiple attachments @ 12'; vertical; one-sided NE.
92	Interior	Bathroo m/tennis	Monterey cypress	17	--	4	Semi-mature	Moderate	Lost central leader; partly suppressed.
93	Interior	Bathroo m/tennis	Monterey cypress	15	--	5	Young	Good	Good tree.
94	Interior	Bathroo m/tennis	Monterey cypress	50	--	3	Over-mature	Poor	Small high crown; very dense; engulfed in ivy.
95	Interior	Bathroo m/tennis	Monterey cypress	79	--	3	Mature	Poor	Good form; thinning crown.
96	Fulton	N.	Monterey cypress	57	--	3	Mature	Poor	High crown; history of branch failure; flat-topped; codominant trunks high in crown.
97	Interior	Bathroo m/tennis	Monterey cypress	45	--	2	Mature	Poor	Small high crown; poor form.
98	Interior	Bathroo m/tennis	Monterey cypress	39	--	2	Mature	Poor	Small high crown; ext. decay @ base on W.
99	Interior	Bathroo m/tennis	Monterey cypress	42	--	2	Mature	Poor	Small high crown; bow in trunk; history of branch failure.

Tree Assessment

Alamo Square
 Alamo Square Neighborhood Association
 San Francisco CA
 June 2011



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100	Interior	Bathroo m/tennis	Monterey cypress	76	--	3	Mature	Poor	High crown; slight lean S.; basal cavity on W.; flat-topped.
101	Fulton	N.	Monterey cypress	98	--	3	Over-mature	Poor	Multiple attachments @ 5'; low, wide squat; crown lifted; thinning.
102	Fulton	N.	Monterey pine	36	--	2	Over-mature	Poor	Codominant trunks @ 10'; long stub; rangy form.
103	Fulton	N.	Italian stone pine	10,9,8,7	--	3	Semi-mature	Poor	Branches from failed tree.
104	Fulton	N.	Italian stone pine	13	--	2	Semi-mature	Poor	Failing @ base to N.
105	Interior	NW.	Lombardy poplar	17	--	3	Mature	Poor	Long seam on W.
106	Interior	NW.	Lombardy poplar	14	--	3	Mature	Poor	Narrow.
107	Interior	NW.	Lombardy poplar	14	--	3	Mature	Poor	Narrow; small crown.
108	Interior	NW.	Lombardy poplar	11	--	3	Mature	Poor	Narrow small crown.
109	Interior	NW.	Lombardy poplar	19	--	4	Mature	Moderate	Basal & trunk wound.
110	Interior	NW.	Lombardy poplar	15	--	3	Mature	Poor	Small narrow crown.
111	Interior	NW.	Lombardy poplar	16	--	3	Mature	Poor	Multiple attachments @ 12'.
112	Interior	NW.	Lombardy poplar	12	--	3	Mature	Poor	Codominant trunks @ 12'.
113	Interior	NW.	Lombardy poplar	15	--	3	Mature	Poor	Codominant trunks @ 14'.
114	Interior	W.	Blue gum	57	--	3	Mature	Poor	Leans NE.; crown reduced; okay vigor.
115	Interior	W.	Blue gum	38	--	3	Mature	Poor	Suppressed; low squat form; multiple attachments @ 14'.
116	Interior	W.	Blue gum	42	--	3	Mature	Poor	Leans E.; base outside of dripline; codominant trunks @ 8'.
117	Interior	W.	Blue gum	85	--	3	Mature	Poor	Multiple attachments @ 8'; <i>Ganoderma</i> @ base on N. & SW.; huge tree.

Tree Assessment

Alamo Square
 Alamo Square Neighborhood Association
 San Francisco CA
 June 2011



TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	STATUS	CONDITION 1=poor 5=excell.	AGE	SUITABILITY for PRESERVATION	COMMENTS	
118	Interior	W.	Canary Island date palm	29	--	5	Young	Good	6' tall.
119	Interior	W.	Monterey pine	15	--	2	Mature	Poor	Failing @ base to N.; low & squat form.
120	Interior	W.	Monterey cypress	74	--	4	Mature	Moderate	Good form; history of branch failure.
121	Interior	W.	Monterey cypress	46	--	4	Mature	Moderate	Good form; long lateral high in crown.
122	Interior	W.	Cordyline	12.9	--	4	Mature	Moderate	Codominant trunks @ base.
123	Interior	W.	Canary Island date palm	37	--	5	Young	Good	8' clear trunk.
124	Interior	Center	Canary Island date palm	30	--	4	Mature	Good	24' clear trunk.
125	Interior	Center	Windmill palm	17	--	3	Mature	Poor	22' clear trunk.
126	Interior	Center	Monterey cypress	16	--	4	Semi-mature	Moderate	Codominant trunks @ 12'.
127	Interior	Center	Monterey cypress	16	--	5	Semi-mature	Good	Good tree.
128	Interior	Center	Monterey cypress	64	--	4	Mature	Moderate	Multiple attachments high in crown; corrected lean S.
129	Interior	Center	Windmill palm	8	--	3	Mature	Poor	22' clear trunk.
130	Hayes	S.	Monterey cypress	72	--	4	Mature	Moderate	Corrected lean E.; good form; history of branch failure.
131	Hayes	S.	Monterey cypress	51	--	3	Mature	Poor	One-sided to W.; heavy lateral limb; upper crown bowed W.
132	Hayes	S.	Monterey cypress	62	--	2	Over-mature	Poor	Leans E.; very small high crown; decay @ base.
133	Hayes	S.	Monterey cypress	30	--	3	Mature	Poor	Leans NE.; high crown.
134	Hayes	S.	Monterey cypress	23	--	1	Mature	Poor	Leans NE.; decay @ base.

Tree Assessment

Alamo Square
 Alamo Square Neighborhood Association
 San Francisco CA
 June 2011



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135	Hayes	S.	Monterey cypress	48	--	3	Mature	Moderate	Irregular form; heavy lateral limb to S., then thinning high crown.
136	Hayes	S.	Monterey cypress	82	--	3	Mature	Poor	Multiple attachments @ 4'; 4 stems; 1 vertical; 3 bowed.
137	Scott	W.	Monterey pine	48	--	2	Over-mature	Poor	Dying; ext. red turpentine beetle; heavy lateral limb to N.
138	Scott	W.	Weeping willow	9	--	4	Semi-mature	Moderate	Codominant trunks @ 6'.
139	Scott	W.	Weeping willow	15	--	3	Mature	Poor	Partial failure to S.; seems stable.
140	Scott	W.	Weeping willow	14	--	3	Mature	Poor	Leans S.; poor form; scaffold to W. cracked.
141	Scott	W.	She oak	14	--	1	Mature	Poor	Failed @ 24' leaving small foliage.
142	Scott	W.	She oak	17,7	--	5	Semi-mature	Good	Typical growth & form.
143	Scott	W.	Weeping willow	9	--	5	Semi-mature	Good	Typical growth & form; planted too deep.
144	Scott	W.	Weeping willow	9	--	5	Semi-mature	Good	Typical growth & form.
145	Scott	W.	Monterey pine	31	--	2	Mature	Poor	Failing @ base to W.; base outside of dripline; codominant trunks @ 6'; girding root.
146	Scott	W.	Monterey pine	22	--	1	Mature	Poor	On ground with upright branches off failed stem.
147	Scott	W.	Monterey pine	29	--	2	Mature	Poor	Failing @ base to W.; lifted roots; flat form.
148	Scott	W.	Monterey pine	24,22,16	--	2	Mature	Poor	Failing @ base @ E.; roots lifted; multiple attachments @ 2'; pine pitch canker.

Tree Assessment

Alamo Square
 Alamo Square Neighborhood Association
 San Francisco CA
 June 2011



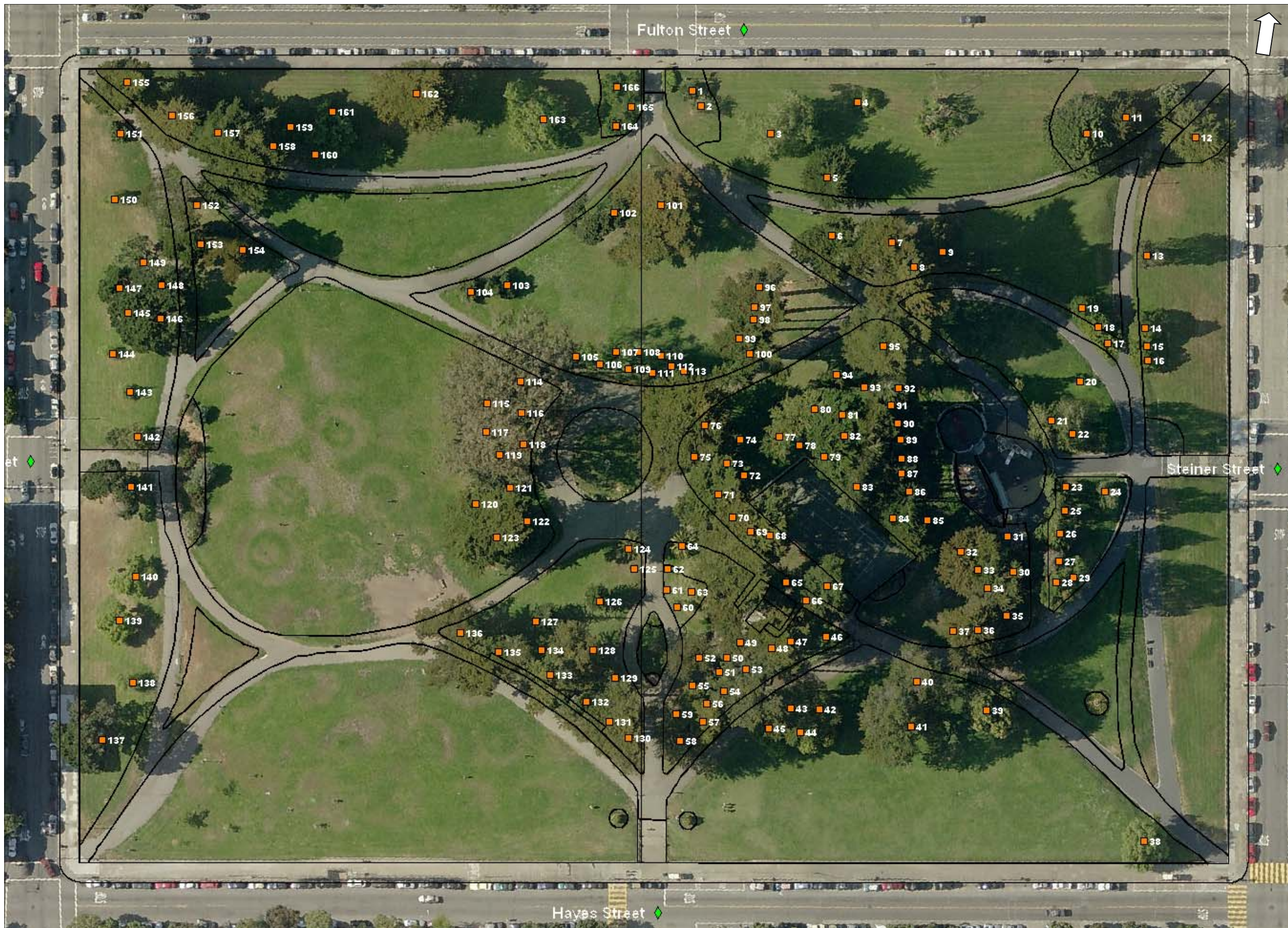
TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	STATUS	CONDITION		AGE	SUITABILITY for PRESERVATION	COMMENTS
					1=poor	5=excell.			
149	Scott	W.	Monterey pine	19,16	--	1	Mature	Poor	Failing @ base to N.; sparse canopy; pine pitch canker.
150	Scott	W.	Weeping willow	10	--	4	Semi-mature	Moderate	Multiple attachments @ 6'.
151	Scott	W.	Monterey pine	8	--	3	Semi-mature	Poor	Bowed flat to N.; looks like a shrub.
152	Scott	W.	Monterey cypress	52	--	3	Mature	Poor	Multiple attachments @ 6'; upright; high thinning crown; heavy lateral limb on NW.
153	Scott	W.	Monterey cypress	57	--	3	Mature	Poor	Codominant trunks @ 20'; one-sided to W.
154	Scott	W.	Monterey cypress	54	--	4	Mature	Moderate	One-sided to SE.; history of branch failure.
155	Fulton	NW.	Monterey pine	20	Significant?	2	Mature	Poor	Poor form & structure; bowed flat to S.
156	Fulton	NW.	Monterey cypress	61	Significant?	4	Mature	Moderate	High crown.
157	Fulton	N.	Monterey cypress	43	--	4	Mature	Moderate	One-sided to W.; good form.
158	Fulton	N.	Monterey cypress	54	--	4	Mature	Moderate	Codominant trunks @ 6'; 1 stem dominant; 1 suppressed to W.
159	Fulton	N.	Monterey cypress	31,23	--	2	Mature	Poor	Codominant trunks @ 4'; one-sided to NE; thin canopy.
160	Fulton	N.	Monterey cypress	71	--	4	Mature	Moderate	Codominant trunks @ 6'; 3rd stem x'd; codominant trunks @ 12'; leans SE.
161	Fulton	N.	Weeping willow	16	--	4	Mature	Moderate	Multiple attachments @ 7'; spreading apart.

Tree Assessment

Alamo Square
 Alamo Square Neighborhood Association
 San Francisco CA
 June 2011



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162	Fulton	N. Monterey cypress	51	--	4	Mature	Moderate	Flat-topped; good tree; several scaffolds @ sharp angles.
163	Fulton	N. Weeping willow	36	--	2	Over-mature	Poor	Just old; codominant trunks @ 5' with decay between; history of branch failure; twig dieback; heavy lateral limbs.
164	Fulton	N. Flowering cherry	9	--	3	Semi-mature	Moderate	Codominant trunks @ 5'; flat-topped.
165	Fulton	N. Flowering cherry	7	--	3	Mature	Poor	Bowed E.; codominant trunks @ 5'; flat-topped.
166	Fulton	N. Flowering cherry	16	--	4	Mature	Moderate	Multiple attachments @ 5'; dense canopy; <i>Ganoderma</i> @ base.



Tree Assessment Map

Alamo Square Park
San Francisco, CA

Prepared for:
Alamo Square
Neighborhood Association

June 2011

No Scale

Notes

- Base map provided by:
San Francisco Park and Recreation
Department
- Numbered tree locations
are approximate.



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