International Swim Center

Tree Report

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Tree Report

International Swim Center
Santa Clara CA

Table of Contents

List of Tables

Attachments

Introduction and Overview

David J. Powers & Associates is preparing environmental documents associated with the re-development of a section of Central Park in Santa Clara CA. Existing site use consists of a Recreation Center, parking and associated landscape. In addition, the proposed project would re-develop an existing parking lot near the St. Justin's School, just south of Central Park. David J. Powers & Associates requested that HortScience, Inc. assess the health and structural condition of trees, and provide recommendations for tree preservation. This report presents the following information:

1. Evaluation of tree health and structural condition.
2. Assessment of tree suitability for preservation.
3. Recommendations for action.
4. Guidelines for tree preservation.

Survey Methods

Trees were surveyed in September 2015. Each tree larger than 5" in diameter was visually assessed from the ground and evaluated as follows:

1. Identifying the tree as to species.
2. Attaching a numerically coded metal tag on the trunk of each tree.
3. Measuring the trunk diameter at a point 48" above grade.
4. Evaluating the health and structural condition using a scale of 0 – 5:
   - ***5*** - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
   - ***4*** - Tree with slight decline in vigor, small amount of twig dieback, or minor structural defects that could be corrected.
   - ***3*** - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
   - ***2*** - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
   - ***1*** - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormic shoots (secondary shoots that arise along the trunk and branches); extensive structural defects that cannot be abated.
   - ***0*** – Tree is dead.
5. Assess tree suitability for preservation as good, moderate or poor.
6. Determining if the tree meets the City of Santa Clara's criteria for Protected status as established in General Plan Conservation Policy 5.10.1-P4, ""Protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property as well as in the public right-of-way." Where trees had more than one stem, the circumference of all stems was added together. For the purposes of this report, trees in either good (rating of 4) or excellent (rating of 5) condition were considered "healthy."
7. Determining if any City-designated Heritage trees are present.

Description of Trees

Two hundred forty-nine (249) trees were evaluated, representing 26 species (Table 1). Essentially all trees appeared to have been planted as part of landscape development when the properties were originally developed. Some trees along the creek corridor on the east side of the Recreation Center may have arisen naturally. Coast live oak #160, located near the creek, is large enough to have been preserved during site development.

Among the 26 species present were several that are native to the Santa Clara area: coast live and valley oak, Calif. buckeye, white alder, western sycamore, willow and elderberry. Trees of these species found the creek corridor may be indigenous to the site.

Table 1. Tree condition and frequency of occurrence. International Swim Center. David J. Powers & Associates. Santa Clara CA.

Common name	Scientific name	Condition				No. of Trees	
		Poor	Fair	Good	Excel.	Protected	Total
White fir	*Abies concolor*	--	1	--	--	--	1
Jap. maple	*Acer palmatum*	3	3	1	--	--	7
Silver maple	*Acer saccharinum*	--	1	1	--	1	2
Calif. buckeye	*Aesculus californica*	--	--	1	--	1	1
White alder	*Alnus rhombifolia*	2	--	--	--	--	2
Calif. incense cedar	*Calocedrus decurrens*	2	--	--	--	--	2
Evergreen ash	*Fraxinus uhdei*	6	20	11	1	12	38
Ginkgo	*Ginkgo biloba*	2	4	1	2	--	9
Calif. black walnut	*Juglans hindsii*	2	6	1	--	1	9
Crape myrtle	*Lagerstroemia* cv.	--	--	--	2	--	2
Tuliptree	*Liriodendron tulipifera*	15	3	--	--	--	18
Canary Island pine	*Pinus canariensis*	2	3	2	6	8	13
Aleppo pine	*Pinus halepensis*	5	1	--	--	--	6
Torrey pine	*Pinus torreyana*	1	--	1	--	1	2
Western sycamore	*Platanus racemosa*	1	9	8	3	11	21
Lombardy poplar	*Populus nigra* 'Italica'	2	--	--	--	--	2
Cottonwood	*Populus* sp.	3	3	1	--	1	7
Carolina cherry	*Prunus caroliniana*	3	--	--	--	--	3
Callery pear	*Pyrus calleryana* cv.	--	--	7	--	4	7
Coast live oak	*Quercus agrifolia*	--	5	10	2	12	17
Holly oak	*Quercus ilex*	--	--	1	--	1	1
Valley oak	*Quercus lobata*	--	3	--	--	--	3
Willow	*Salix* sp.	2	--	--	--	--	2
Elderberry	*Sambucus mexicana*	--	2	--	--	--	2
Coast redwood	*Sequoia sempervirens*	16	22	29	2	31	69
Evergreen elm	*Ulmus parvifolia*	3	--	--	--	--	3
Total, all trees assessed		**70**	**86**	**75**	**18**	**84**	**249**

The City of Santa Clara's criteria for Protected (tree) status is established in General Plan Conservation Policy 5.10.1-P4, ""Protect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other trees over 36 inches in circumference measured from 48 inches above-grade on private and public property as well as in the public right-of-way." Species present that met this critierion included: coast redwood, Calif. incense cedar, valley oak, coast live oak, and holly oak. We did not observe any other cedars (*Cedrus* sp., *Chamaecyparis* sp.), redwoods (*Sequoiadendron giganteum*, *Metasequoia glyptostroboides*), oak species (*Quercus* sp.), bay laurel (*Umbellularia californica*), olive (*Olea europaea*) or pepper (*Schinus* sp.).

Appendix 8.10 of the City's General Plan lists trees that have been given Heritage status. Based on our review of the list, none of the trees at the project site has Heritage status.

Trees considered to have Protected status must be both of the following criteria: 1) cedars, redwoods, oaks, olives, bay laurel and pepper of any size or other species with trunk circumference of 36" or greater (measured at 48" above the ground) and 2) healthy (condition rating of 4 or 5). Eighty-four (84) of the 249 trees were both large and healthy enough to meet the criteria as Protected (see ***Tree Assessment Form***).

Coast redwood was the most frequently occurring species with 69 trees. Redwoods were concentrated along Kiely Blvd and around the St. Justin School parking lot. Redwoods were generally mature in development with trunk diameters between 10" and 43". Only 9 of 69 trees were less than 20" in diameter. Over half were 30" or greater. Condition of coast redwoods was variable ranging from poor (15 trees) to fair (22) to good (29) (Photo 1). Redwoods #46 (34") and 132 (38") were in excellent condition. Most redwoods had the pyramidal form that is typical of the species. Foliage density and color ranged from largely defoliated to full and dense. The primary factor influencing condition of redwoods was drought and inadequate irrigation.

Photo 1. Coast redwoods #46 (left) and 47 (right) illustrate the extremes in tree condition.

Thirty-eight (38) evergreen ash trees were concentrated along Kiely Blvd, near the Recreation Center and parking lot (Photo 2). Trees were mature in development with trunk diameters that ranged from 5" to 39". Thirty-five (35) of the 38 ashes were 20" or greater. The largest ash, #210, was 38" in diameter and in good condition. Tree condition ranged from poor (6 trees) to fair (20) to good (11). Evergreen ash #10 at the north end of the site was 34" in diameter and in excellent condition. Asymmetric and suppressed form due to crowding and lack of irrigation were the most important factors to tree condition. History of branch and stem failure was a secondary factor. Many trees had large surface roots that had displaced pavement.

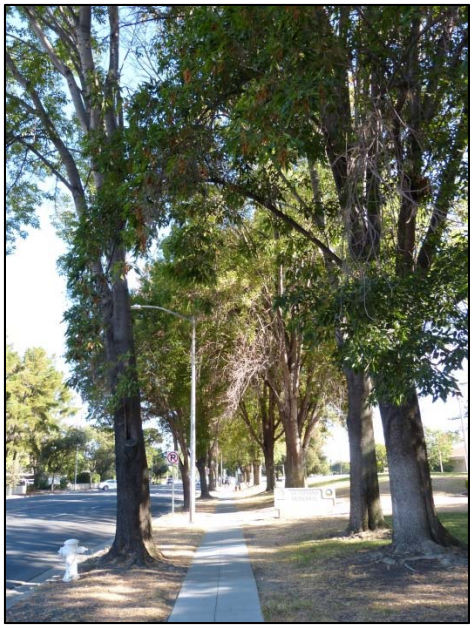

Photo 2. Looking north along Kiely Blvd. at double row of evergreen ash trees.

Twenty-one (21) western sycamores were concentrated at the south of the Recreation Center area (Photo 3). Exceptions were sycamores #99, 125, 141, 143 and 145. These trees were found along the creek corridor. Sycamores ranged from semi-mature to mature in development. Trunk diameters ranged from 7" to 34". Tree condition varied from poor (#86) to fair (9) to good (8) to excellent (#81, 87, 145). Asymmetric and/or leaning form and overall foliage density were the primary factors associated with tree condition. Several trees had been topped to clear overhead electrical lines.

Photo 3. Western sycamore #77 was 34" in diameter and in good condition.

Eighteen (18) tuliptrees had been installed in small planters in the parking areas. Trees were semi-mature in development with trunk diameters between 5" and 11". Overall tree condition was poor (15 trees). Tuliptrees #15, 136 and 237 were in fair condition. Lack of irrigation appeared to be the primary cause of poor condition. Poor crown structure was likely due to repeated episodes of dieback. Trees were serevely infested by scale and other sucking insects.

Seventeen (17) coast live oaks were present. Essentially all trees were located along the creek corridor. Trees ranged from young to mature in development; trunk diameters from 5" to 65". Tree #160 was 65" and in excellent condition, located mid-bank (Photo 4, following page). Condition of coast live oaks ranged from fair (5 trees) to good (10) to excellent (#157, 160). Several trees had been topped while others had poor crown structure.

Photo 4 (above). Coast live oak #160 was 65" in diameter & in excellent condition.

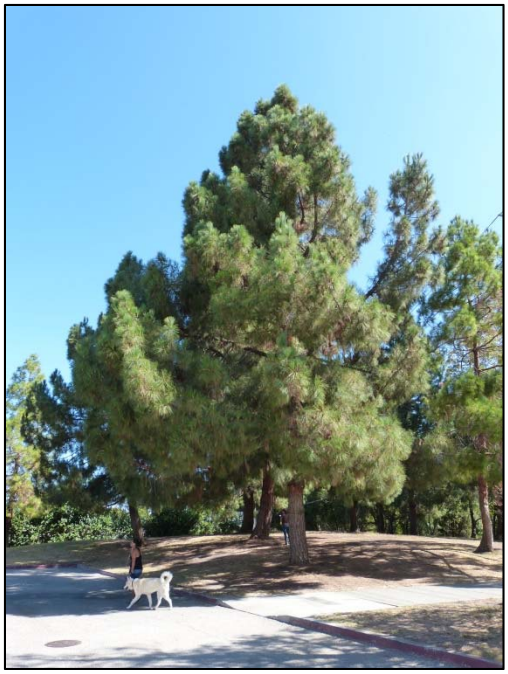

Photo 5 (right). Canary Island pine #127 was 27" and in good condition.

Thirteen (13) Canary Island pines were concentrated in the northeast section of the Recreation Center site, near the tennis courts (Photo 5). Trees ranged from 14" to 28" in diameter. Tree condition was poor (#129, 138), fair (#126, 130, 137), good (#127, 131) and excellent (#128, 134, 135, 136, 147, 148). Several trees had been either topped or side-trimmed.

No other species was represented by more than 10 trees. Included in this group were:

- 9 Calif. black walnuts included several trees larger than 25": #114 (26", poor condition), #44 (39", fair condition), #45 (24, 24, 15", fair condition), #67 (36", fair condition) and #63 (32, 31", good condition). All were on the Recreation Center site. The other 4 walnuts were smaller in size, located along the creek.

Photo 6. Calif. black walnut #63 had trunks of 32" and 31" and was in good condition.

- 9 ginkgos were clustered together south of the Recreation Center building. Trunk diameters ranged from 5" to 11". Tree condition varied widely due to the presence of overhead electrical lines. Ginkgos #69 and 70 were in excellent condition.

- 9 Japanese maples were located adjacent to the Recreation Center building and in interior courtyards. All were typical small, multi-stem trees that lacked vigor. Barks wounds were present on most trees. Japanese maple #61 was in good condition.

- Cottonwoods #100 – 105, 124 were located along the creek. Trees ranged from 12" to 24" in diameter. Condition was poor (#100, 101, 105), fair (#102, 103, 104) or good (#124).

- Aleppo pines #106 – 111 were mature in development. Trunk diameters ranged from 11" 25" (#106). Tree condition was poor save for #106 which was fair.

- Callery pears #165 – 170, 173 were located on the north side of the Recreation Center building. Trees were in good condition with trunks between 10" and 12".

- Carolina cherries #211, 212, 213 were located off-site, adjacent to the St. Justin School parking lot. Tree canopies extended into the parking lot. All three trees were in poor condition.

- Evergreen elms #64, 65, 66 were mature in form but in poor condition due to poor pruning practice.

- Valley oaks #98, 123 and 159 were semi-mature trees growing in crowded conditions. All were in fair condition.

- White alders #163 and 164 were in front of the Recreation Center. Both were over-mature in development and dying.

- Willows #142 and 153 were small multi-stem trees in poor condition.

- Crape myrtles #171 and 172 were small trees, 5" in diameter and in excellent condition.

- Elderberries #117 and 119 were large multi-stem shrubs along the tree corridor. Both were in fair condition.

- Lombardy poplars #121 and 122 had been topped at 12'. Both were multi-stem trees in poor condition.

- Silver maples #217 and 218 were located off-site to the south of the St. Justin School parking lot (Photo 7). Both had the form and structure typical of the species. Tree #218 was in fair condition while #217 was good. The canopy of silver maple #217 extended into the parking lot.

Photo 7. Silver maple #217 was located on an adjacent property but the crown extended over the St. Justin School parking lot.

- Torrey pines #56 and 57 were just south of the Recreation Center building. Tree #56 was 27" and in good condition while tree #57 was 18" and poor.

- Calif. buckeye #115 had stems of 7, 7 and 5" and was in good condition.

- Calif. incense cedars #93 and 96 were small and poor.

- Holly oak #97 was a large specimen tree south of the Recreation Center building (Photo 8). Trunk diameter was 32". Tree condition was good.

Photo 8. Looking south at holly oak #97. Creek is on the left.

- White fir #90 was 7" and poor.

Aside from lack of irrigation, one of the constraints to tree development was the presence of overhead electrical lines that generally paralleled the creek (see Photos 4 and 7). Numerous trees had either been topped or side-trimmed to clear the lines.

Description of individual trees is found on the enclosed ***Tree Assessment Form***. Tree locations are found on the ***Tree Assessment Map***. Both are included as **Attachments.**

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, coast live oak and coast redwood are generally tolerant of construction impacts while Calif. black walnut is far more 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. The California Invasive Plant Inventory Database (www.cal-ipc.org/paf) lists species identified as having being invasive. Santa Clara is part of the Central West Floristic Province. None of the species present at the International Swim Center have been identified as 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. International Swim Center. David J. Powers & Associates. Santa Clara CA.

High	Trees with good health and structural stability that have the potential for longevity at the site. Eighteen (18) trees were rated as having high suitability for preservation: Canary Island pines #128, 134, 135, 136, 147, 148; western sycamore #81, 87, 145; coast live oak #157, 160; coast redwood #46, 132; crape myrtle #171, 172; ginkgo #69, 70; and evergreen ash #10.
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 "high" category. Eighty-eight (88) trees were rated as having moderate suitability for preservation: 32 coast redwood; 12 western sycamore; 12 coast live oak; Callery pear #165 - 170, 173; Canary Island pine #126, 127, 131; valley oak #98, Calif. black walnut #63, Calif. buckeye #115, cottonwood #124, ginkgo #73, holly oak #97, Jap. maple #61, silver maple #217 and Torrey pine #56.
Low	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 forty-three (143) trees were rated as having low suitability for preservation including 35 coast redwood, 24 evergreen ash, 17 tuliptree, 8 Calif. black walnut, 6 Aleppo pine, 6 cottonwood, 6 ginkgo, 6 Jap. maple, 6 western sycamore and 4 Canary Island pine.

We consider trees with high 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.

Mitigation Requirements

The City of Santa Clara's General Plan Conservation Policy 5.10.1-P4 requires that development "[p]rotect all healthy cedars, redwoods, oaks, olives, bay laurel and pepper trees of any size, and all other trees over 36 inches in circumference (12" diameter) measured from 48 inches above-grade on private and public property as well as in the public right-of-way." General Plan Policy 5.10.1-P3 requires "preservation of all City-designated heritage trees listed in the Heritage Tree Appendix 8.10 of the General Plan." The City also requires that tree removal be mitigated by replanting. General Plan Policy 5.3.1-P10 requires that new development "provide opportunities for increased landscaping and trees in the community, including requirements for new development to provide street trees and a minimum 2:1 on- or off-site replacement for trees removed as part of the project."

Additionally, the City's Design Guidelines require that mature trees proposed for removal be replaced on-site at a 1:1 ratio with 24", 36" box or specimen size material. The City of Santa Clara does not have any further applicable tree protection policies, regulations, or ordinances.

Based on our assessment, 84 Protected trees were present at the proposed site of the International Swim Center and the nearby parking lot. No heritage trees listed in the Heritage Tree Appendix 8.10 of the General Plan were present. Normal mitigation requirement would be 2 replacement trees for every tree to be removed based on General Plan Policy 5.3.1-P10.

Evaluation of Impacts and Recommendations for Action

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The results of the general and individual tree surveys were the reference points for tree condition and quality. No specific site plans have been prepared. Impacts from the proposed project were assessed using the conceptual plans.

The proposed project would completely redevelop the Recreation Center area. The existing structure, parking lot to the north, tennis courts and landscape area to the south would be demolished. The St. Justin School parking lot would be reconfigured and enlarged, connecting to the new Swim Center by an existing path. Because detailed plans are not available, I've made several assumptions about the new project:

1. Existing street trees along Kiely Blvd. will be removed.

2. Grading and construction will not intrude into the creek area and that trees at the top of bank would be retained.

3. The southern extent of new development would be in the area of Kaiser Drive.

4. The existing planting space between Kiely Blvd. and the St. Justin School parking lot will be retained.

Impacts to trees could occur in a variety of ways. Demolition of existing structures and associated infrastructure may directly damage tree roots and crowns. Grading and other construction activities may also damage trees, through both direct mechanical injury and indirectly by altering drainage. New structures will be constructed in areas currently occupied by trees.

Based on my assessment of the conceptual site plan and the assumptions noted above, I recommend preservation of 77 trees (36 Protected) and removal of 172 (48 Protected) (Table 3, page 12).

Included among trees recommended for removal is holly oak #97 which is noted as "remove?" This well-developed specimen tree is located within areas proposed for development. The site plan should consider retention of this tree.

Tree Preservation Guidelines

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. This is particularly true during drought conditions when trees may not receive adequate irrigation.

The response of individual trees will depend on the amount of excavation and grading, the care with which demolition is undertaken, and the construction methods. Coordinating any construction activity inside the **TREE PROTECTION ZONE** can minimize these impacts.

The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

Design recommendations

1. Establish the horizontal and vertical locations of all trees within 50' of the proposed edge of grading and include on all future plans.

2. All plans affecting trees shall be reviewed by the Consulting Arborist with regard to tree impacts. These include, but are not limited to, demolition plans, grading plans, drainage plans, utility plans, and landscape and irrigation plans.

3. Establish a **TREE PROTECTION ZONE** around each tree to be preserved. For design purposes, the **TREE PROTECTION ZONE** shall be the dripline or 25' from the trunk whichever is larger. No grading, excavation, construction or storage of materials shall occur within that zone without authorization of the Consulting Arborist. This **TREE PROTECTION ZONE** should be on all construction plans.

4. Underground services including utilities, sub-drains, water or sewer shall be routed around the **TREE PROTECTION ZONE**. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury.

5. As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees should be designed to withstand differential displacement.

6. Do not lime the subsoil within 50' of any tree. Lime is toxic to tree roots.

7. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.

8. Irrigation systems must be designed so that no trenching will occur within the **TREE PROTECTION ZONE**.

Pre-construction treatments and recommendations

1. The construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.

2. Fence trees to be preserved to completely enclose the **TREE PROTECTION ZONE** prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by Consulting Arborist. Fences are to remain until all grading and construction is completed.

3. Trees to be preserved may require pruning to provide clearance for construction and correct defects in structure. Pruning must be performed by a Certified Arborist or Certified Tree Worker and must adhere to the latest editions of the ANSI Z133 and A300 standards.

4. Trees to be preserved will require irrigation during demolition and construction. A plan for temporary irrigation shall be prepared prior to the start of demolition.

Recommendations for tree protection during construction

1. No grading, construction, demolition or other work shall occur within the **TREE PROTECTION ZONE**. Any modifications must be approved and monitored by the Consulting Arborist.

2. Fences have been erected to protect trees to be preserved. Fences define a specific **TREE PROTECTION ZONE** for each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without permission of the Consulting Arborist.

3. Prior to grading or trenching, trees may require root pruning outside the **TREE PROTECTION ZONE**. Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the Consulting Arborist.

4. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.

5. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the **TREE PROTECTION ZONE**.

6. Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.

7. Trees to be preserved should be irrigated at a schedule specified by the Consulting Arborist.

HortScience, Inc.

James R. Clark, Ph.D.
Certified Arborist WE-0846
Registered Consulting Arborist #357

Table 3. Proposed action. International Swim Center. David J. Powers & Associates. Santa Clara CA.

Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excell.	Proposed Action	Notes
1	Coast redwood	23	Yes	4	Preserve	Edge of project area
2	Coast redwood	28	No	3	Remove	Within project area
3	Evergreen ash	36	No	3	Remove	Within project area
4	Evergreen ash	20	No	3	Remove	Within project area
5	Evergreen ash	27	No	3	Remove	Within project area
6	Evergreen ash	27	No	3	Remove	Within project area
7	Evergreen ash	26	Yes	4	Remove	Within project area
8	Evergreen ash	24	No	2	Remove	Within project area
9	Coast redwood	15	No	3	Remove	Within project area
10	Evergreen ash	34	Yes	5	Remove	Within project area
11	Evergreen ash	31	No	3	Remove	Within project area
12	Coast redwood	12	No	2	Remove	Within project area
13	Coast redwood	30	Yes	4	Remove	Within project area
14	Coast redwood	40	Yes	4	Remove	Within project area
15	Tuliptree	12	No	3	Remove	Within project area
16	Evergreen ash	31	Yes	4	Remove	Within project area
17	Evergreen ash	21	No	3	Remove	Within project area
18	Evergreen ash	27	Yes	4	Remove	Within project area
19	Evergreen ash	22	No	3	Remove	Within project area
20	Evergreen ash	18	No	2	Remove	Within project area
21	Evergreen ash	32	Yes	4	Remove	Within project area
22	Evergreen ash	26	Yes	4	Remove	Within project area
23	Evergreen ash	24	Yes	4	Remove	Within project area
24	Evergreen ash	26	No	3	Remove	Within project area
25	Evergreen ash	25	No	3	Remove	Within project area
26	Evergreen ash	34	No	3	Remove	Within project area
27	Evergreen ash	29	No	3	Remove	Within project area
28	Evergreen ash	28	No	3	Remove	Within project area
29	Evergreen ash	15	No	2	Remove	Within project area
30	Evergreen ash	27	No	3	Remove	Within project area
31	Evergreen ash	28	No	3	Remove	Within project area
32	Evergreen ash	29	Yes	4	Remove	Within project area
33	Evergreen ash	38	Yes	4	Remove	Within project area
34	Evergreen ash	21	No	2	Remove	Within project area
35	Evergreen ash	31	Yes	4	Preserve	Edge of project area
36	Evergreen ash	30	No	3	Preserve	Edge of project area
37	Coast redwood	26	No	3	Preserve	Edge of project area
38	Coast redwood	21	No	3	Preserve	Edge of project area

Table 3, continued. Proposed action. International Swim Center. David J. Powers & Associates. Santa Clara CA.

Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excell.	Proposed Action	Notes
39	Coast redwood	17	No	2	Remove	Edge of project area; poor condition
40	Coast redwood	26	No	3	Preserve	Edge of project area
41	Coast redwood	32	Yes	4	Preserve	Edge of project area
42	Coast redwood	26	Yes	4	Remove	Within project area
43	Coast redwood	24	Yes	4	Remove	Within project area
44	Calif. black walnut	39	No	3	Remove	Within project area
45	Calif. black walnut	24,24,15	No	3	Remove	Within project area
46	Coast redwood	35	Yes	5	Remove	Within project area
47	Coast redwood	26	No	2	Remove	Within project area
48	Coast redwood	21	No	2	Remove	Within project area
49	Coast redwood	22	No	2	Remove	Within project area
50	Coast redwood	13	No	2	Remove	Within project area
51	Coast redwood	43	Yes	4	Remove	Within project area
52	Coast redwood	20	No	2	Remove	Within project area
53	Coast redwood	30	No	3	Remove	Within project area
54	Coast redwood	21	No	3	Remove	Within project area
55	Coast redwood	31	No	3	Remove	Within project area
56	Torrey pine	27	Yes	4	Remove	Within project area
57	Torrey pine	18	No	2	Remove	Within project area
58	Jap. maple	6,5,4,2	No	3	Remove	Within project area
59	Jap. maple	7,6	No	3	Remove	Within project area
60	Jap. maple	7,6,5	No	2	Remove	Within project area
61	Jap. maple	7,6,6,5,4	No	4	Remove	Within project area
62	Jap. maple	5	No	2	Remove	Within project area
63	Calif. black walnut	32,31	Yes	4	Remove	Within project area
64	Evergreen elm	21	No	2	Remove	Within project area
65	Evergreen elm	15	No	2	Remove	Within project area
66	Evergreen elm	21	No	2	Remove	Within project area
67	Calif. black walnut	36	No	3	Remove	Within project area
68	Ginkgo	8	No	3	Remove	Within project area
69	Ginkgo	8	No	5	Remove	Within project area
70	Ginkgo	9	No	5	Remove	Within project area
71	Ginkgo	10	No	3	Remove	Within project area
72	Ginkgo	10	No	2	Remove	Within project area
73	Ginkgo	8	No	4	Remove	Within project area
74	Ginkgo	5	No	2	Remove	Within project area
75	Ginkgo	9	No	3	Remove	Within project area
76	Ginkgo	11	No	3	Remove	Within project area

Table 3, continued. Proposed action. International Swim Center. David J. Powers & Associates. Santa Clara CA.

Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excell.	Proposed Action	Notes
77	Western sycamore	34	Yes	4	Preserve	Edge of project area
78	Western sycamore	30	No	3	Preserve	Edge of project area
79	Western sycamore	13	No	3	Preserve	Edge of project area
80	Western sycamore	13	Yes	4	Preserve	Edge of project area
81	Western sycamore	15	Yes	5	Preserve	Edge of project area
82	Western sycamore	15	No	3	Preserve	Edge of project area
83	Western sycamore	15	No	3	Preserve	Edge of project area
84	Western sycamore	15	No	3	Preserve	Edge of project area
85	Western sycamore	29	Yes	4	Preserve	Edge of project area
86	Western sycamore	12	No	2	Remove	Edge of project area; poor condition
87	Western sycamore	24	Yes	5	Preserve	Edge of project area
88	Western sycamore	16	Yes	4	Preserve	Edge of project area
89	Coast live oak	21,20	Yes	4	Preserve	Edge of project area
90	White fir	7	No	3	Preserve	Edge of project area
91	Western sycamore	17	Yes	4	Remove	Within project area
92	Western sycamore	15	Yes	4	Remove	Within project area
93	Calif. incense cedar	7,5,5	No	2	Remove	Within project area
94	Western sycamore	9	No	3	Remove	Within project area
95	Western sycamore	23	Yes	4	Remove	Within project area
96	Calif. incense cedar	8	No	2	Remove	Within project area
97	Holly oak	32	Yes	4	Remove?	Within project area; specimen tree
98	Valley oak	14	No	3	Remove	Within project area
99	Western sycamore	29	Yes	4	Preserve	Creek area
100	Cottonwood	16	No	1	Remove	Creek area; poor condition
101	Cottonwood	20,19,14	No	1	Remove	Creek area; poor condition
102	Cottonwood	14	No	3	Preserve	Creek area
103	Cottonwood	14	No	3	Preserve	Creek area
104	Cottonwood	12	No	3	Preserve	Creek area
105	Cottonwood	12	No	2	Remove	Creek area; poor condition
106	Aleppo pine	25	No	3	Preserve	Edge of project area
107	Aleppo pine	11	No	2	Remove	Within project area
108	Aleppo pine	25	No	2	Remove	Within project area
109	Aleppo pine	16	No	2	Remove	Within project area
110	Aleppo pine	18	No	1	Remove	Within project area

Table 3, continued. Proposed action. International Swim Center. David J. Powers & Associates. Santa Clara CA.

Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excell.	Proposed Action	Notes
111	Aleppo pine	13	No	2	Remove	Within project area
112	Coast live oak	9	Yes	4	Preserve	Creek area
113	Evergreen ash	5	No	2	Remove	Creek area; poor condition
114	Calif. black walnut	26	No	2	Remove	Creek area; poor condition
115	Calif. buckeye	7,7,5	Yes	4	Preserve	Creek area
116	Coast live oak	6	Yes	4	Preserve	Creek area
117	Elderberry	6,6,5,3	No	3	Preserve	Creek area
118	Coast live oak	12	Yes	4	Preserve	Creek area
119	Elderberry	12,8,8,8,6,5	No	3	Preserve	Creek area
120	Calif. black walnut	9,7	No	2	Remove	Creek area; poor condition
121	Lombardy poplar	7,6,6,6,4,4	No	2	Remove	Creek area; poor condition
122	Lombardy poplar	12,9,8,7, 7,5,5,3	No	2	Remove	Creek area; poor condition
123	Valley oak	11	No	3	Preserve	Creek area
124	Cottonwood	24	Yes	4	Preserve	Creek area
125	Western sycamore	31	No	3	Preserve	Creek area
126	Canary Island pine	14	No	3	Remove	Within project area
127	Canary Island pine	24	Yes	4	Remove	Within project area
128	Canary Island pine	28	Yes	5	Remove	Within project area
129	Canary Island pine	21	No	2	Remove	Within project area
130	Canary Island pine	24	No	3	Remove	Within project area
131	Canary Island pine	24	Yes	4	Remove	Within project area
132	Coast redwood	38	Yes	5	Remove	Within project area
133	Coast redwood	35	Yes	4	Remove	Within project area
134	Canary Island pine	18	Yes	5	Remove	Within project area
135	Canary Island pine	28	Yes	5	Remove	Within project area
136	Canary Island pine	16	Yes	5	Remove	Within project area
137	Canary Island pine	20	No	3	Remove	Within project area
138	Canary Island pine	18	No	2	Remove	Within project area
139	Calif. black walnut	11	No	3	Preserve	Creek area
140	Coast live oak	5	No	3	Preserve	Creek area
141	Western sycamore	14	No	3	Preserve	Creek area
142	Willow	8,7,6,6,5,5	No	2	Preserve	Creek area
143	Western sycamore	7	No	3	Preserve	Creek area

Table 3, continued. Proposed action. International Swim Center. David J. Powers & Associates. Santa Clara CA.

Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excell.	Proposed Action	Notes
144	Coast live oak	8	Yes	4	Preserve	Creek area
145	Western sycamore	18	Yes	5	Preserve	Creek area
146	Calif. black walnut	13	No	3	Preserve	Creek area
147	Canary Island pine	23	Yes	5	Preserve	Creek area
148	Canary Island pine	22	Yes	5	Preserve	Creek area
149	Calif. black walnut	6	No	3	Preserve	Creek area
150	Coast live oak	10	Yes	4	Preserve	Creek area
151	Coast live oak	13,8	No	3	Preserve	Creek area
152	Coast live oak	16,13	No	3	Preserve	Creek area
153	Willow	7,7,6,4	No	2	Preserve	Creek area
154	Coast live oak	9	No	3	Preserve	Creek area
155	Coast live oak	12	Yes	4	Preserve	Creek area
156	Coast live oak	10	Yes	4	Preserve	Creek area
157	Coast live oak	12	Yes	5	Preserve	Creek area
158	Coast live oak	7	No	3	Preserve	Creek area
159	Valley oak	7	No	3	Preserve	Creek area
160	Coast live oak	65	Yes	5	Preserve	Creek area
161	Coast live oak	15	Yes	4	Preserve	Creek area
162	Coast live oak	19	Yes	4	Preserve	Creek area
163	White alder	17	No	2	Remove	Within project area
164	White alder	15	No	2	Remove	Within project area
165	Callery pear	10	No	4	Remove	Within project area
166	Callery pear	10	No	4	Remove	Within project area
167	Callery pear	11	Yes	4	Remove	Within project area
168	Callery pear	10	No	4	Remove	Within project area
169	Callery pear	11	Yes	4	Remove	Within project area
170	Callery pear	12	Yes	4	Remove	Within project area
171	Crape myrtle	7	No	5	Remove	Within project area
172	Crape myrtle	7	No	5	Remove	Within project area
173	Callery pear	11	Yes	4	Remove	Within project area
174	Jap. maple	8,5	No	2	Remove	Within project area
175	Jap. maple	7,6,4	No	3	Remove	Within project area
176	Tuliptree	6	No	3	Remove	Within project area
177	Tuliptree	5	No	2	Remove	Within project area
178	Tuliptree	7	No	2	Remove	Within project area
179	Tuliptree	6	No	2	Remove	Within project area
180	Tuliptree	7	No	2	Remove	Within project area
181	Tuliptree	5	No	2	Remove	Within project area
182	Coast redwood	24	No	3	Preserve	Edge of project area

Table 3, continued. Proposed action. International Swim Center. David J. Powers & Associates. Santa Clara CA.

Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excell.	Proposed Action	Notes
183	Coast redwood	32	Yes	4	Preserve	Edge of project area
184	Coast redwood	33	Yes	4	Preserve	Edge of project area
185	Coast redwood	28	Yes	4	Preserve	Edge of project area
186	Coast redwood	35	Yes	4	Preserve	Edge of project area
187	Coast redwood	33	Yes	4	Preserve	Edge of project area
188	Coast redwood	41	No	3	Preserve	Edge of project area
189	Coast redwood	31	Yes	4	Preserve	Edge of project area
190	Coast redwood	39	Yes	4	Preserve	Edge of project area
191	Coast redwood	31	No	3	Preserve	Edge of project area
192	Coast redwood	28	No	3	Preserve	Edge of project area
193	Coast redwood	31	No	2	Preserve	Edge of project area
194	Coast redwood	34	No	3	Preserve	Edge of project area
195	Coast redwood	34	Yes	4	Preserve	Edge of project area
196	Coast redwood	40	No	3	Remove	Within project area
197	Coast redwood	20	No	2	Remove	Within project area
198	Evergreen ash	28	No	3	Remove	Within project area
199	Evergreen ash	27	No	3	Remove	Within project area
200	Coast redwood	10	No	2	Remove	Within project area
201	Evergreen ash	32	No	3	Remove	Within project area
202	Evergreen ash	25	No	2	Remove	Within project area
203	Evergreen ash	27	No	3	Remove	Within project area
204	Coast redwood	23	No	2	Remove	Within project area
205	Coast redwood	39	No	3	Remove	Within project area
206	Coast redwood	20	No	3	Remove	Within project area
207	Coast redwood	21	No	1	Remove	Within project area
208	Evergreen ash	30	No	3	Remove	Within project area
209	Evergreen ash	22	Yes	4	Remove	Within project area
210	Evergreen ash	39	Yes	4	Remove	Within project area
211	Carolina cherry	6	No	2	Preserve	Off-site; prune for clearance
212	Carolina cherry	12	No	2	Preserve	Off-site; prune for clearance
213	Carolina cherry	8	No	2	Preserve	Off-site; prune for clearance
214	Tuliptree	13	No	2	Remove	Within project area
215	Coast redwood	35	No	2	Remove	Within project area
216	Coast redwood	35	Yes	4	Remove	Within project area

Table 3, continued. Proposed action. International Swim Center. David J. Powers & Associates. Santa Clara CA.

Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excell.	Proposed Action	Notes
217	Silver maple	25	Yes	4	Preserve	Off-site; prune for clearance
218	Silver maple	28	No	3	Preserve	Off-site; prune for clearance
219	Coast redwood	24	No	3	Remove	Within project area
220	Coast redwood	35	Yes	4	Remove	Within project area
221	Coast redwood	34	Yes	4	Remove	Within project area
222	Coast redwood	33	No	3	Remove	Within project area
223	Coast redwood	10	No	2	Remove	Within project area
224	Coast redwood	35	Yes	4	Remove	Within project area
225	Coast redwood	22	No	3	Remove	Within project area
226	Coast redwood	19	No	2	Remove	Within project area
227	Coast redwood	36	Yes	4	Remove	Within project area
228	Coast redwood	27	No	3	Remove	Within project area
229	Coast redwood	22	No	3	Remove	Within project area
230	Coast redwood	33	No	2	Remove	Within project area
231	Coast redwood	38	Yes	4	Remove	Within project area
232	Coast redwood	24	Yes	4	Remove	Within project area
233	Coast redwood	35	Yes	4	Remove	Within project area
234	Coast redwood	20	Yes	4	Remove	Within project area
235	Coast redwood	27	Yes	4	Remove	Within project area
236	Tuliptree	9	No	2	Remove	Within project area
237	Tuliptree	16	No	3	Remove	Within project area
238	Tuliptree	10	No	2	Remove	Within project area
239	Tuliptree	7	No	2	Remove	Within project area
240	Tuliptree	7	No	2	Remove	Within project area
241	Coast redwood	33	Yes	4	Remove	Within project area
242	Tuliptree	6	No	2	Remove	Within project area
243	Coast redwood	33	Yes	4	Remove	Within project area
244	Coast redwood	17	No	3	Remove	Within project area
245	Coast redwood	16	Yes	4	Remove	Within project area
246	Tuliptree	10	No	2	Remove	Within project area
247	Tuliptree	8	No	2	Remove	Within project area
248	Tuliptree	11	No	2	Remove	Within project area
249	Tuliptree	10	No	2	Remove	Within project area

ATTACHMENTS

Tree Assessment Form

Tree Assessment Map

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

HORT SCIENCE

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
1	Rec Ctr.	Coast redwood	23	Yes	4	Moderate	Good form & structure; thin canopy.
2	Rec Ctr.	Coast redwood	28	No	3	Low	Topped for overhead lines; round form.
3	Rec Ctr.	Evergreen ash	36	No	3	Low	Side-trimmed; otherwise typical form & structure; large surface roots; previously topped.
4	Rec Ctr.	Evergreen ash	20	No	3	Low	Partly suppressed; flat form to E./W.
5	Rec Ctr.	Evergreen ash	27	No	3	Low	Partly suppressed; heavy bow W. over street.
6	Rec Ctr.	Evergreen ash	27	No	3	Low	One-sided to W.; root pruned for sidewalk repair.
7	Rec Ctr.	Evergreen ash	26	Yes	4	Moderate	Typical form & structure; codominant trunks @ 6'; thin canopy.
8	Rec Ctr.	Evergreen ash	24	No	2	Low	Partly suppressed; one-sided to S.; twig & branch dieback to 3" throughout.
9	Rec Ctr.	Coast redwood	15	No	3	Moderate	Good form & structure; thin canopy.
10	Rec Ctr.	Evergreen ash	34	Yes	5	High	Good form & structure; large surface roots; vase-shaped crown.
11	Rec Ctr.	Evergreen ash	31	No	3	Low	One-sided & bowed S.; branch failure.
12	Rec Ctr.	Coast redwood	12	No	2	Low	Good form but very thin canopy.
13	Rec Ctr.	Coast redwood	30	Yes	4	Moderate	Typical form & structure.
14	Rec Ctr.	Coast redwood	40	Yes	4	Moderate	Typical form & structure.
15	Rec Ctr.	Tuliptree	12	No	3	Low	Good form; thin canopy; surrounded by pavement.
16	Rec Ctr.	Evergreen ash	31	Yes	4	Moderate	Large wounded surface roots; codominant trunks @ 8'; 1 vertical; 2nd with broad sweep.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

HORT SCIENCE

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
17	Rec Ctr.	Evergreen ash	21	No	3	Low	Codominant trunks @ 7' with branch failure just above attachment; thin canopy.
18	Rec Ctr.	Evergreen ash	27	Yes	4	Moderate	Typical form & structure; surface roots; slightly one-sided to S.
19	Rec Ctr.	Evergreen ash	22	No	3	Low	Partly suppressed; one-sided & bowed SW.
20	Rec Ctr.	Evergreen ash	18	No	2	Low	Poor form & structure; bowed W. over street; base outside of dripline.
21	Rec Ctr.	Evergreen ash	32	Yes	4	Moderate	Typical form & structure; multiple attachments @ 6'; thin canopy.
22	Rec Ctr.	Evergreen ash	26	Yes	4	Moderate	Typical form & structure; one-sided to N.; thin canopy.
23	Rec Ctr.	Evergreen ash	24	Yes	4	Moderate	Typical form & structure; one-sided to S.; thin canopy.
24	Rec Ctr.	Evergreen ash	26	No	3	Low	Typical form & structure; one-sided to W.; buttress roots wounded for sidewalk repair.
25	Rec Ctr.	Evergreen ash	25	No	3	Low	One-sided to W.; partly suppressed; roots pruned.
26	Rec Ctr.	Evergreen ash	34	No	3	Low	Codominant trunks @ 7' with seam on E. to 4'; stems upright; one-sided to S.
27	Rec Ctr.	Evergreen ash	29	No	3	Low	Typical form & structure; series of codominant trunks attachments; branch failures; multiple attachments @ 8'; lost central leader.
28	Rec Ctr.	Evergreen ash	28	No	3	Low	One-sided & bowed S.
29	Rec Ctr.	Evergreen ash	15	No	2	Low	Suppressed; upper canopy bowed W.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
30	Rec Ctr.	Evergreen ash	27	No	3	Moderate	Typical form & structure; one-sided to W.
31	Rec Ctr.	Evergreen ash	28	No	3	Moderate	Narrow & upright form; multiple attachments @ 10'.
32	Rec Ctr.	Evergreen ash	29	Yes	4	Moderate	Typical form & structure; multiple attachments @ 10'.
33	Rec Ctr.	Evergreen ash	38	Yes	4	Moderate	Typical form & structure; multiple attachments @ 10'; slight separation among stems.
34	Rec Ctr.	Evergreen ash	21	No	2	Low	Poor form & structure; suppressed.
35	Rec Ctr.	Evergreen ash	31	Yes	4	Moderate	Typical form & structure; narrow & upright form; surface roots!
36	Rec Ctr.	Evergreen ash	30	No	3	Low	One-sided to SW.; wedge of a crown.
37	Rec Ctr.	Coast redwood	26	No	3	Low	One-sided to S.; wedge of a crown.
38	Rec Ctr.	Coast redwood	21	No	3	Low	One-sided to SE.; wedge of a crown.
39	Rec Ctr.	Coast redwood	17	No	2	Low	Good form; very thin canopy.
40	Rec Ctr.	Coast redwood	26	No	3	Low	Good form; thin canopy.
41	Rec Ctr.	Coast redwood	32	Yes	4	Moderate	Good form; thin canopy.
42	Rec Ctr.	Coast redwood	26	Yes	4	Moderate	Good form; one-sided to S.; thin canopy.
43	Rec Ctr.	Coast redwood	24	Yes	4	Moderate	Good form; one-sided to N.; thin canopy.
44	Rec Ctr.	Calif. black walnut	39	No	3	Low	One-sided to E.; multiple attachments @ 5'; irregular form.
45	Rec Ctr.	Calif. black walnut	24,24,15	No	3	Low	One-sided to E.; multiple attachments @ 3'; irregular form.
46	Rec Ctr.	Coast redwood	35	Yes	5	High	Good form & structure.
47	Rec Ctr.	Coast redwood	26	No	2	Low	Good form; very thin canopy.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
48	Rec Ctr.	Coast redwood	21	No	2	Low	Weird form; leans S.; then sweeps vertical; one-sided to N.
49	Rec Ctr.	Coast redwood	22	No	2	Low	Good form; very thin canopy.
50	Rec Ctr.	Coast redwood	13	No	2	Low	Good form; very thin canopy.
51	Rec Ctr.	Coast redwood	43	Yes	4	Moderate	Typical form & structure; thin canopy.
52	Rec Ctr.	Coast redwood	20	No	2	Low	Interior; crook mid-crown; thin canopy.
53	Rec Ctr.	Coast redwood	30	No	3	Low	Interior; typical form & structure; thin canopy.
54	Rec Ctr.	Coast redwood	21	No	3	Low	No vigor; thin canopy; lost central leader @ top.
55	Rec Ctr.	Coast redwood	31	No	3	Low	Typical form & structure; very thin canopy.
56	Rec Ctr.	Torrey pine	27	Yes	4	Moderate	One-sided to N.; thin canopy.
57	Rec Ctr.	Torrey pine	18	No	2	Low	Sharp lean S.; base outside of dripline.
58	Rec Ctr.	Jap. maple	6,5,4,2	No	3	Low	Typical form & structure; multiple attachments @ 1'; bark wounds.
59	Rec Ctr.	Jap. maple	7,6	No	3	Low	Codominant trunks @ 2'; upper canopy thin with twig dieback.
60	Rec Ctr.	Jap. maple	7,6,5	No	2	Low	Ext. twig dieback with thin canopy; codominant trunks @ 2' & 3'.
61	Rec Ctr.	Jap. maple	7,6,6,5,4	No	4	Moderate	Typical form & structure; codominant trunks @ 1' & above; minor twig dieback.
62	Rec Ctr.	Jap. maple	5	No	2	Low	Poor form & structure.
63	Rec Ctr.	Calif. black walnut	32,31	Yes	4	Moderate	Big tree; codominant trunks @ 3'; round form; upper canopy thin with minor dead branches.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
64	Rec Ctr.	Evergreen elm	21	No	2	Low	Poor form & structure; multiple attachments @ 6' with poor attachment; bark wounds; stripped out.
65	Rec Ctr.	Evergreen elm	15	No	2	Low	Poor form & structure; leans E.; completely stripped out.
66	Rec Ctr.	Evergreen elm	21	No	2	Low	Poor form & structure; leans S.; codominant trunks @ 7' with wound @ attachment; stripped out.
67	Rec Ctr.	Calif. black walnut	36	No	3	Low	Lower trunk leans S.; codominant trunks @ 2'; topped for overhead lines; asymmetric form heavy to W.
68	Rec Ctr.	Ginkgo	8	No	3	Low	Okay tree; lost central leader.
69	Rec Ctr.	Ginkgo	8	No	5	High	Good form & structure; narrow & upright form.
70	Rec Ctr.	Ginkgo	9	No	5	High	Good form & structure; slightly one-sided to S.
71	Rec Ctr.	Ginkgo	10	No	3	Low	Topped for overhead lines.
72	Rec Ctr.	Ginkgo	10	No	2	Low	Poor form & structure; codominant trunks @ 7'; topped for overhead lines.
73	Rec Ctr.	Ginkgo	8	No	4	Moderate	Good form & structure; thin canopy.
74	Rec Ctr.	Ginkgo	5	No	2	Low	Poor form & structure; bowed SE.
75	Rec Ctr.	Ginkgo	9	No	3	Low	Topped for overhead lines; trunk wound.
76	Rec Ctr.	Ginkgo	11	No	3	Low	Topped for overhead lines; trunk wound.
77	Rec Ctr.	Western sycamore	34	Yes	4	Moderate	Codominant trunks @ 12'; both stems vertical; nice form; wounded surface roots.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
78	Rec Ctr.	Western sycamore	30	No	3	Moderate	Corrected lean S.; bowed N.; codominant trunks @ 20'; separated.
79	Rec Ctr.	Western sycamore	13	No	3	Low	Leaning & bowed SE.; base outside of dripline.
80	Rec Ctr.	Western sycamore	13	Yes	4	Moderate	One-sided to E.
81	Rec Ctr.	Western sycamore	15	Yes	5	High	Good form & structure; slight lean S.
82	Rec Ctr.	Western sycamore	15	No	3	Low	Asymmetric form due to line clearing; otherwise okay.
83	Rec Ctr.	Western sycamore	15	No	3	Low	Topped for overhead lines.
84	Rec Ctr.	Western sycamore	15	No	3	Low	Topped for overhead lines.
85	Rec Ctr.	Western sycamore	29	Yes	4	Moderate	Multiple attachments @ 8'; somewhat flat to N./S.
86	Rec Ctr.	Western sycamore	12	No	2	Low	Poor form & structure; crook @ 7'.
87	Rec Ctr.	Western sycamore	24	Yes	5	High	Good form & structure.
88	Rec Ctr.	Western sycamore	16	Yes	4	Moderate	Leans S.; uphill; otherwise okay.
89	Rec Ctr.	Coast live oak	21,20	Yes	4	Moderate	Typical form & structure; codominant trunks @ 4' & 8'; one-sided to S.; heavy lateral limbs throughout.
90	Rec Ctr.	White fir	7	No	3	Low	Good form; thin canopy; no vigor.
91	Rec Ctr.	Western sycamore	17	Yes	4	Moderate	Good form; thin canopy.
92	Rec Ctr.	Western sycamore	15	Yes	4	Moderate	Rangy form; thin canopy.
93	Rec Ctr.	Calif. incense cedar	7,5,5	No	2	Low	Poor form & structure; multiple attachments @ base; big shrub.
94	Rec Ctr.	Western sycamore	9	No	3	Low	Crook @ 6'; partly suppressed.
95	Rec Ctr.	Western sycamore	23	Yes	4	Moderate	Corrected lean S.
96	Rec Ctr.	Calif. incense cedar	8	No	2	Low	Suppressed & crowded.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

HORT SCIENCE

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
97	Rec Ctr.	Holly oak	32	Yes	4	Moderate	Multiple attachments @ 6' with seam to 3'; dense rounded crown.
98	Rec Ctr.	Valley oak	14	No	3	Moderate	Rangy form due to crowded space; high canopy.
99	Rec Ctr.	Western sycamore	29	Yes	4	Moderate	Slight lean S.; one-sided to E.; lost central leader @ top.
100	Rec Ctr.	Cottonwood	16	No	1	Low	All but dead.
101	Rec Ctr.	Cottonwood	20,19,14	No	1	Low	Multiple attachments @ 1'; all but dead.
102	Rec Ctr.	Cottonwood	14	No	3	Low	Leans E.; lost central leader.
103	Rec Ctr.	Cottonwood	14	No	3	Low	Leans E.; lost central leader.
104	Rec Ctr.	Cottonwood	12	No	3	Low	Rangy form.
105	Rec Ctr.	Cottonwood	12	No	2	Low	Poor form & structure.
106	Rec Ctr.	Aleppo pine	25	No	3	Low	Leans S.; dense canopy; codominant trunks high in crown; codominant trunks stem x'd @ 2'.
107	Rec Ctr.	Aleppo pine	11	No	2	Low	Poor form & structure; suppressed.
108	Rec Ctr.	Aleppo pine	25	No	2	Low	Codominant trunks @ 4' with included bark; topped with resprouts; rangy.
109	Rec Ctr.	Aleppo pine	16	No	2	Low	Poor form & structure.
110	Rec Ctr.	Aleppo pine	18	No	1	Low	Failing @ base to S.; base outside of dripline.
111	Rec Ctr.	Aleppo pine	13	No	2	Low	Poor form & structure.
112	Rec Ctr.	Coast live oak	9	Yes	4	Moderate	Sweeps upright from base; good young
113	Rec Ctr.	Evergreen ash	5	No	2	Low	Poor form & structure; no vigor; top dead.
114	Rec Ctr.	Calif. black walnut	26	No	2	Low	Ext. twig & branch dieback to 8".

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
115	Rec Ctr.	Calif. buckeye	7,7,5	Yes	4	Moderate	Typical form & structure; multiple attachments @ base; leans S.
116	Rec Ctr.	Coast live oak	6	Yes	4	Moderate	Narrow & upright form; codominant trunks @ 20'.
117	Rec Ctr.	Elderberry	6,6,5,3	No	3	Low	Multiple attachments @ base; leans S.
118	Rec Ctr.	Coast live oak	12	Yes	4	Moderate	Multiple attachments @ 6'; dense canopy.
119	Rec Ctr.	Elderberry	12,8,8,8,6,5	No	3	Low	Big shrub; multiple attachments @ base; topped for line clearance.
120	Rec Ctr.	Calif. black walnut	9,7	No	2	Low	Poor form & structure.
121	Rec Ctr.	Lombardy poplar	7,6,6,6,4,4	No	2	Low	Topped to 12'.
122	Rec Ctr.	Lombardy poplar	12,9,8,7,7,5, 5,3	No	2	Low	Topped to 12'.
123	Rec Ctr.	Valley oak	11	No	3	Low	Topped for overhead lines; codominant trunks @ 7'; rangy form.
124	Rec Ctr.	Cottonwood	24	Yes	4	Moderate	Mid-bank; leans S. over creek; good form & structure; large decayed surface roots.
125	Rec Ctr.	Western sycamore	31	No	3	Moderate	Leans E.; under power lines.
126	Rec Ctr.	Canary Island pine	14	No	3	Moderate	Basal wound; sweeps upright from base; open canopy.
127	Rec Ctr.	Canary Island pine	24	Yes	4	Moderate	Typical form & structure; one-sided to S.; heavy lateral limbs; needs pruning to keep.
128	Rec Ctr.	Canary Island pine	28	Yes	5	High	Good form & structure.
129	Rec Ctr.	Canary Island pine	21	No	2	Low	Sweeps upright; lost central leader @ 16'; poor form & structure.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

HORT SCIENCE

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
130	Rec Ctr.	Canary Island pine	24	No	3	Low	Codominant trunks @ 10'; 1 stem vertical; 2nd sweeps upright on N.; attachment poor; needs prune/cable to keep.
131	Rec Ctr.	Canary Island pine	24	Yes	4	Moderate	Typical form & structure; partially corrected lean W.
132	Rec Ctr.	Coast redwood	38	Yes	5	High	Good form & structure.
133	Rec Ctr.	Coast redwood	35	Yes	4	Moderate	Good form; thin canopy.
134	Rec Ctr.	Canary Island pine	18	Yes	5	High	Good form & structure.
135	Rec Ctr.	Canary Island pine	28	Yes	5	High	Good form & structure.
136	Rec Ctr.	Canary Island pine	16	Yes	5	High	Good form & structure.
137	Rec Ctr.	Canary Island pine	20	No	3	Low	Topped on E.; dense canopy away from lines.
138	Rec Ctr.	Canary Island pine	18	No	2	Low	Topped; poor form & structure.
139	Rec Ctr.	Calif. black walnut	11	No	3	Low	Rangy form; no vigor.
140	Rec Ctr.	Coast live oak	5	No	3	Low	Crook @ 6'; suppressed; lost central leader.
141	Rec Ctr.	Western sycamore	14	No	3	Moderate	Crook @ 10'; then narrow & upright form.
142	Rec Ctr.	Willow	8,7,6,6,5,5	No	2	Low	Multiple attachments @ base; stems vertical to horizontal in orientation; several failures.
143	Rec Ctr.	Western sycamore	7	No	3	Moderate	Narrow & upright form; @ base of willow.
144	Rec Ctr.	Coast live oak	8	Yes	4	Moderate	At base of #145; narrow & upright form.
145	Rec Ctr.	Western sycamore	18	Yes	5	High	Good form & structure.
146	Rec Ctr.	Calif. black walnut	13	No	3	Low	Rangy form; thin canopy.
147	Rec Ctr.	Canary Island pine	23	Yes	5	High	Good form & structure; side-trimmed on
148	Rec Ctr.	Canary Island pine	22	Yes	5	High	Good form & structure; side-trimmed on

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

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149	Rec Ctr.	Calif. black walnut	6	No	3	Low	Bowed E.; poor form.
150	Rec Ctr.	Coast live oak	10	Yes	4	Moderate	Narrow & upright form.
151	Rec Ctr.	Coast live oak	13,8	No	3	Low	Codominant trunks @ 3' & 6'; flat rangy form.
152	Rec Ctr.	Coast live oak	16,13	No	3	Moderate	Codominant trunks @ 3' & 5'; several vertical branches; high crown.
153	Rec Ctr.	Willow	7,7,6,4	No	2	Low	Multiple attachments @ base; leans S.; poor form.
154	Rec Ctr.	Coast live oak	9	No	3	Moderate	Narrow & upright form; crowded.
155	Rec Ctr.	Coast live oak	12	Yes	4	Moderate	One-sided.to W.; perform *root collar exam* to keep; possible girdling root on N.
156	Rec Ctr.	Coast live oak	10	Yes	4	Moderate	One-sided to W.
157	Rec Ctr.	Coast live oak	12	Yes	5	High	Good young tree.
158	Rec Ctr.	Coast live oak	7	No	3	Low	Codominant trunks @ 4'; suppressed.
159	Rec Ctr.	Valley oak	7	No	3	Low	Rangy form.
160	Rec Ctr.	Coast live oak	65	Yes	5	High	Huge tree; codominant trunks @ 5' & 12'; heavy lateral limb to S; dense canopy.
161	Rec Ctr.	Coast live oak	15	Yes	4	Moderate	Topped for overhead lines; otherwise good.
162	Rec Ctr.	Coast live oak	19	Yes	4	Moderate	Topped for overhead lines; otherwise good; codominant trunks @ 5' & 8'.
163	Rec Ctr.	White alder	17	No	2	Low	Dying.
164	Rec Ctr.	White alder	15	No	2	Low	Dying.
165	Rec Ctr.	Callery pear	10	No	4	Moderate	Typical form & structure; surface roots; multiple attachments @ 6'.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

HORT SCIENCE

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
166	Rec Ctr.	Callery pear	10	No	4	Moderate	Typical form & structure; surface roots; multiple attachments @ 6'.
167	Rec Ctr.	Callery pear	11	Yes	4	Moderate	Typical form & structure; surface roots; multiple attachments @ 6'.
168	Rec Ctr.	Callery pear	10	No	4	Moderate	Typical form & structure; surface roots; multiple attachments @ 6'.
169	Rec Ctr.	Callery pear	11	Yes	4	Moderate	Typical form & structure; surface roots; multiple attachments @ 6'.
170	Rec Ctr.	Callery pear	12	Yes	4	Moderate	Typical form & structure; surface roots; multiple attachments @ 6'.
171	Rec Ctr.	Crape myrtle	7	No	5	High	Good form & structure.
172	Rec Ctr.	Crape myrtle	7	No	5	High	Good form & structure.
173	Rec Ctr.	Callery pear	11	Yes	4	Moderate	Typical form & structure; multiple attachments @ 6'; one-sided to W.
174	Rec Ctr.	Jap. maple	8,5	No	2	Low	Codominant trunks @ 3' with decay near attachment; multiple attachments @ 4'.
175	Rec Ctr.	Jap. maple	7,6,4	No	3	Low	Multiple attachments @ 4'; bleeding from trunk wound.
176	Rec Ctr.	Tuliptree	6	No	3	Low	Lost central leader; parking lot planter.
177	Rec Ctr.	Tuliptree	5	No	2	Low	Poor form; no vigor; parking lot planter.
178	Rec Ctr.	Tuliptree	7	No	2	Low	Poor form; no vigor; parking lot planter.
179	Rec Ctr.	Tuliptree	6	No	2	Low	Poor form; no vigor; parking lot planter.
180	Rec Ctr.	Tuliptree	7	No	2	Low	Poor form; no vigor; parking lot planter.
181	Rec Ctr.	Tuliptree	5	No	2	Low	Poor form; no vigor; parking lot planter.
182	Parking	Coast redwood	24	No	3	Low	Good form; thin canopy.
183	Parking	Coast redwood	32	Yes	4	Moderate	Good form; thin canopy.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
184	Parking	Coast redwood	33	Yes	4	Moderate	Good form; thin canopy; one-sided to N.
185	Parking	Coast redwood	28	Yes	4	Moderate	Good form; thin canopy; one-sided to S.
186	Parking	Coast redwood	35	Yes	4	Moderate	Good form; thin canopy.
187	Parking	Coast redwood	33	Yes	4	Moderate	Good form; thin canopy; large base.
188	Parking	Coast redwood	41	No	3	Moderate	Good form; very thin canopy.
189	Parking	Coast redwood	31	Yes	4	Moderate	Good form; thin canopy; sweeps vertical from base.
190	Parking	Coast redwood	39	Yes	4	Moderate	Good form; thin canopy; codominant trunks @ 6' & hic.
191	Parking	Coast redwood	31	No	3	Low	Good form; very thin canopy.
192	Parking	Coast redwood	28	No	3	Low	Good form; very thin canopy.
193	Parking	Coast redwood	31	No	2	Low	Good form; very thin canopy.
194	Parking	Coast redwood	34	No	3	Low	Good form; very thin canopy.
195	Parking	Coast redwood	34	Yes	4	Moderate	Good form; thin canopy.
196	Parking	Coast redwood	40	No	3	Low	Good form; very thin canopy.
197	Parking	Coast redwood	20	No	2	Low	Good form; very thin canopy with ext. dead foliage.
198	Parking	Evergreen ash	28	No	3	Low	One-sided to NW.; scaffolds bowed flat.
199	Parking	Evergreen ash	27	No	3	Low	One-sided to W.; codominant trunk failure @ 3' on E.
200	Parking	Coast redwood	10	No	2	Low	Dying.
201	Parking	Evergreen ash	32	No	3	Low	One-sided to NW.; multiple attachments @ 12'.
202	Parking	Evergreen ash	25	No	2	Low	Suppressed on E. with poor form & structure.
203	Parking	Evergreen ash	27	No	3	Low	Crowded; crown a small wedge to SW.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
204	Parking	Coast redwood	23	No	2	Low	Dying.
205	Parking	Coast redwood	39	No	3	Low	Good form; one-sided to E.; thin canopy.
206	Parking	Coast redwood	20	No	3	Low	Good form; one-sided to E.; thin canopy.
207	Parking	Coast redwood	21	No	1	Low	All but dead.
208	Parking	Evergreen ash	30	No	3	Low	One-sided to W.; pavement lifted.
209	Parking	Evergreen ash	22	Yes	4	Moderate	Typical form & structure; multiple attachments @ 8'; pavement lifted.
210	Parking	Evergreen ash	39	Yes	4	Moderate	Typical form & structure; multiple attachments @ 8'; ext. pavement displacement.
211	Parking	Carolina cherry	6	No	2	Low	Off-site; poor form & structure; canopy hangs over fence.
212	Parking	Carolina cherry	12	No	2	Low	Off-site; poor form & structure; canopy hangs over fence.
213	Parking	Carolina cherry	8	No	2	Low	Off-site; poor form & structure; canopy hangs over fence.
214	Parking	Tuliptree	13	No	2	Low	Good form; very thin canopy; twig dieback throughout.
215	Parking	Coast redwood	35	No	2	Low	Very thin canopy with ext. twig dieback.
216	Parking	Coast redwood	35	Yes	4	Moderate	Good form; thin canopy.
217	Parking	Silver maple	25	Yes	4	Moderate	Off-site; no tag; 8' from fence; codominant trunks @ 10'; canopy extends over fence.
218	Parking	Silver maple	28	No	3	Low	Off-site; no tag; 6' from fence; one-sided to S.; multiple attachments @ 3' to 5'; thin canopy.
219	Parking	Coast redwood	24	No	3	Low	Good form; very thin canopy.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
220	Parking	Coast redwood	35	Yes	4	Moderate	Good form; thin canopy.
221	Parking	Coast redwood	34	Yes	4	Moderate	Good form; thin canopy.
222	Parking	Coast redwood	33	No	3	Low	Sharp sweep upright from base; then side-trimmed; lost central leader @ top.
223	Parking	Coast redwood	10	No	2	Low	Poor form & structure; topped.
224	Parking	Coast redwood	35	Yes	4	Moderate	Good form; thin canopy.
225	Parking	Coast redwood	22	No	3	Low	Topped; okay otherwise.
226	Parking	Coast redwood	19	No	2	Low	Good form; very thin canopy.
227	Parking	Coast redwood	36	Yes	4	Moderate	Good form; thin canopy.
228	Parking	Coast redwood	27	No	3	Low	Good form; very thin canopy.
229	Parking	Coast redwood	22	No	3	Moderate	Good form; thin canopy.
230	Parking	Coast redwood	33	No	2	Low	Good form; dying.
231	Parking	Coast redwood	38	Yes	4	Moderate	Good form; thin canopy.
232	Parking	Coast redwood	24	Yes	4	Moderate	Good form; thin canopy.
233	Parking	Coast redwood	35	Yes	4	Moderate	Good form; thin canopy.
234	Parking	Coast redwood	20	Yes	4	Moderate	Parking lot planter; good form; thin canopy.
235	Parking	Coast redwood	27	Yes	4	Moderate	Parking lot planter; good form; thin canopy.
236	Parking	Tuliptree	9	No	2	Low	Parking lot planter; dying; okay form.
237	Parking	Tuliptree	16	No	3	Low	Parking lot planter; codominant trunks @ 8'; rangy form; twig dieback.
238	Parking	Tuliptree	10	No	2	Low	Parking lot planter; poor form & structure;
239	Parking	Tuliptree	7	No	2	Low	Parking lot planter; poor form & structure;
240	Parking	Tuliptree	7	No	2	Low	Parking lot planter; large trunk wound; just poor.

Tree Assessment

International Swim Center
Santa Clara CA
September 2015

TREE No.	LOCATION	SPECIES	TRUNK DIAMETER (in.)	PROTECTED TREE?	CONDITION 1=poor 5=excell.	SUITABILITY for PRESERVATION	COMMENTS
241	Parking	Coast redwood	33	Yes	4	Moderate	Parking lot planter; good form; thin canopy.
242	Parking	Tuliptree	6	No	2	Low	Parking lot planter; okay form; dying.
243	Parking	Coast redwood	33	Yes	4	Moderate	Parking lot planter; good form; thin canopy, upper canopy in particular.
244	Parking	Coast redwood	17	No	3	Low	Parking lot planter; one-sided to S.; thin canopy.
245	Parking	Coast redwood	16	Yes	4	Moderate	Parking lot planter; good form; thin canopy.
246	Parking	Tuliptree	10	No	2	Low	Parking lot planter; poor form & structure; dying.
247	Parking	Tuliptree	8	No	2	Low	Parking lot planter; poor form & structure; dying.
248	Parking	Tuliptree	11	No	2	Low	Parking lot planter; poor form & structure; dying; no basal flare.
249	Parking	Tuliptree	10	No	2	Low	Parking lot planter; poor form & structure; dying; no basal flare.

Tree Assessment Map

International Swim Center
Recreation Area
Santa Clara, CA

Prepared for:
David J. Powers & Associates
San Jose, CA

September 2015

No Scale

Notes:

Base map provided by:
ESRI

Numbered tree locations are approximate.

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Tree Assessment Map

International Swim Center
St. Justin School Parking Area
Santa Clara, CA

Prepared for:
David J. Powers & Associates
San Jose, CA

September 2015

No Scale

Notes:

Base map provided by:
ESRI

Numbered tree locations are approximate.

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