

APPENDIX D

Tree Inventory

December 2, 2015

Scott Johnson, Associate Planner
City of Sacramento, Community Development Department
300 Richards Boulevard, Third Floor
Sacramento, CA 95811

Subject: Tree Inventory for the Yamanee Mixed-Use Project, Sacramento, Sacramento County, California

Dear Mr. Johnson:

This letter is to inform you of AECOM's findings for a tree inventory conducted at the Yamanee project site at 25th Street and J Street in Sacramento, California on November 17, 2015.

METHODS

ISA Certified Arborists Kristin Asmus (WE-6139A) and Sarah Bennett (WE-7726A) conducted the tree inventory on November 17, 2015. In accordance with the Sacramento City Code Chapters 12.56 and 12.60 (Sacramento 2015), all trees in the 0.44-acre study area with a diameter greater than 6.5 inches at 4.5 feet above natural grade (diameter at breast height, DBH) were identified to species, the DBH measured and recorded, and the location recorded on a map.

Inventoried trees were assigned a unique identification (ID) number and their location mapped. Tree locations were recorded digitally using a global positioning system (GPS) data logger (Trimble Geo XH). GPS data were recorded in North American Datum 83 (NAD 83). The GPS was used to collect data points at the physical locations of trees. Tree canopies may interfere with accurate data collection, therefore the data points were rectified in ArcGIS post processing. While the majority of points were rectified, not every point can be feasibly verified at submeter accuracy. An engineering survey is recommended for use of tree location data for plan drawings or other planning and construction supporting documents, as well as depiction of accurate canopy drip lines potentially required for establishing a tree protection zone (TPZ).

All inventoried trees were visually assessed from the ground and assigned health and structure ratings on a scale of 0 to 5 where 0 is dead standing, 1 declining/very poor, 2 poor, 3 fair, 4 good, and 5, excellent. Health (the overall vigor and vitality) was based on several factors, including crown density, extent of crown dieback (if present), leaf color and size, presence of epicormic growth, (sprouts or shoots emerging from the tree trunk or branches, an indicator of stress), and evidence of active callusing (wound healing). Structural stability was based on several factors including co-dominant trunks, included bark, abnormal lean, lopsided canopy, and presence of decay or conks (visible fruiting body of a fungus). Any areas of structural weakness such as decay, cracks, poor crown formation or branch structure, and signs of disease were also noted.

RESULTS

A total of 11 trees were inventoried, representing 8 species, all of which are nonnative species (Table 1). Attachment A contains the complete data set arranged by ID number (Table A-1). Exhibit A-1 (Attachment B) provides location information by ID numbers for each tree contained in Attachment A. All the tree resources on site are mature and are in fair to good health and all but one have fair to good structure. None of the trees meet the minimum size requirement to be considered as Heritage Trees.

| Species | Common Name | Count |
|------------------------------|-------------------|-------|
| <i>Celtis occidentalis</i> | common hackberry | 1 |
| <i>Ginkgo biloba</i> | gingko | 2 |
| <i>Lagerstroemia indica</i> | crape myrtle | 1 |
| <i>Magnolia grandiflora</i> | Southern magnolia | 1 |
| <i>Phoenix canariensis</i> | date palm | 2 |
| <i>Pistacia chinensis</i> | chinese pistache | 1 |
| <i>Platanus x acerifolia</i> | London plane tree | 1 |
| <i>Quercus palustris</i> | pin oak | 2 |
| Total | | 11 |

Source: AECOM 2015

SUITABILITY FOR PRESERVATION

Trees that are preserved on sites undergoing development or rehabilitation must be able to survive construction impacts, adapt to a new environment, and perform well in the landscape. Prior to evaluating any impacts from proposed development it is necessary to consider the plant resource itself and its ability to function well over an extended period of time. Each tree was rated for suitability for preservation based upon its species, approximate age, health, structural integrity, and ability to safely coexist within a development environment. Suitability was rated as “good”, “moderate”, or “poor” (Attachment A).

Trees rated “good” have good health and structural stability, and the potential for longevity at the site. Trees rated “moderate” have fair health and/or structural defects that may be abated with management measures. Trees in the “moderate” category may require more management and may have shorter life spans than those rated “good”. Trees rated “poor” have poor health or significant structural defects that cannot be abated with treatment. Trees in this category can be expected to decline regardless of management practices and may be good targets for replacement.

All of the trees on site were included in the inventory and are mature trees. Of the 11 trees, 5 are rated good suitability for preservation, 3 are rated moderate, and 3 are rated poor. Trees with “moderate” and “good” suitability ratings can be considered for preservation depending on the intensity of proposed site changes and the species tolerance to impacts. Retention of trees with “poor” suitability for preservation generally cannot be recommended in areas where people or property may be in close proximity and tree failure poses a significant risk.

CONCLUSION

During the project design phase the suitability ratings and other data collected in this inventory may be used to help inform design decisions. Once the design has been finalized, grading and development plans can be used to evaluate project impacts to individual trees and recommendations for preservation or removal can be made in conjunction with data collected during this inventory. At that time a tree preservation plan should be prepared for any trees that are to be retained on site. The tree preservation plan should include any general mitigation measures determined necessary during

the environmental review process for the project and any mitigation measures specific to individual trees to be preserved during project implementation.

REFERENCES

Sacramento, City of. 2015. Sacramento City Code. Chapter 12.56 Trees Generally and Chapter 12.64 Heritage Trees. Accessed November 2015. Available: <http://portal.cityofsacramento.org/Public-Works/Maintenance-Services/Trees/Permits-Ordinances>

Sincerely,

A handwritten signature in blue ink, appearing to read "Krisin Asmus", with a long horizontal flourish extending to the right.

Krisin Asmus
ISA Certified Arborist WE-6139A

Attachments

A Tree Inventory Data

ATTACHMENT A

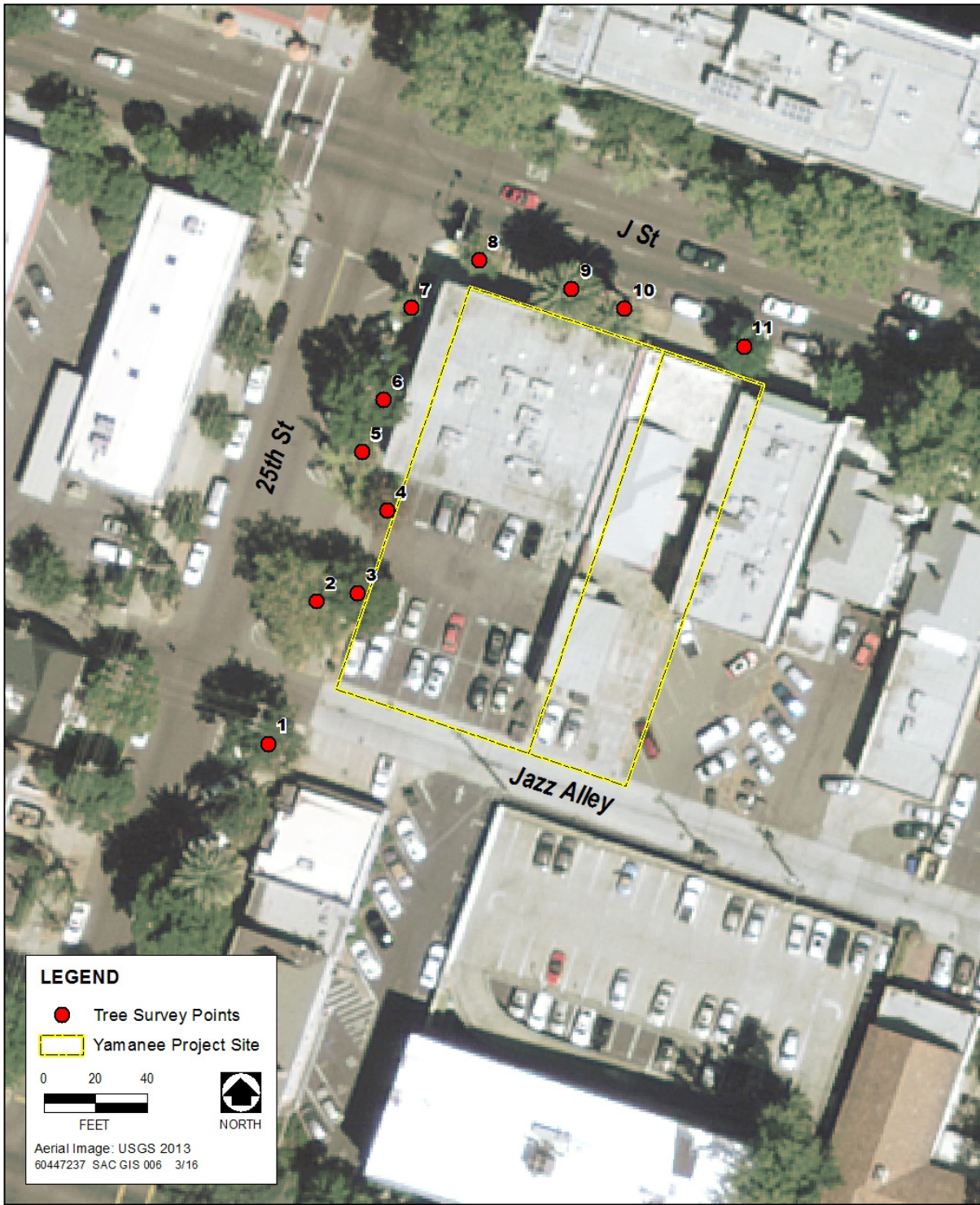
Tree Inventory Data

| Table A-1. Tree Inventory Data | | | | | | | |
|--------------------------------|------------------------------|-------------------|------|---------------------|------------------------|------------------------------|--|
| ID No. | Species | Common Name | DBH | Health ¹ | Structure ¹ | Suitability for Preservation | Comments |
| 1 | <i>Magnolia grandiflora</i> | Southern magnolia | 20.5 | 3 | 3 | Moderate | Circling and exposed roots in bed; well-healed scars on trunk; some water sprouts; tree conflicts with utility pole, affecting canopy shape; canopy color good; a little dieback of small branch tips; main branch with included bark and weak attachment. |
| 2 | <i>Platanus x acerifolia</i> | London plane tree | 15.1 | 4 | 4 | Good | Space conflict with adjacent tree leading to slightly lopsided canopy, but overall very good condition for a street tree. |
| 3 | <i>Celtis occidentalis</i> | common hackberry | 14.0 | 4 | 3 | Moderate | A couple spots of small branch dieback; typical crowded branch attachments; trunk is covered in ivy. |
| 4 | <i>Lagerstroemia indica</i> | crape myrtle | 10.3 | 4 | 4 | Good | Covered in ivy, even into lower canopy; a few broken branches but easy to clean-up. |
| 5 | <i>Ginkgo biloba</i> | ginkgo | 10.2 | 3 | 2 | Poor | Very lopsided, main trunk is at 45 degree angle with compensating branches rounding out canopy; minimal branching limits a full canopy. |
| 6 | <i>Quercus palustris</i> | pin oak | 15.1 | 3 | 3 | Poor | Exposed roots in bed, some small roots circling; some kind of bark damage on base of trunk, small fungus in a crack and spots with blank detritus (dried sap maybe?); some small branch dieback but color and density of canopy are good. |
| 7 | <i>Ginkgo biloba</i> | ginkgo | 11.4 | 4 | 4 | Moderate | Puffball at base, not a common wood decay fungus; few mid-size branch pruning wounds on trunk, healing; 2 mid-size (3 in) water sprouts on trunk with very vertical attachment; canopy color and density are good. |
| 8 | <i>Pistacia chinensis</i> | chinese pistache | 9.2 | 3 | 3 | Poor | Large limbs removed, lots of watersprouts present; poor canopy structure, lopsided; leaves are healthy. |
| 9 | <i>Phoenix canariensis</i> | date palm | 29.6 | 4 | 4 | Good | |
| 10 | <i>Phoenix canariensis</i> | date palm | 25.9 | 4 | 4 | Good | |
| 11 | <i>Quercus palustris</i> | pin oak | 9.5 | 4 | 4 | Good | Beautiful healthy street tree. |

Notes:
¹ 0 = dead standing, 1 = declining/very poor, 2 = poor, 3 = fair, 4 = good, and 5 = excellent
Source: AECOM 2015

ATTACHMENT B

Tree Inventory Map



Source: AECOM 2015

Exhibit B-1. Tree Inventory Map

