TREE
ASSOCIATES

October 27, 2021

Joshua Garner
Liberty Towers Church
5132 Elkhorn Boulevard
Sacramento, CA 95842

RE: Arborist Report, Liberty Towers Church Project

Joshua,

Attached is the Arborist Report you requested. I appreciate the opportunity to work with you. Please do not hesitate to contact me should you have questions regarding this report.

Sincerely,

John M. Lichter, M.S.
ASCA Registered Consulting Arborist #375
ISA Certified Arborist #863
ISA Qualified Tree Risk Assessor
ASCA Qualified Tree and Plant Appraiser



ARBORIST REPORT
LIBERTY TOWERS CHURCH PROJECT
SACRAMENTO, CALIFORNIA

Prepared for
LIBERTY TOWERS CHURCH
SACRAMENTO, CALIFORNIA

Prepared by
TREE ASSOCIATES
John M. Lichter, M.S.
ASCA Registered Consulting Arborist #375
ISA Certified Arborist #863
ISA Qualified Tree Risk Assessor
ASCA Qualified Tree and Plant Appraiser

October 27, 2021

©Copyright TREE ASSOCIATES, INC. 2021

Assignment

Joshua Garner, with Liberty Towers Church in Sacramento requested that Tree Associates Inc. prepare an Arborist Report concerning trees located on the Liberty Towers Church property bounded by Elkhorn Boulevard, Hillsdale Boulevard and Andrea Drive (see attached tree location map). This Arborist Report includes a tree evaluation and general preservation guidelines for these trees.

Limits of the Assignment

- This evaluation reports on the condition of the subject trees at the time of my site visit. Tree conditions change over time and, as they change, this report may need to be revised.
- This evaluation was based on a visual inspection from the ground.
- The results of the evaluations for trees for which more detailed examination and/or testing and is recommended (including aerial inspection, decay mapping and/or root examination) are provisional, pending the outcome of these studies.

Tree Evaluation

On October 11 and October 19, 2021, I identified, tagged in the field, measured, and evaluated all trees with a diameter of 3 inches or larger on site. For each of these trees, the following data were collected.

- Tree # – corresponds to a round aluminum tag affixed to each tree. I used tags numbered 25 through 92. I lost tag 36, so there is no tree on the map or in the table with that number. In addition, I added tree #49a which was immediately adjacent to tree 49. Tree 49a is included in the tree location map but it does not have a tree tag affixed to it.
- Species – common and scientific name of the tree.
- Trunk Diameter (Dia.) – the diameter of the tree (in inches) at 4.5' above grade, unless measurement at another location between 1 and 5 feet above grade provided a more accurate reflection of the size of the tree.
- Maximum Dripline Radius (Max Drip Line) – the approximate maximum distance from the trunk to the edge of the tree's canopy, in feet.
- Tree Protection Zone (TPZ) – the radius, in feet, of a circular tree protection zone (centered at the trunk) recommended by the author (typically one foot per inch trunk diameter). For trees with more than one trunk, I first determined the sum of the diameter (in inches) of the largest stem and half of the diameter of the smaller stems. Then I used one foot per inch of this sum as the TPZ.
- Comments – comments regarding tree and landscape features that influenced health and structural ratings.
- Health – rating between poor and good considering the overall health of the tree. A rating of fair-good or good indicates no significant health concerns.
- Structure – rating between poor and good considering the overall structure of the tree. A rating of fair-good or good indicates no significant structural concerns.
- Recommendations – recommendations for tree work or treatments to improve tree structure or health or for further evaluation, where necessary. Removal recommendations are indicated in red.

Summary of Tree Evaluation

Exhibit 1, entitled "Liberty Towers Tree Evaluation Data" summarizes the results of the tree evaluation. The approximate locations of the trees can be found attached on a copy of an existing conditions exhibit created by TSD Engineering.

Project Location Description, Number of Trees, Species Makeup, Size and Age:
The project site included a church, storage containers, a baseball diamond, parking lot, turf and open areas. Roads bounded three sides of the property and a school was southeast and adjacent to the property.

There were 68 trees on the property. Most of the trees were planted and several of them appear to be volunteer trees (trees that weren't planted and grew on their own).

There were a total of 19 different tree species represented on site. London plane and callery pear accounted for over half of the trees (52% of the total). Chinese pistache represented 14% of the tree population. Each of the other sixteen species represented less than 5% of the trees on the property (Figure 1).

I estimated that the oldest trees were 25 years old except for three trees - two Aleppo pines (#31,32) and one blue oak (#56). These trees were likely not much older (35 years old, estimated).

The largest trees were the two Aleppo pines mentioned above which had trunks measuring 26 and 34 inches in diameter.

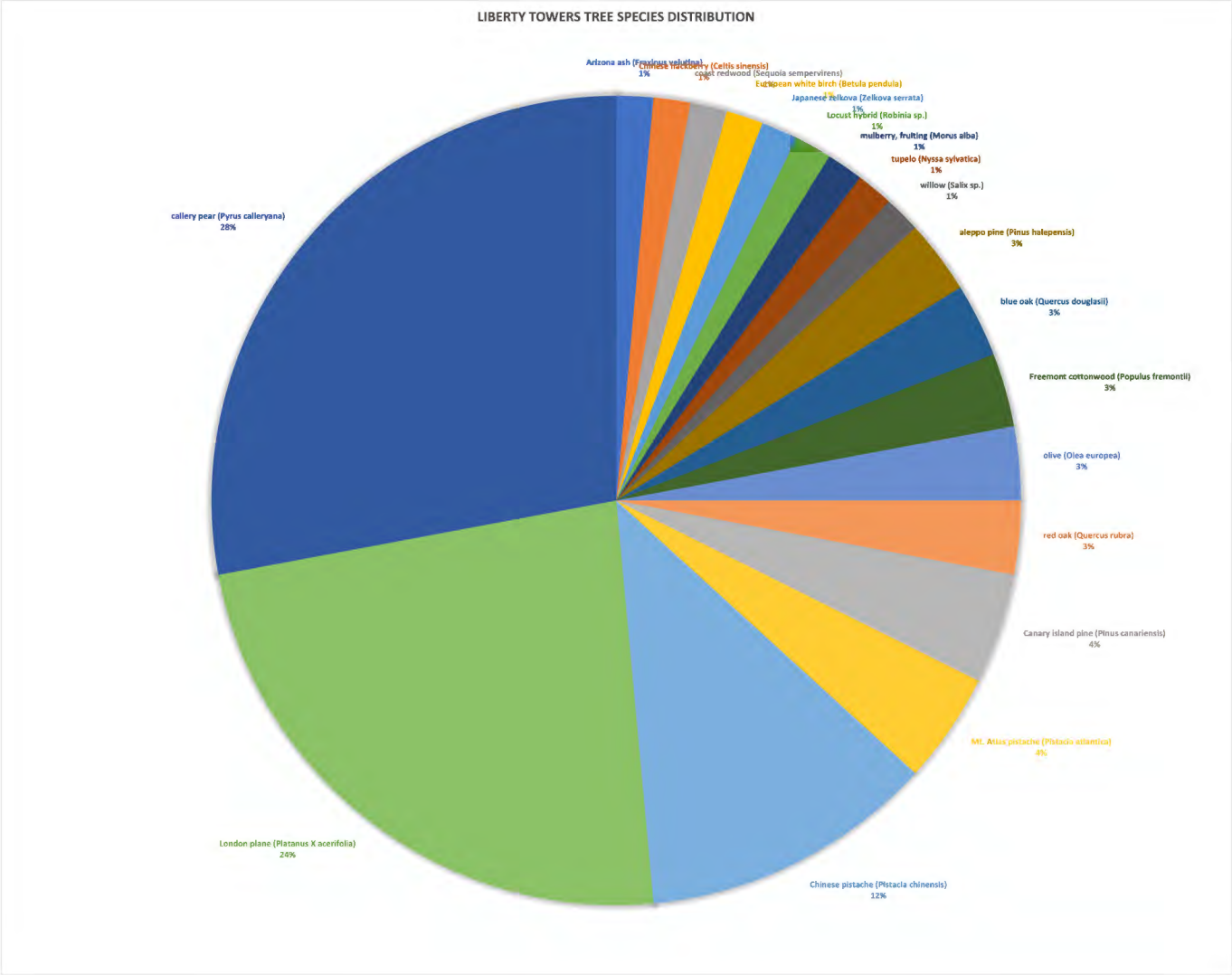


Figure 1. Liberty Towers tree species distribution chart.

Tree Health:

Seventy five percent (51) of the trees were in fair-good or good health with no significant health concerns. Twenty-two percent (15) of the trees were in fair condition and 2 percent (2) of the trees were in poor or poor-fair health (Figure 2).

Tree Structure

Eight of the trees (12% of the total) had fair-good structure. Thirty-nine of the trees (57% of the total) had fair structure. The remaining 31 percent (21 trees) had poor-fair or poor structure (Figure 3).

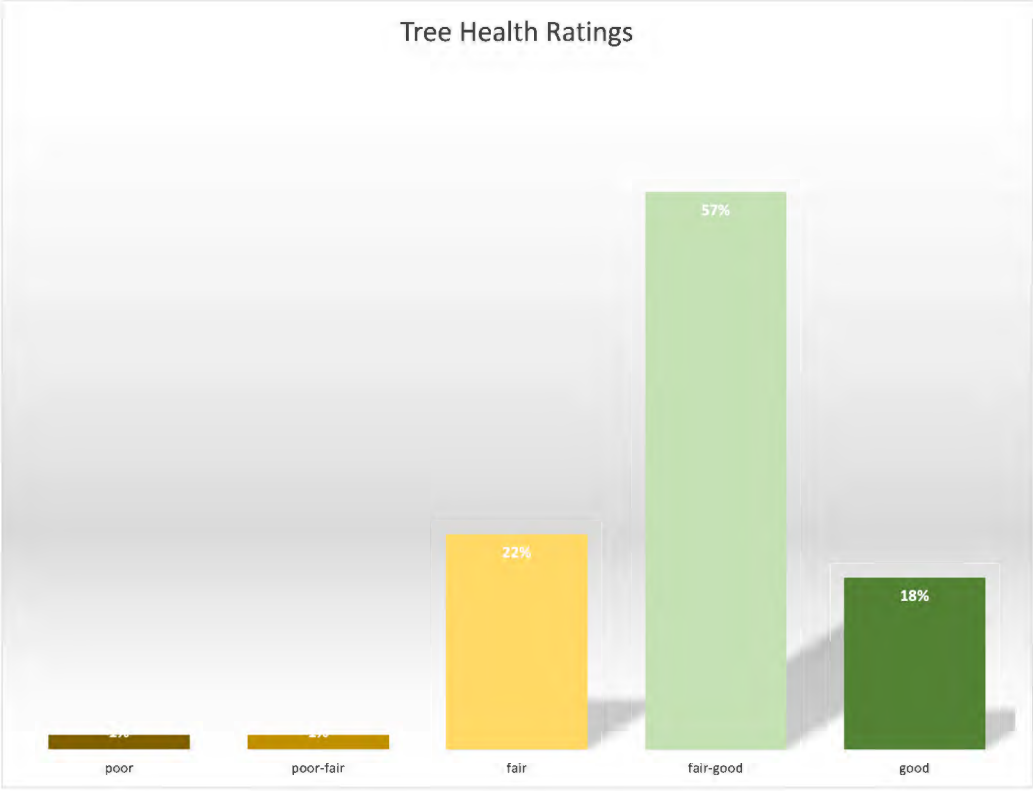


Figure 2. Tree health ratings.

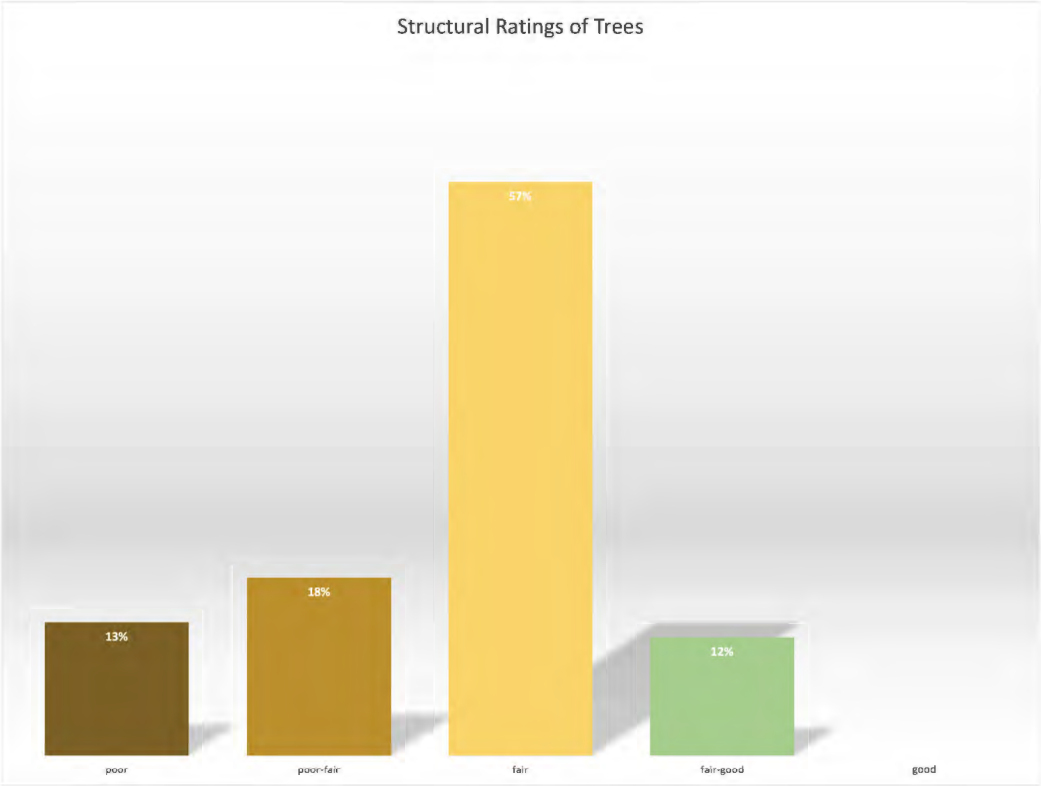


Figure 3. Structural ratings of trees.

Removal Recommendations, Recommendations to Improve Tree Condition

I recommended that 12 of the trees be removed due to their poor health and/or structure and a lack of adequate remedies to improve their condition. Recommendations for tree work and or other treatments are given for individual trees in the attached tree evaluation table. All tree work should be performed by or under the direct supervision of an International Society of Arboriculture (ISA) Certified Arborist or Tree Worker.

It appeared that some of the trees were suffering from drought stress. Some did not have an irrigation system. I recommend that all the trees to be preserved have an irrigation system capable of uniformly wetting the soil under the tree's canopy (considering the future growth of the tree).

I recommend irrigating the trees weekly between the late spring and early fall. The system should be run long enough to wet the soil to at least 18 inches below grade.

Sacramento County Code Comments:

The Sacramento County Code defines a tree as follows and indicates the activities prohibited without a tree permit or unless authorized:

> "Tree: As used in this chapter, a "tree" shall mean any living native oak tree having at least one trunk of six inches or more in diameter measured four and one-half feet above the ground, or a multi-trunked native oak tree having an aggregate diameter of ten inches or more, measured four and one-half feet above the ground (dbh).
>
> No person shall trench, grade or fill within the dripline of any tree or destroy, kill or remove any tree as defined, in the designated urban area of the unincorporated area of Sacramento County, on any property, public or private, without a tree permit, or unless authorized as a condition of a discretionary project approval by the Board of Supervisors, County Planning Commission, Zoning Board of Appeals, the Zoning Administrator or the Subdivision Review Committee. (SCC 1400 § 23, 2008; SCC 480 § 1, 1981.)"

There was only one tree, #56, which meets the definition of a tree according to the code. Tree #56 is a blue oak with a 9-inch diameter live trunk (it had two trunks, but one died). I have recommended that this tree be removed as it is likely to fail and it is situated over a sidewalk and roadway.

While this was the only tree fitting this definition, the County's "Arborist Report Submittal Requirements" indicates that the following trees should be inventoried:

- all native oak and specified no-oak native trees of 4-inch diameter or larger;
- all on-site trees and all off-site trees that have canopies overhanging the project site.

A tree location exhibit, which may be prepared by the Project Engineer, is also required which includes the location, trunk size, species and dripline of all the existing trees (4" diameter or larger) on site. Further details concerning the tree location exhibit are provided in the ordinance.

Tree Preservation Guidelines

Following the guidelines presented below for all trees to be preserved will reduce tree impacts from the proposed construction.

- Tree preservation measures should be indicated on construction plans.
- Indicate surveyed trunk locations and tree protection zones (TPZ's) as described in the attached table on all construction plans for trees to be preserved. Note, where infrastructure is located within protection zones, indicate modified tree protection zones (MTPZ's) and fencing as close to infrastructure as possible (minimize overbuild).
- Engage the Consulting Arborist to prepare a tree impact assessment after construction plans are drafted. The tree impact assessment should be revised as construction plans are modified.
- Conduct a meeting with the project manager and design team to review the tree impact assessment and discuss design modifications to mitigate potential development impacts to trees where possible.
- Conduct a meeting to discuss tree preservation guidelines with the Consulting Arborist and all contractors, subcontractors and project managers prior to the initiation of demolition and construction.
- Any pruning required for construction or recommended in this report should be performed by an ISA Certified Arborist or Tree Worker. Pruning for necessary clearance should be the minimum required for the project performed prior to demolition by an ISA Certified Arborist.
- Prior to any grubbing, demolition or construction activity, identify (tagged) trees to be preserved and install tree protection fencing as indicated on the construction plans.
- Tree protection fences should be made of chain link with posts either sunk into the ground or placed within concrete blocks. Install two signs per tree on fences that indicate that the fences are not to be moved until construction is complete except under Arborist supervision.
- Avoid grading, compaction, trenching, rototilling, vehicle traffic, material storage, spoil, waste or washout or any other disturbance within TPZ's/MTPZ's.
- Any work that is to occur within the protection zones of the trees should be monitored by the Consulting Arborist.
- Prior to trenching or grading within the protection zone of trees, carefully excavate, expose and mark roots >/= 2" diameter and preserve if possible or cut cleanly with a sharp saw under Arborist supervision.
- If roots >/= 2 inches or limbs larger than 3 inches in diameter are cut or damaged during construction, contact Consulting Arborist as soon as possible to inspect and recommend appropriate remedial treatments.
- All trees to be preserved should be irrigated once every week during non-Winter months to uniformly wet the soil to a depth of at least 18 inches under and beyond their canopies.

Arborist Disclosure Statement

The following statement pertains to my work and this report.

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the Arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the Arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the Arborist. An Arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

Glossary[1]

Bow – the gradual curve of a branch or stem.

Callus – growth resulting from and found at the margin of wounds.

Canker – a localized area of dead tissue on a stem or branch, caused by fungal or bacterial organisms.

Central Leader – the main stem of the tree.

Chlorotic – yellow.

Codominant – equal in size and relative importance.

Crown – parts of the tree above the trunk.

Crown Clean – the removal of dead, dying, diseased, broken, and weakly attached branches and watersprouts from a tree's crown.

Decay – process of degradation of woody tissues by fungi and bacteria.

Dieback – death of shoots and branches, generally from tip to base.

Dropcrotch – the process of shortening trunks or limbs by pruning back to dominant lateral limbs.

End Weight – the concentration of foliage at the distal ends of branches.

Epicormic – shoots which result from adventitious or latent buds; often indicates poor vigor.

Included bark – pattern of development at branch junctions where bark is turned inward rather than pushed out.

Primary limb – limb attached directly to the trunk.

Reduction cut – shortening the length of a branch or stem by cutting it back to a lateral branch of at least one-third the diameter of the cut stem.

Root crown – area at the base of a tree where the roots and stem merge.

Secondary limb – limb attached directly to a primary limb.

Sound wood – undecayed wood.

Suppressed – trees which have been overtopped and whose crown development is restricted from above.

Target – people or property potentially affected by tree failure.

Topped – Pruned to reduce height by cutting large branches back to stubs.

Train – to prune a young tree to establish a strong structure.

Vigor – overall health.

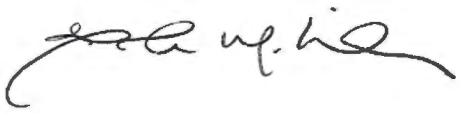
Watersprouts – vigorous, upright, epicormic shoots that grow from latent buds in older wood.

1 Definitions from author or Matheny and Clark, Evaluation of Hazard Trees in Urban Areas, 2nd Edition c 1994, ISA.

Certification of Performance

I, John M. Lichter, certify:

- That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and/or appraisal is stated in the attached report and the Terms and Conditions;
- That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;
- That the analysis, opinions and conclusions stated herein are my own, and are based on current scientific procedures and facts;
- That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events;
- That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;
- That no one provided significant professional assistance to the consultant, except as indicated within the report.



John M. Lichter, M.S.
ASCA Registered Consulting Arborist #375
ISA Certified Arborist #863
ISA Qualified Tree Risk Assessor
ASCA Qualified Tree and Plant Appraiser

ASSUMPTIONS AND LIMITING CONDITIONS: TREE ASSOCIATES, INC.

1. Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.

3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant/appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.

4. The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

5. Unless required by law otherwise, possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant/appraiser.

6. Unless required by law otherwise, neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior expressed written or verbal consent of the consultant/appraiser -- particularly as to value conclusions, identity of the consultant/appraiser, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant/appraiser as stated in his qualifications.

7. This report and any values expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.

8. Sketches, drawings, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise. The reproduction of any information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is for the express purpose or coordination and ease of reference only. Inclusion of said information on any drawings or other documents does not constitute a representation by John M. Lichter or TREE ASSOCIATES as to the sufficiency or accuracy of said information.

9. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

10. Loss or alteration of any part of this report invalidates the entire report.

Exhibit 1. **Liberty Towers Tree Evaluation Data** **To Accompany Tree Associates Report 10/27/21**

Tree #	Species	Dia. (in.)	Max Drip Line (ft.)	TPZ (ft.)	Comments	Health	Structure	Recommendations
25	callery pear (*Pyrus calleryana*)	9	9	9	no irrigation; low vigor; codominant trunks	fair	fair	irrigate.
26	callery pear (*Pyrus calleryana*)	9	11	9	no irrigation; low vigor	fair	fair-good	irrigate.
27	callery pear (*Pyrus calleryana*)	10	12	10	soil dry; slightly overextended primary limbs	fair-good	fair-good	irrigate.
28	London plane (*Platanus* X *acerifolia*)	10	21	10	overextended primary limbs; soil dry	fair-good	fair	use reduction cuts to remove 25% of the foliage of primary limbs > 1/3 trunk diameter at their attachment.
29	European white birch (*Betula pendula*)	7	11	7	severe lean; adjacent to walk; 20% of crown dead; low vigor; declining health	poor-fair	poor-fair	remove tree.
30	Arizona ash (*Fraxinus velutina*)	10	14	10	soil dry; overextended primary limbs; limb attachments with included bark	fair-good	poor-fair	use reduction cuts to remove 25% of the foliage of primary limbs > 1/3 trunk diameter at their attachment.
31	aleppo pine (*Pinus halepensis*)	34 @18"	28	32	three codominant trunks with included bark; overextended primary limbs; sequoia pitch moth	fair-good	poor-fair	use reduction cuts to remove 25% of the foliage of primary limbs > 1/3 trunk diameter at their attachment. select leader, drop crotch competing trunks or primary limbs. cable trunks.
32	aleppo pine (*Pinus halepensis*)	26	23	26	trunk lean; overextended primary limbs	fair-good	fair	use reduction cuts to remove 25% of the foliage of primary limbs > 1/3 trunk diameter at their attachment.

Exhibit 1. **Liberty Towers Tree Evaluation Data** **To Accompany Tree Associates Report 10/27/21**

Tree #	Species	Dia. (in.)	Max Drip Line (ft.)	TPZ (ft.)	Comments	Health	Structure	Recommendations
33	Mt. Atlas pistache (*Pistacia atlantica*)	9 @1'	8	9	adjacent to fence; codominant trunks with included bark	good	fair	select leader, drop crotch competing trunks or primary limbs.
34	Mt. Atlas pistache (*Pistacia atlantica*)	10 @1'	9	10	adjacent to fence; codominant trunks	good	fair	select leader, drop crotch competing trunks or primary limbs.
36	blue oak (*Quercus douglasii*)	5	12	5	limbs grafted back into trunk; no central leader; low vigor - typical for species	fair-good	fair	select leader, drop crotch competing trunks or primary limbs.
37	Freemont cottonwood (*Populus fremontii*)	7	13	7	codominant trunks	fair-good	fair	select leader, drop crotch competing trunks or primary limbs.
38	Freemont cottonwood (*Populus fremontii*)	18	20	18	large limb break; codominant trunks; no central leader	fair-good	fair	perform crown reduction with reduction cuts up to 5" diameter to remove 30% of the foliage/buds with special attention to limb over roadway. select leader, drop crotch competing trunks or primary limbs.
39	Mt. Atlas pistache (*Pistacia atlantica*)	3,3,2,1	8	6	multiple trunks from near base; poor structure; likelihood of limb failure will increase with time	fair-good	poor	remove tree.
40	callery pear (*Pyrus calleryana*)	15	21	15	codominant trunks with included bark; overextended primary limbs; mistletoe	good	fair	perform crown reduction with reduction cuts up to 3" diameter to remove 25% of the foliage/buds in the lower half of the crown.

Exhibit 1. **Liberty Towers Tree Evaluation Data** **To Accompany Tree Associates Report 10/27/21**

Tree #	Species	Dia. (in.)	Max Drip Line (ft.)	TPZ (ft.)	Comments	Health	Structure	Recommendations
41	callery pear (*Pyrus calleryana*)	14	22	14	codominant trunks with included bark; overextended primary limbs	fair-good	fair	perform crown reduction with reduction cuts up to 3" diameter to remove 25% of the foliage/buds in the lower half of the crown.
42	callery pear (*Pyrus calleryana*)	11	15	11	multiple trunks; slightly overextended primary limbs; mistletoe	fair-good	fair	perform crown reduction with reduction cuts up to 2" diameter to remove 25% of the foliage/buds in the lower half of the crown.
43	callery pear (*Pyrus calleryana*)	11	17	11	multiple trunks with included bark; mistletoe	fair-good	fair	perform crown reduction with reduction cuts up to 2" diameter to remove 25% of the foliage/buds in the lower half of the crown.
44	callery pear (*Pyrus calleryana*)	13	19	13	codominant trunks with included bark; overextended primary limbs; mistletoe	fair-good	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
45	London plane (*Platanus* X *acerifolia*)	10	20	10	codominant trunks; sycamore scale	fair-good	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
46	London plane (*Platanus* X *acerifolia*)	10	17	10	codominant trunks; sycamore scale	fair-good	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.

Exhibit 1. **Liberty Towers Tree Evaluation Data** **To Accompany Tree Associates Report 10/27/21**

Tree #	Species	Dia. (in.)	Max Drip Line (ft.)	TPZ (ft.)	Comments	Health	Structure	Recommendations
47	London plane (*Platanus* X *acerifolia*)	8	13	8	low vigor; twig dieback; sycamore scale	fair	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
48	mulberry, fruiting (*Morus alba*)	4.4,3 ,3,2	16	10	multiple trunks from base with included bark; likely stump sprouts	fair-good	poor	remove tree.
49	callery pear (*Pyrus calleryana*)	4,3,3 ,2,2	8	9	multiple trunks from base with included bark; immediately adjacent to tree 49a	fair-good	poor	remove tree.
49a	Japanese zelkova (*Zelkova serrata*)	2,2,2	11	4	immediately adjacent to tree 49; codominant trunks with included bark; volunteer	fair-good	poor	remove tree.
50	London plane (*Platanus* X *acerifolia*)	11	17	11	codominant trunks	fair-good	fair	select leader, drop crotch competing trunks and/or primary limbs.
51	callery pear (*Pyrus calleryana*)	3,3	7	5	two trunks from ground level	fair-good	poor	remove east trunk. select leader, drop crotch competing trunks and/or primary limbs.
52	callery pear (*Pyrus calleryana*)	4 @1'	7	4	multiple trunks	fair-good	poor-fair	select leader, drop crotch competing trunks or primary limbs.
53	London plane (*Platanus* X *acerifolia*)	8	17	8	unbalanced crown; 6' from tree 54; overextended primary limbs; slightly low vigor	fair-good	fair	use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.

Exhibit 1. **Liberty Towers Tree Evaluation Data** **To Accompany Tree Associates Report 10/27/21**

Tree #	Species	Dia. (in.)	Max Drip Line (ft.)	TPZ (ft.)	Comments	Health	Structure	Recommendations
54	willow (*Salix* sp.)	9,7,5,9,9,8	21	28	multiple trunks from base with included bark; probable trunk failure within 5 years; removal will benefit tree 53	good	poor	remove tree.
55	Chinese hackberry (*Celtis sinensis*)	9	22	9	aphids; slightly low vigor; codominant trunks	fair	fair	select leader, drop crotch competing trunks or primary limbs.
56	blue oak (*Quercus douglasii*)	9 (live stem)	14	9	main trunk died leaving very poorly attached trunk; large trunk wounds; failure likely over walk and street	fair-good	poor	remove tree.
57	callery pear (*Pyrus calleryana*)	12	15	12	codominant trunks	good	fair	use reduction cuts to remove 25% foliage of primary limbs with >1/3 trunk dia.
58	callery pear (*Pyrus calleryana*)	15	22	15	multiple trunks; limb attachments with included bark; overextended primary limbs; mistletoe	good	poor-fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
59	olive (*Olea europea*)	5,5	18	8	codominant trunks from near grade; overextended crown	good	fair	perform crown reduction with reduction cuts up to 3" to remove 30% of the foliage.
60	callery pear (*Pyrus calleryana*)	15	28	15	codominant trunks with included bark; grossly overextended primary limbs	good	poor-fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment and 35% for limb over walk.

Exhibit 1. **Liberty Towers Tree Evaluation Data** **To Accompany Tree Associates Report 10/27/21**

Tree #	Species	Dia. (in.)	Max Drip Line (ft.)	TPZ (ft.)	Comments	Health	Structure	Recommendations
61	callery pear (*Pyrus calleryana*)	5	13	5		fair-good	fair	select leader, drop crotch competing trunks or primary limbs.
62	London plane (*Platanus* X *acerifolia*)	9	15	9	low vigor; twig dieback; sycamore scale	fair	fair-good	
63	London plane (*Platanus* X *acerifolia*)	8	17	8	low vigor; twig dieback; sycamore scale	fair	fair-good	
64	London plane (*Platanus* X *acerifolia*)	5	10	5	low vigor; watersprouts	fair	fair-good	remove watersprouts
65	London plane (*Platanus* X *acerifolia*)	7	11	7	watersprouts; low vigor	fair	fair-good	remove watersprouts
66	London plane (*Platanus* X *acerifolia*)	6,5	15	9	watersprouts; low vigor; codominant trunks from 2 feet above grade	fair	poor-fair	use reduction cuts to shorten west trunk. use reduction cuts to remove 25% of the foliage of primary limbs > 1/3 trunk diameter at their attachment.
67	coast redwood (*Sequoia sempervirens*)	13	10	13	top dead; limb dieback; redwood canker (fungal disease) symptoms	fair	fair	crown clean. select leader, drop crotch competing trunks or primary limbs.
68	callery pear (*Pyrus calleryana*)	9	12	9	codominant trunks	fair-good	fair	select leader, drop crotch competing trunks or primary limbs.

Exhibit 1. **Liberty Towers Tree Evaluation Data** **To Accompany Tree Associates Report 10/27/21**

Tree #	Species	Dia. (in.)	Max Drip Line (ft.)	TPZ (ft.)	Comments	Health	Structure	Recommendations
69	callery pear (*Pyrus calleryana*)	10	16	10	codominant trunks; limb attachments with included bark; overextended primary limbs	fair-good	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
70	callery pear (*Pyrus calleryana*)	7	10	7	codominant trunks; mistletoe; slightly low vigor	fair	fair	select leader, drop crotch competing trunks or primary limbs.
71	Locust hybrid (*Robinia* sp.)	14	17	14	large limb dieback; extensive borer injury; codominant trunks with included bark	poor	poor	remove tree.
72	callery pear (*Pyrus calleryana*)	9	14	9	overextended primary limbs; mistletoe	fair-good	fair	use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
73	red oak (*Quercus rubra*)	3	7	3	sunburned trunk; low vigor; codominant trunks; root dead	fair	fair	remove tree.
74	red oak (*Quercus rubra*)	5	8	5	sunburned trunk; low vigor southwest side of trunk; trunk decay likely	fair	poor-fair	remove tree.
75	Chinese pistache (*Pistacia chinensis*)	9	18	9	codominant trunks; overextended primary limbs	fair-good	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.

Exhibit 1. **Liberty Towers Tree Evaluation Data** **To Accompany Tree Associates Report 10/27/21**

Tree #	Species	Dia. (in.)	Max Drip Line (ft.)	TPZ (ft.)	Comments	Health	Structure	Recommendations
76	Chinese pistache (*Pistacia chinensis*)	7	14	7	codominant trunks; overextended primary limbs	fair-good	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
77	Chinese pistache (*Pistacia chinensis*)	6@1'	13	6	6' from tree 78; unbalanced crown; codominant trunks; removal will benefit tree 78	fair-good	poor-fair	remove tree.
78	Chinese pistache (*Pistacia chinensis*)	8	14	8	6' from tree 77; overextended primary limbs	fair-good	fair	use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
79	Chinese pistache (*Pistacia chinensis*)	7	12	7	codominant trunks; overextended primary limbs; slightly low vigor	fair-good	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
80	Chinese pistache (*Pistacia chinensis*)	7	15	7	codominant trunks; overextended primary limbs; slightly low vigor	fair-good	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
81	London plane (*Platanus* X *acerifolia*)	12	20	12	codominant trunks; overextended primary limbs; sycamore scale	fair-good	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.

Exhibit 1. **Liberty Towers Tree Evaluation Data** **To Accompany Tree Associates Report 10/27/21**

Tree #	Species	Dia. (in.)	Max Drip Line (ft.)	TPZ (ft.)	Comments	Health	Structure	Recommendations
82	Chinese pistache (*Pistacia chinensis*)	8	15	8	codominant trunks; limb breaks - mechanical	fair-good	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
83	Chinese pistache (*Pistacia chinensis*)	12	19	12	multiple trunks with included bark; overextended primary limbs; limb attachments with included bark	good	poor-fair	use reduction cuts to remove 40% of the foliage/buds of lowest primary limbs facing east with diameters >1/3 trunk diameter at their attachment. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment. select leader, drop crotch competing trunks or primary limbs.
84	London plane (*Platanus* X *acerifolia*)	11	19	11	slightly low vigor; overextended primary limbs;	fair-good	fair	use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.
85	tupelo (*Nyssa sylvatica*)	7	12	7	sunburned trunk; wound 50% of trunk circumference; cracks in trunk; likely to fail within 5 years	fair	poor	remove tree.
86	London plane (*Platanus* X *acerifolia*)	14	22	14	codominant trunks; overextended primary limbs; sycamore scale	fair-good	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs >1/3 trunk diameter at their attachment.

Exhibit 1. **Liberty Towers Tree Evaluation Data** **To Accompany Tree Associates Report 10/27/21**

Tree #	Species	Dia. (in.)	Max Drip Line (ft.)	TPZ (ft.)	Comments	Health	Structure	Recommendations
87	London plane (*Platanus* X *acerifolia*)	11	18	11	overextended primary limbs; sycamore scale	fair-good	fair	use reduction cuts to remove 25% of the foliage of primary limbs > 1/3 trunk diameter at their attachment.
88	London plane (*Platanus* X *acerifolia*)	11	16	11	codominant trunks; slightly low vigor	fair	fair	select leader, drop crotch competing trunks or primary limbs. use reduction cuts to remove 25% of the foliage of primary limbs > 1/3 trunk diameter at their attachment.
89	olive (*Olea europea*)	5@1'	8	5	three trunks with included bark	good	poor-fair	remove all but central trunk.
90	Canary island pine (Pinus canariensis)	15	16	15	overextended primary limbs	fair-good	poor-fair	select leader, drop crotch competing trunks or primary limbs.
91	Canary island pine (Pinus canariensis)	19	17	19		good	fair-good	
92	Canary island pine (Pinus canariensis)	16	16	16		good	fair-good	

EXISTING CONDITION EXHIBIT
LIBERTY ROCK DEVELOPMENT
5132 ELKHORN BLVD
SACRAMENTO, CA 95842



EXISTING CONDITION EXHIBIT
OCTOBER 7, 2021

N
W E
S
scale: 1"=50'

50 0 25 50 100

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite #110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

P:\Projects\161-001\02 DWG\B- Planning\PDF\Existing Tree Exhibit.dwg, Aaron, 10:27:35, 10-07-21