
APPENDIX J

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95630
916.365.8700 tel
619.462.0552 fax
www.helixepi.com



April 9, 2025

Project 08874.00001.001

Gary Perry
Davis Eastside, LLC
2251 Fair Oaks Boulevard, Suite 200
Sacramento, CA 95825
gary@garyperryllc.com

Subject: Arborist Survey for the Willowgrove Project, City of Davis, Yolo County, California

Dear Mr. Perry:

This letter documents the results of an arborist survey conducted for the Willowgrove Project (Project) located in the City of Davis (City), Yolo County, California. HELIX Environmental Planning, Inc. (HELIX) was tasked with conducting a survey of trees within or overhanging the project site and within or overhanging potential off-site improvement areas, as well as summarizing tree data taken in the field, and providing avoidance and minimization measures to minimize impacts on trees to be preserved on-site during construction. This letter report describes the methods and results of the arborist inventory. All referenced figures are included in Attachment A.

PROJECT LOCATION AND DESCRIPTION

The approximately 237.56-acre Study Area is located on East Covell Road just west of Mace Boulevard, north of Interstate 80 (I-80), near the City of Davis, Yolo County, California. The Study Area is situated in Sections 1 and 2 of Township 8 North and Range 2 East, as depicted on the U.S. Geological Survey (USGS) *Davis*, CA 7.5-minute quadrangle map and includes APN 071-130-007. The approximate center of the Study Area is at latitude 121.7081286 and longitude 38.5695584. The Study Area is in Yolo County and is within the Yolo County Habitat Conservation Plan/Natural Communities Conservation Plan area, and is adjacent to the City of Davis on the southern and western boundaries of the Study Area. The site is anticipated to be included in the City of Davis during the entitlement process, and therefore, it is assumed that the City of Davis tree ordinance will apply for this proposed project. The site is split into two sections, on-site and off-site. The on-site area refers to the Study Area as seen in Figure 1, *Site and Vicinity*. The off-site area refers to the additional areas along the border of the Study Area that may have impacts associated with trail connections, water and sewer connections and roadway improvements and is also shown in Figure 1.

REGULATORY FRAMEWORK

City of Davis

The City of Davis regulates the cutting, pruning, spraying, bracing, planting, moving, removal, and replacement of city trees and private/protected trees. A tree is defined as any woody perennial plant having one or several main stems commonly achieving ten or more feet in height and capable of being pruned and shaped to develop a branch-free trunk at least nine feet in height in the Davis Municipal Code (Code) Section 37.01.020. A city tree is defined in Section 37.01.020 of the Code as any tree within the ten-foot easement on private property planted by the city, and trees in the city's public right-of-way, parks, greenbelts, and property owned by the city. Private/protected trees are defined in Section 37.01.020 of the Code as any tree privately owned and growing on private property, which is protected under this article, such as landmark trees and/or trees of significance. A "[t]ree of significance means any tree, which measures five inches or more in diameter (DBH) located on property that is used for commercial, multi-family housing or residential care facilities, or in publicly accessible common space controlled by a Homeowner's Association." A "[l]andmark tree means a tree that has been determined by resolution of the city council to be of high value because of its species, size, age, form, historical significance, or some other professional criterion." The exception is trees on single-family or duplex dwelling properties where trees were not preserved by conditions of approval, part of a planned development zone project description, nor is the property associated with any active applications for building permits or discretionary project reviews.

A City tree permit application is required for any person desiring to perform any activity that will impact a city tree's roots, canopy, trunk, and/or ability to grow naturally, including prohibited acts within 37.02.010 of the Code. A private/protected tree permit is required for any person desiring to perform removal or other prohibited acts within 37.02.010 of the Code. A written application shall be submitted to the director, defined as the department director or designee that administers the Urban Forestry Program, for a city tree permit, along with a processing fee, as established by the city council by resolution. In the city tree permit application, the applicant shall describe the act intended to be done, and the number, species, size, and location of trees to be affected. The applicant shall also explain in the city tree permit application the purpose and proposed manner of doing the act and such other information as the city may require (for example, a tree protection plan where applicable).

A private/protected tree permit application is required by any person desiring to perform an activity prohibited by Section 37.02.010 of the Code, including removal, to a private/protected tree protected under this chapter. A written application shall be submitted for a private/protected tree permit and along with a processing fee, as established by resolution of the city council, to the director. The private/protected tree permit application shall describe the act intended to be done, and the number, species, size, and location of trees to be affected. The application shall also explain the purpose and proposed manner of doing the act, site map of the labeled subject trees, and other information as the director may require.

Section 37.01.020 describes an arborist report as a report prepared by a certified or consulting arborist containing specific information on the location, condition, potential impacts of development, recommended actions and mitigation measures regarding one or more trees on an individual lot or project site with the arborist's signature and seal.

Yolo County

The Yolo HCP/NCCP provides protections for 12 endangered species and conserves over 30,000 acres of land. The HCP/NCCP was formally adopted in 2018, and the City of Davis is a participating agency in the HCP/NCCP (USFWS and Yolo Habitat Conservancy 2018). As such, the proposed Project will mitigate for impacts to natural communities that will result from the proposed Project according to HCP/NCCP requirements and guidance. To facilitate the review of the Project's impacts by the Yolo Habitat Conservancy, the vegetation community descriptions, proposed avoidance and minimization measures, and impact and mitigation calculations included in this document are consistent with HCP/NCCP requirements. While the HCP/NCCP covered species includes one plant species (Palmate-bracted bird's beak), it does not cover any species of trees and thus the loss of individual trees would not be mitigated through the HCP/NCCP but instead would be addressed through City of Davis Code.

The Yolo Habitat Conservancy has prepared a permitting guide (Yolo HCP/NCCP 2018) to assist applicants with preparing applications for coverage under the Yolo HCP/NCCP. The permitting guide provides information on the plan area of the HCP/NCCP, provides information on covered activities under the Yolo HCP/NCCP, and provides applicable Avoidance and Minimization Measures for covered species and habitats, application fees, and an application checklist.

METHODS

International Society of Arboriculture Certified Arborist, Dena Elimelech (WE-15122A), surveyed the Study Area and associated off-site areas on February 3, 10, and 12, 2025. The following data were collected for all trees within the surveyed area: species; trunk diameter at four feet, six inches above the ground; total DBH; dripline radius; estimated height; and overall health and structure of the tree. Overall health and structure were rated on a five-point scale from Poor to Excellent, with ratings at Poor, Fair-Poor, Fair, Excellent-Fair, and Excellent. Details pertaining to health and structure were noted, such as number of trunks, irregularities, scars, or other growth characteristics or vigor indicators for each tree. The location of each tree was recorded using an EOS Systems Arrow 100 Global Navigation Satellite System receiver with sub-meter accuracy. Trees on the site were tagged with pre-printed numbered tags. Many trees within the on-site and off-site areas were small and shrub like and are unlikely to fall under the City of Davis tree ordinance's definition of a tree. As such, only trees with at least one stem of DBH five inches and greater were noted in this report. Trees that were too small to be tagged or within Wildhorse Agricultural Buffer, a fenced-in area just west of the Study Area boundary, were not tagged and instead were assigned numbers for purposes of recording tree data. All the tree data can be found in Attachment C, Tree Data.

RESULTS

The Study Area is located within an agricultural setting adjacent to a residential area. There are a total of 277 trees on or overhanging the Study Area and the associated off-site areas. All of the trees qualify as private/protected trees under the Davis City Code definition because their trunks measure more than 5 inches DBH. There are no known landmark trees as defined in the Davis City Code. The species assemblage is composed of 97 black walnuts (*Juglans nigra*), 45 valley oaks (*Quercus lobata*), 29 goldenrain trees (*Koeleruteria paniculata*), 18 ash trees (*Fraxinus sp.*), 18 English walnuts (*Juglans regia*), 15 Western sycamores (*Platanus racemosa*), eight willows (*Salix sp.*), six cottonwoods (*Populus fremontii*), six coast live oaks (*Quercus wislizeni*), five Chinese tallows (*Tradica sebifera*), five

trees of heaven (*Ailanthus altissima*), four California buckeyes (*Aesculus californica*), three Chinese elms (*Ulmus parvifolia*), one elm species (*Ulmus sp.*), two Chinaberry trees (*Melia azedarach*), two toyons (*Heteromeles arbutifolia*), two common hackberries (*Celtis occidentalis*), one Bradford pear (*Pyrus calleryana*), one California date palm (*Phoenix dactylifera*), one maple (*Acer sp.*), one elderberry (*Sambucus mexicana*), one olive (*Olea europaea*), one ceanothus (*Ceanothus sp.*), one Prunus (*Prunus sp.*), and four unknown/unidentifiable trees. The unidentifiable trees did not have leaves or other distinguishing characteristics at the time of the survey. The approximate locations and driplines of these trees can be found in Figure 2 of Attachment A, Approximate Tree Locations. Representative photographs of the site are provided in Attachment B. Tree data are provided in Attachment C.

The trees along the southern border of the site are adjacent to the sidewalk on the northern side of East Covell Blvd. The soil quality is poor in this area, and there are numerous previously felled trees and branch debris surrounding these trees. There are several overhanging trees from the trail area on the western border of the study area, as well as a row of shrub-like black walnuts just inside the western border of the study area.

On-site Trees

In this report, on-site trees are defined as trees within or overhanging the project footprint (Study Area). There are a total of 118 within or overhanging the study area (on-site trees), including 37 black walnuts, 29 goldenrain trees, 18 ash, six cottonwoods, five willows, five trees of heaven, four English walnuts, three Chinese elms, two common hackberries, two Chinese tallows, one olive, one coast live oak, one Bradford pear, one California date palm, and three unknown/unidentifiable trees.

Off-site Trees

There are a total of 159 off-site trees, including 60 black walnuts, 45 valley oaks, 15 sycamores, 14 English walnuts, five coast live oaks, four California buckeyes, three Chinese tallows, three willows, two toyons, two chinaberry trees, one elm species, one maple species, one elderberry, one prunus species, one ceanothus species, and one unknown/unidentifiable species.

IMPACTS

On-site Trees

Removal of any tree as defined by the City of Davis will require submittal of a permit application to the department director or designee that administers the Urban Forestry Program and will likely require mitigation. Several trees within the drainage in the northern portion of the on-site area may be impacted by the proposed project either through removal or impact on the current dripline (trees #234, 172, 280, 167, 165, 164, and 161). Several trees on the western border of the on-site area will likely require removal (trees #157, 156, 155, 153, 154, 219, and 152) or will likely be impacted by the project plan through development within the dripline (trees #254, 253, 334, 335, 251, 340, 341, 342, 345, 346, 262, 206, 250, 364, 263, 248, 247, 246, 245, 244, 264, 243, 434, 405, 265, 151, 266, 242, and 241). The trees along the frontage of East Covell Boulevard are currently planned for preservation, but their driplines overlap with the project plan and may be impacted by construction (trees #139, 138, 136, 135, 132, 131, 130, 129, 128, 127, 126, 125, 121, 120, 119, 118, 117, 116, 115, 114, 113, 112, 111, 110, 109, 108, 107, 106, 105, 101, 150, 149, 148, 147, 146, 145, 142, and 141).

Off-site Trees

Removal of any off-site tree will require submittal of a permit application to the department director or designee that administers the Urban Forestry Program and will likely require mitigation. Based on the preliminary site plan, two trees in the off-site area on the western border of the site have driplines that overlap with the project plan and may be impacted by grading and construction (trees #320 and 984).

TREE PROTECTION RECOMMENDATIONS DURING AND POST-CONSTRUCTION

Tree protection measures during and post-construction for trees that may be planned for preservation are included in Attachment D.

CONCLUSION

There are a total of 277 trees on the site, consisting of 118 on-site trees and 159 off-site trees. All on-site and off-site trees would be regulated under the City of Davis Tree Ordinance, and removal or impact to any of these trees will require submittal of a permit to the department director or designee that administers the Urban Forestry Program will likely require mitigation.

We appreciate the opportunity to assist you on this project. Feel free to contact me with any questions at (916) 435-1202.

Sincerely,



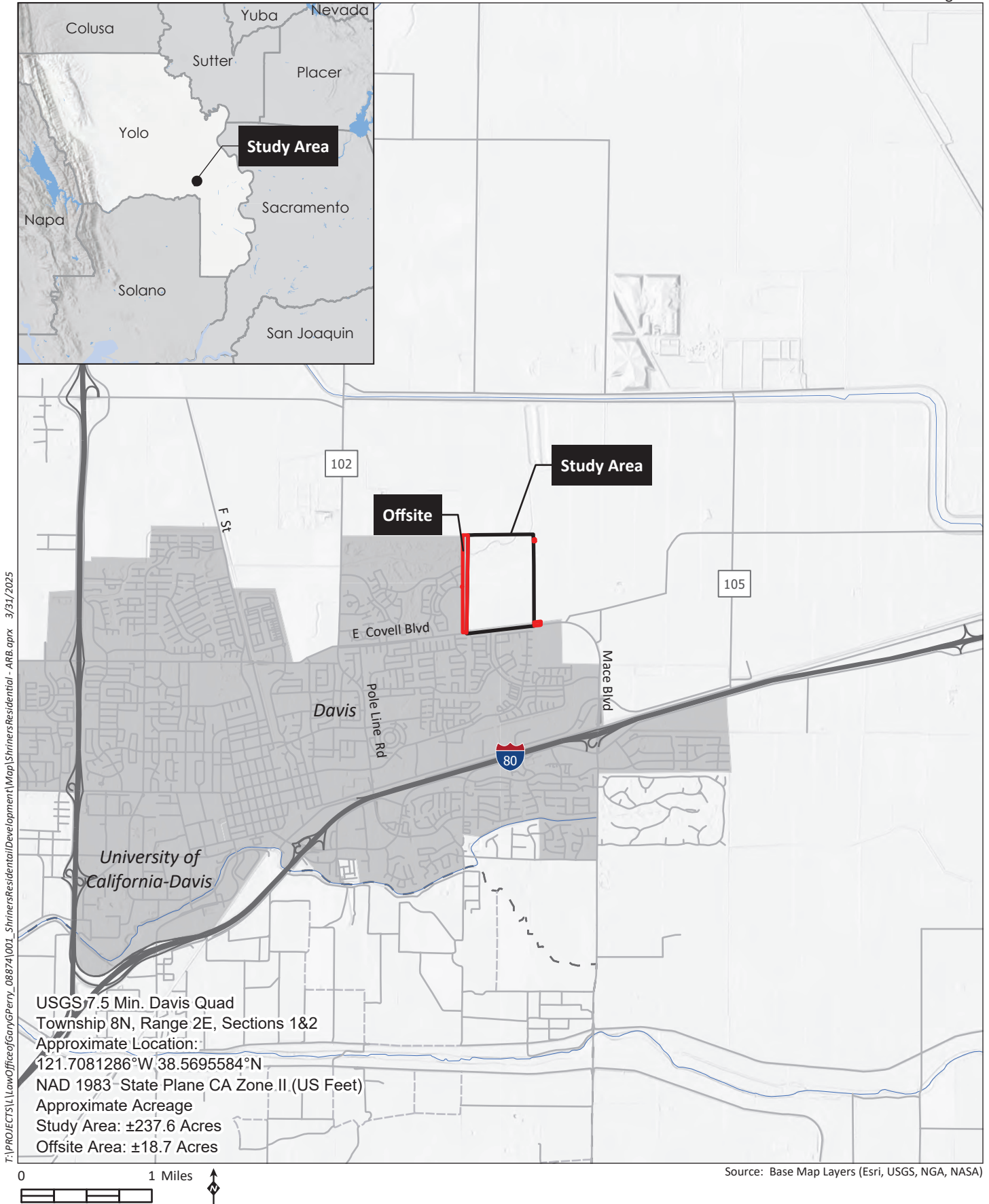
Dena Elimelech
Biologist (ISA Certified Arborist WE-15122A)

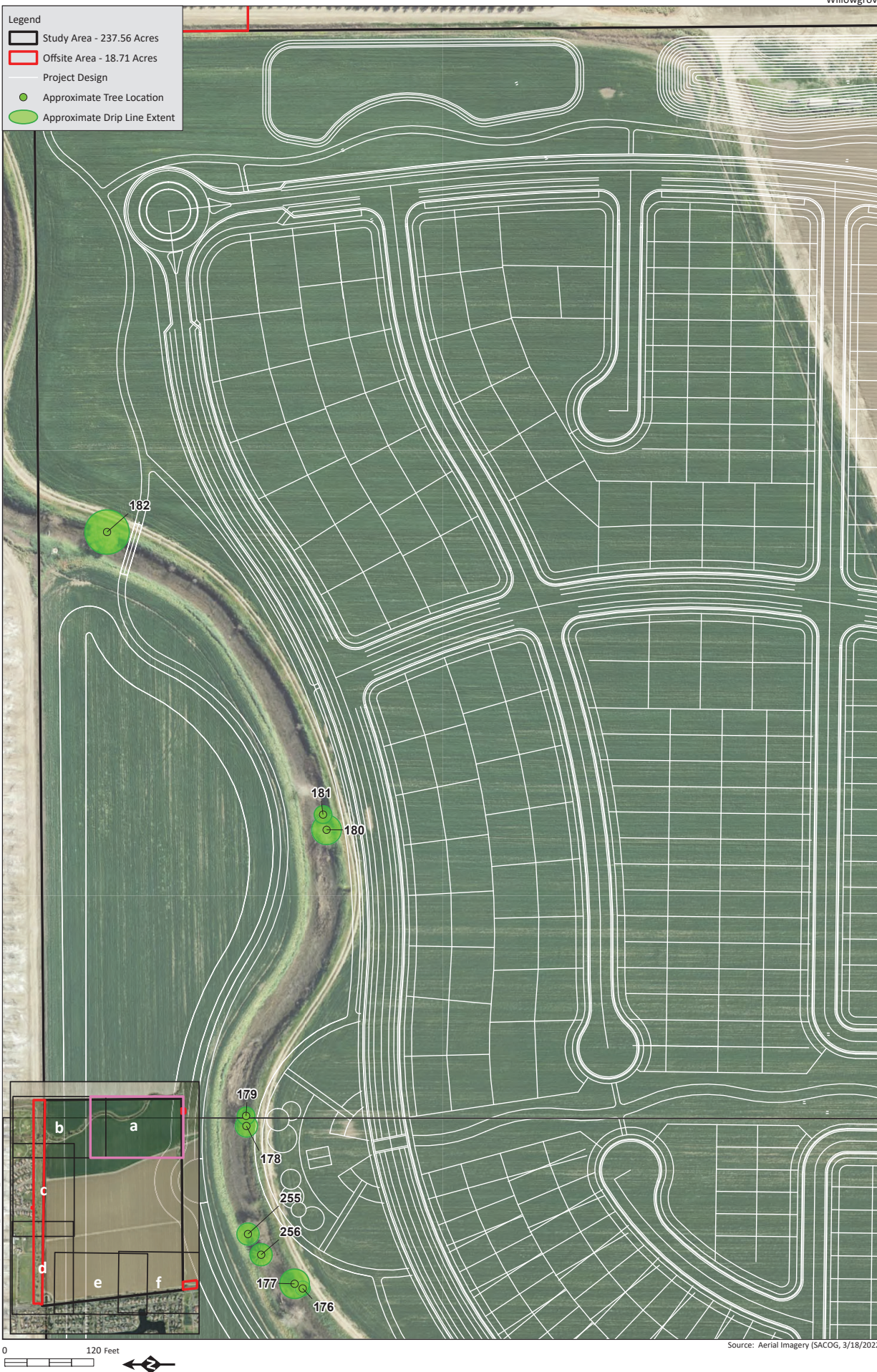
Attachments:

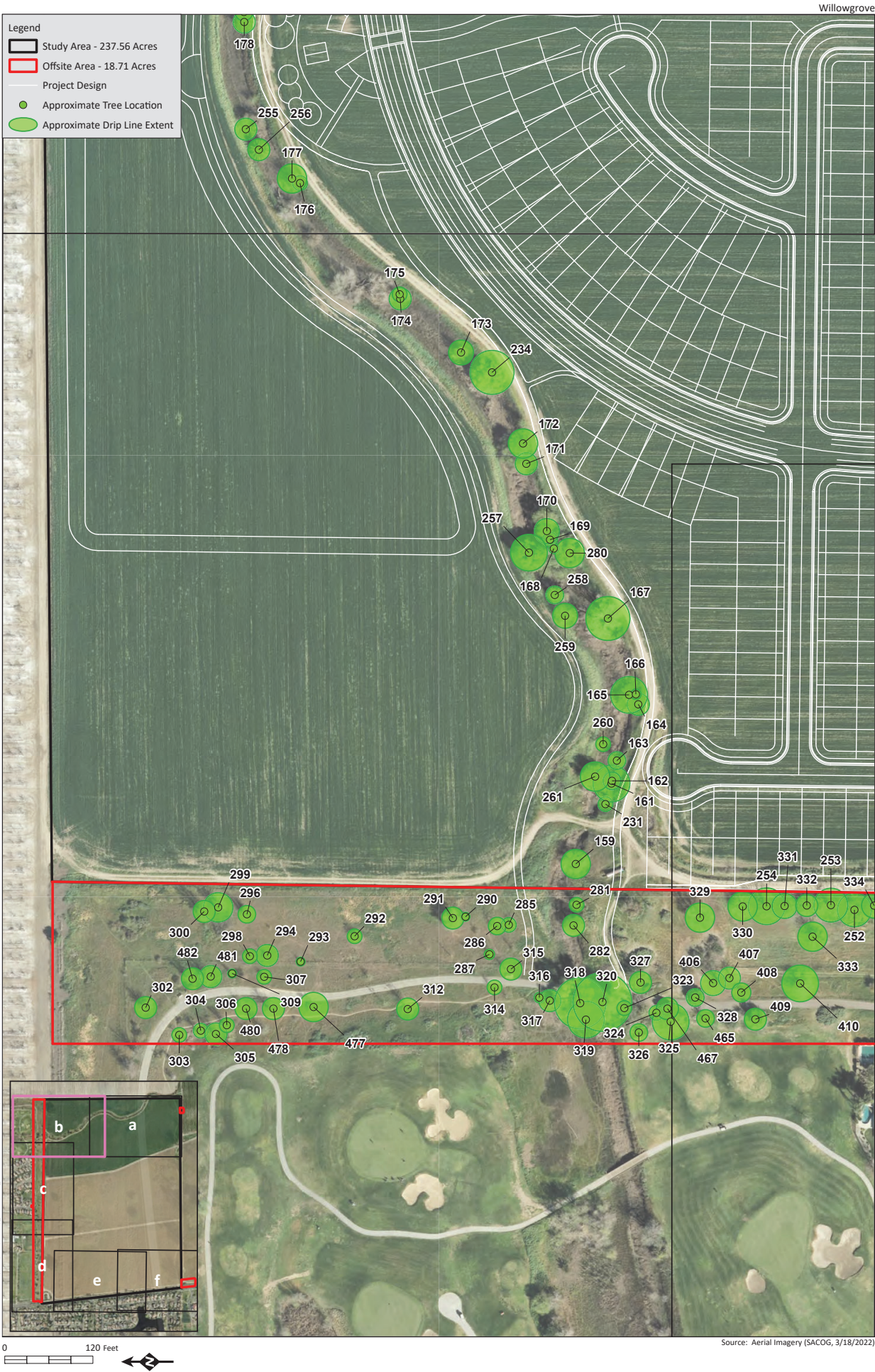
- Attachment A – Figures
- Attachment B – Representative Site Photos
- Attachment C – Tree Data
- Attachment D – Tree Protection Measures

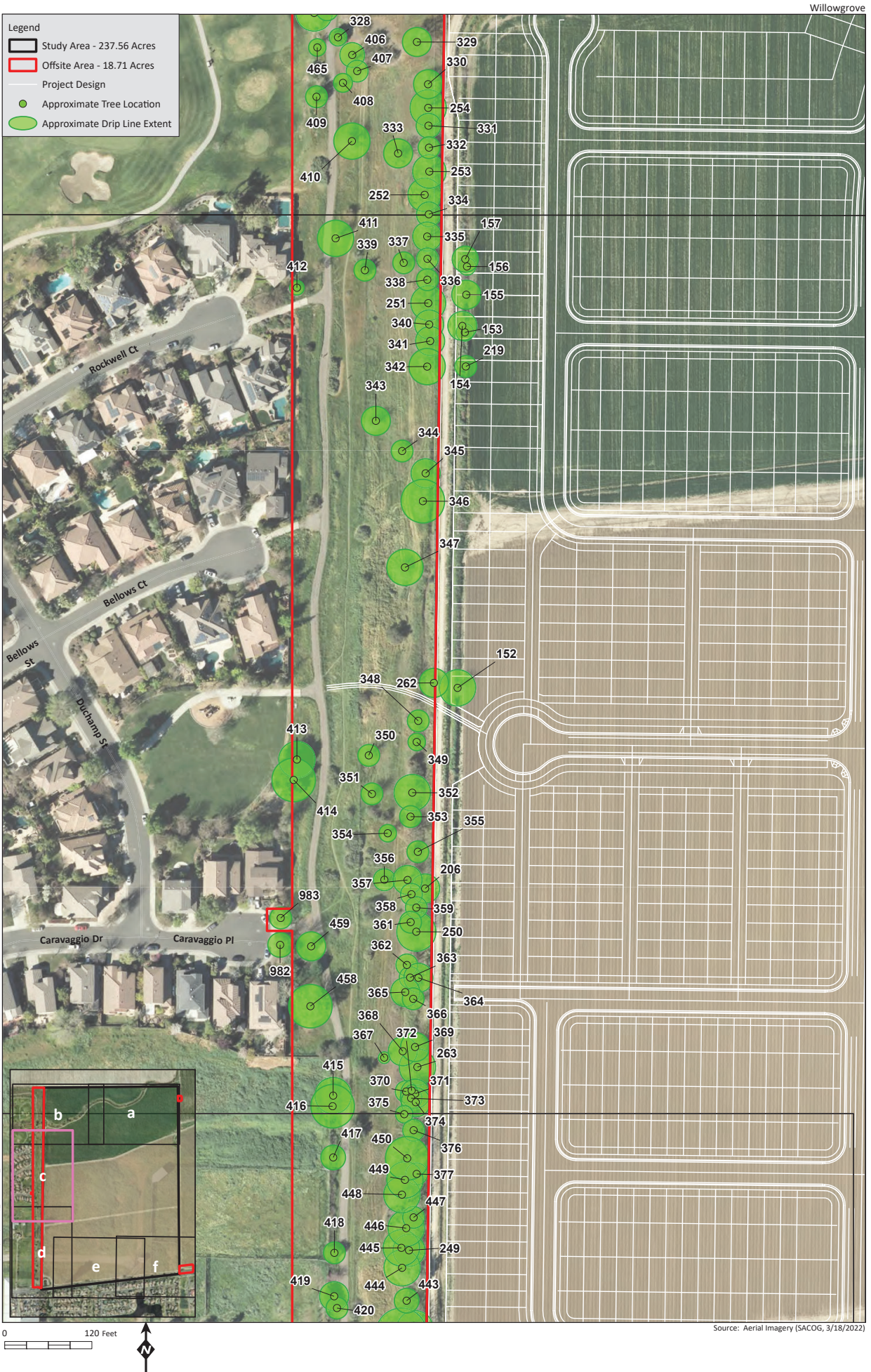
Attachment A

Figures

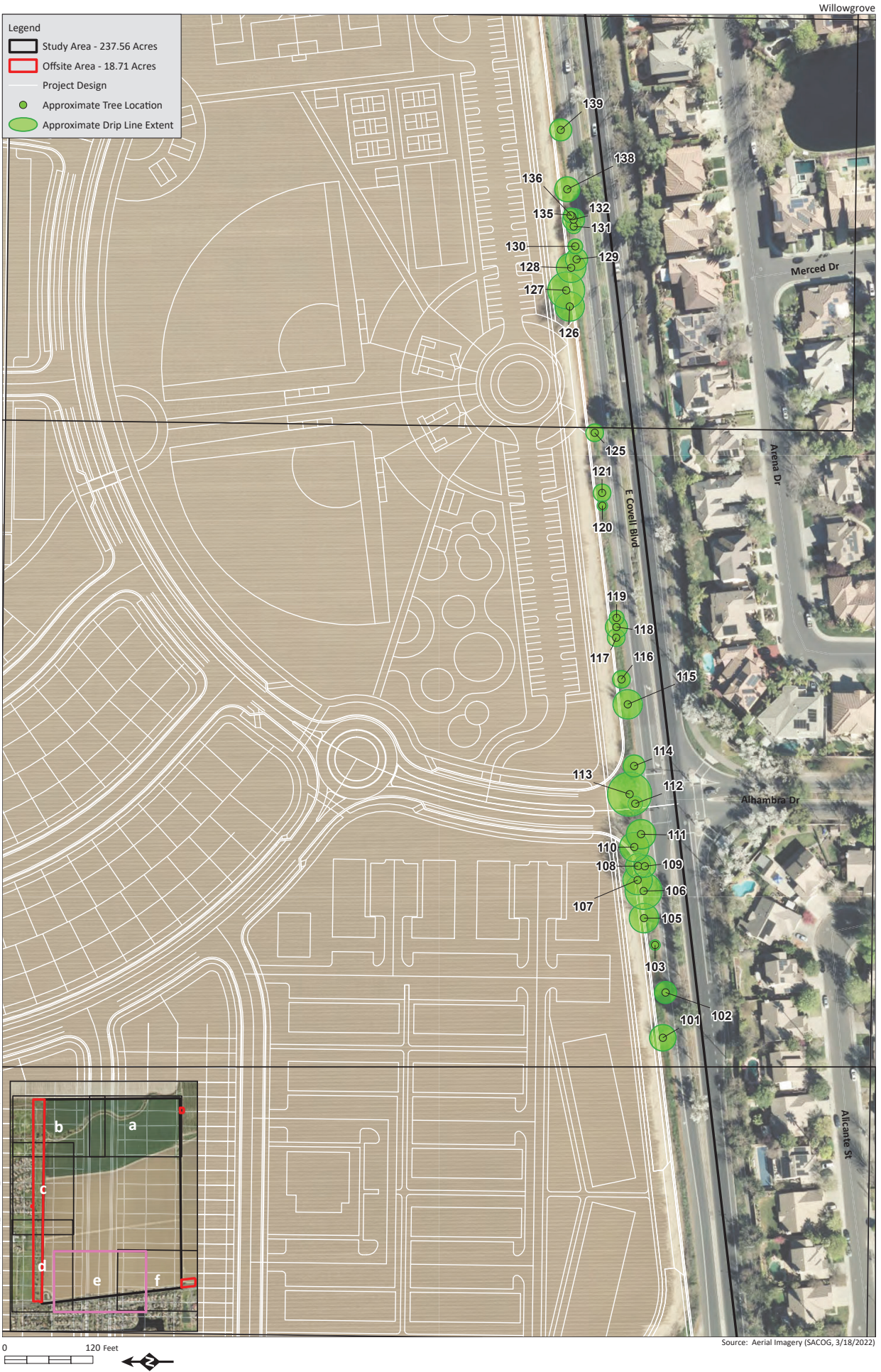














Attachment B

Representative Site Photos



View of the site from the southern border of the study area facing west. Date: 2/3/2025. Photographer: Dena Elimelech



Representative image of the study area from the southern border, facing north. Date: 2/3/2025. Photographer: Dena Elimelech

M:\PROJECTS\LowOffice\GaryGerry_08874\001_ShrinersResidentialDevelopment\Reports\ARB\Attachments\AttB_Representative Photos for Photo Page



View of the southern border of the study area, including East Covell Blvd, facing east. Date: 2/3/2025. Photographer: Dena Elimelech



Image of tree number 127, Chinese elm, on the southern border of the study area. Date: 2/3/2025. Photographer: Dena Elimelech

M:\PROJECTS\LowOffice\GaryGPerry_08874\001_ShrinerResidential\Development\Reports\ARB\Attachments\ARB_Representative Photos for Photo Page



Representative image of the southern border of the study area, facing west.
Date: 2/3/2025. Photographer: Dena Elimelech



Representative image of the western border of the study area facing north.
Date: 2/10/2025. Photographer: Dena Elimelech

M:\PROJECTS\LowOffice\GaryGPerry_08874\001_ShrinersResidentialDevelopment\Reports\ARB\Attachments\AttB_Representative Photos for Photo Page



Representative image of the drainage in the northern area of the study area, on the southern side, facing north. Date: 2/10/2025. Photographer: Dena Elimelech



Image of the drainage from the southern side, facing east. Date: 2/10/2025. Photographer: Dena Elimelech

M:\PROJECTS\LowOffice\GaryGPerry_08874\001_ShrinerResidential\Development\Reports\ARB\Attachments\ARB_Representative Photos\Photos for Photo Page



Anna's hummingbird nest in tree number 162, a willow tree, within the drainage. Date: 2/10/2025. Photographer: Dena Elimelech



Image of long-eared owl roost adjacent to tree number 40, black walnut. Date: 2/12/2025. Photographer: Dena Elimelech

M:\PROJECTS\LowOffice\GaryGerry_08874\001_ShrinerResidential\Development\Reports\ARB\Attachments\ARB_Representative Photos for Photo Page



Representative image of the drainage in the northern area of the study area, facing west. Date: 2/12/2025. Photographer: Dena Elimelech

M:\PROJECTS\LowOfficeofGaryGPerry_08874\001_ShrinersResidentialDevelopment\Reports\ARB\Attachments\AttB_Representative Photos for Photo Page

Attachment C

Tree Data

Tree #	Species	Number of Trunks	DHB (inches)	TDBH	DLR (feet)	Height (feet)	Health	Structure	Comments
101	Golden rain (<i>Koelreuteria paniculata</i>)	4	8.6, 7.7, 6.9, 6.8	30.0	18	25	Fair	Fair	Multistem, included bark, some dead branches, new buds.
102	Golden rain (<i>Koelreuteria paniculata</i>)	3	7.9, 6.3, 4.8	19.0	15	20	Fair	Fair	Pruning cuts for road clearance, some epicormic growth, some dead branches, uneven weight.
103	Golden rain (<i>Koelreuteria paniculata</i>)	1	5.9	5.9	7	18	Fair	Fair	Old CODIT*, some included bark, surrounded by a dead/fallen tree at base, recent pruning cuts, new buds.
105	Golden rain (<i>Koelreuteria paniculata</i>)	7	7.3, 7.2, 4.5, 4.2, 3.3, 3.2, 2	31.7	20	25	Fair	Fair-Poor	Multistem, dead branches and some peeling bark, old CODIT, poor soil at base, epicormic growth.
106	Tree of heaven (<i>Ailanthus altissima</i>)	3	32, 30, 30	92.0	25	45	Fair	Fair-Poor	Estimated DBH, dense mangled trunks with a lot of debris, white flies present, debris within codominant stem area, weeping, included bark.
107	Tree of heaven (<i>Ailanthus altissima</i>)	3	7.5, 3.3, 3.3	14.1	20	23	Fair	Fair	Below-ground multistem, new growth, poor soil, surrounded by debris.
108	Tree of heaven (<i>Ailanthus altissima</i>)	9	13.1, 8.8, 7.8, 4.8, 4.4, 4.3, 3.8, 3.5, 2,	52.5	17	35	Fair	Fair-Poor	Below ground multistem, poor soil, some dead branches, new buds.
109	Coast live oak (<i>Quercus agrifolia</i>)	1	11.9	11.9	15	25	Fair	Fair	Some galls, uneven canopy, dense growth, growing within a tree of heaven's root space, CODIT present.
110	Tree of heaven (<i>Ailanthus altissima</i>)	1	12.9	12.9	20	35	Fair	Fair-Poor	Lean, poor/muddy soil, epicormic growth, new buds, dead branches.
111	Golden rain (<i>Koelreuteria paniculata</i>)	3	12, 11.1, 10	33.1	20	25	Fair-Poor	Fair-Poor	Multistem, old CODIT, red-shouldered

									bugs, canker, dead lead, some dead branches.
112	Unknown	3	7.1, 6.9, 6.8	20.8	10	30	Fair	Fair-Poor	Multistem with heavily included bark, poor soil.
113	Chinese elm (<i>Ulmus parvifolia</i>)	4	9.2, 7.5, 7.4, 4	28.1	30	30	Fair	Fair-Poor	Abnormal/sprawling growth, included bark, multi stem, CODIT.
114	Golden rain (<i>Koelreuteria paniculata</i>)	5	7, 7, 5.8, 5.3, 4.6	29.7	15	20	Fair	Fair	Old CODIT, sprawling growth at trunk base, recent pruning cuts, multistem, some dead branches.
115	Chinese elm (<i>Ulmus parvifolia</i>)	7	8.2, 7.7, 6.8, 5, 5, 4, 4	40.7	20	35	Fair	Poor	Dead main leads, CODIT, sprawling growth over dead old leads, epicormic growth, poor soil.
116	Tree of heaven (<i>Ailanthus altissima</i>)	2	6.2, 5.9	12.1	12	24	Fair	Fair-Poor	Deep included bark on codominant stems, old pruning cuts without CODIT, debris at base, poor soil.
117	Bradford pear (<i>Pyrus calleryana</i>)	3	5, 4, 3.9	12.9	12	25	Fair	Fair-Poor	Multistem with included bark, good new buds, old CODIT, dead wood at base, red-shouldered beetle present.
118	Golden rain (<i>Koelreuteria paniculata</i>)	2	5.9, 5.7	11.6	15	15	Fair	Fair	Included bark at codominant stems, some dead branches, decent structure, poor soil, new buds.
119	Golden rain (<i>Koelreuteria paniculata</i>)	1	5.1	5.1	10	12	Fair	Fair	Recent pruning cuts and removed codominant stem, CODIT, decent canopy.
120	Golden rain (<i>Koelreuteria paniculata</i>)	2	5.7, 4.4	10.1	7	15	Fair	Fair-Poor	Codominant stems with included bark, recent pruning cuts, decent canopy, poor soil.
121	Golden rain (<i>Koelreuteria paniculata</i>)	4	8.1, 6.1, 5.1, 5	24.3	12	17	Fair	Fair-Poor	Multistem with low growth at base, recent pruning cuts, red-shouldered beetles, old CODIT, peeling bark.
125	Golden rain (<i>Koelreuteria paniculata</i>)	5	6.3, 6.2, 5.2, 5.1, 4.2	27.0	12	15	Fair	Fair-Poor	Mangled growth and included bark, decent canopy, poor soil.

126	Common hackberry (<i>Celtis occidentalis</i>)	4	16.4, 8.9, 7.3, 3.5	36.1	20	35	Fair	Fair	Good branch attachments, recent pruning cuts, multistem at base, decent canopy.
127	Chinese elm (<i>Ulmus parvifolia</i>)	5	19.2, 18.6, 11.5, 7, 6	62.3	25	40	Fair	Fair-Poor	Pruning cuts, multistem, dead branches, epicormic growth, poor soil, some CODIT, decent canopy.
128	Golden rain (<i>Koelreuteria paniculata</i>)	2	9.5, 6.9	16.4	20	20	Fair	Fair-Poor	Codominant stems with included bark, lean, dead branches, old pruning cuts without CODIT.
129	Golden rain (<i>Koelreuteria paniculata</i>)	1	5.6	5.6	15	15	Fair	Fair-Poor	Lean, one-sided canopy, recent pruning cuts, red-shouldered beetle, old CODIT.
130	Golden rain (<i>Koelreuteria paniculata</i>)	4	5, 4.6, 4.1, 4	17.7	10	20	Fair	Fair-Poor	Twisted multistem, dead branches, decent canopy, recent pruning cuts.
131	Golden rain (<i>Koelreuteria paniculata</i>)	1	6.1	6.1	10	15	Fair	Fair	Recent pruning cuts, old CODIT, uneven canopy.
132	Golden rain (<i>Koelreuteria paniculata</i>)	3	6.5, 5.4, 5.1	17.0	15	24	Fair	Fair-Poor	Removed lead, old pruning cuts with poor CODIT, decent canopy.
136	Golden rain (<i>Koelreuteria paniculata</i>)	2	5.8, 4.9	10.7	6	20	Fair	Fair	Codominant stems, slight lean, recent pruning cuts, old CODIT.
135	Golden rain (<i>Koelreuteria paniculata</i>)	2	5.4, 3.4	8.8	10	15	Fair	Fair	Slight lean, codominant with included bark, decent canopy.
138	Golden rain (<i>Koelreuteria paniculata</i>)	3	5.6, 5.4, 5.1	16.1	17	25	Fair	Fair-Poor	Multistem with recently removed leads, downward growth, dead fallen branches.
139	Golden rain (<i>Koelreuteria paniculata</i>)	5	7.5, 3, 2.9, 2.8, 2.8	19.0	15	20	Fair-Poor	Fair-Poor	Multistem and abnormal trunk sprawl, recently removed leads, red-shouldered beetles, peeling bark, old CODIT.
141	Golden rain (<i>Koelreuteria paniculata</i>)	4	8.3, 6.9, 6, 5.7	26.9	15	25	Fair	Fair	Recent pruning cuts, multistem, decent canopy, CODIT, lean.
142	Golden rain (<i>Koelreuteria paniculata</i>)	3	8.1, 7.7, 7	22.8	15	25	Fair	Fair	Multistem, recently pruned branches, dead branches, decent canopy.

144	Golden rain (<i>Koelreuteria paniculata</i>)	1	5.1	5.1	5	20	Fair-Poor	Fair	Pruning cuts, dead branches, small canopy, old CODIT, old trunk wound at eight feet.
145	Golden rain (<i>Koelreuteria paniculata</i>)	1	5.0	5.0	10	20	Fair-Poor	Fair-Poor	Codominant stems with removed lead and downward growth, dead branches, debris at base, heavy lean.
146	Golden rain (<i>Koelreuteria paniculata</i>)	5	7.7, 6.9, 5.4, 3.9, 3	26.9	20	35	Fair	Fair-Poor	Multistem with included bark, peeling bark, red-shouldered beetles, some CODIT, some removed branches without CODIT.
147	Golden rain (<i>Koelreuteria paniculata</i>)	4	6.8, 5.1, 3, 3	17.9	12	30	Fair	Fair	Multistem, included bark, some epicormic growth, some CODIT, some lack of CODIT, decent canopy.
148	Golden rain (<i>Koelreuteria paniculata</i>)	3	10.1, 8, 8	26.1	17	30	Fair	Fair	Multistem, decent canopy, CODIT, debris at base.
149	Golden rain (<i>Koelreuteria paniculata</i>)	1	9.1	9.1	17	25	Fair	Fair	Codominant stems, decent canopy, some epicormic growth.
150	Golden rain (<i>Koelreuteria paniculata</i>)	2	6.4, 6.2	12.6	15	20	Fair-Poor	Fair-Poor	Codominant stems with included bark, black weep, red-shouldered beetles, epicormic growth, removed branches and dead branches.
151	Black walnut (<i>Juglans nigra</i>)	3	12.1, 12, 11	35.1	25	25	Fair	Fair-Poor	Abnormal swelling at base, new buds, some dead branches, on study area side of fence.
206	Black walnut (<i>Juglans nigra</i>)	3	13.7, 13, 10	36.7	20	25	Fair-Poor	Fair-Poor	Estimated DBH, behind fence. Lean, poor new buds, old CODIT dead branches, removed leads.
152	Black walnut (<i>Juglans nigra</i>)	5	11.2, 7.4, 7.3, 6.9, 6.8	39.6	25	30	Fair	Fair-Poor	New buds, dead lead with old CODIT, multistem.
219	Black walnut (<i>Juglans nigra</i>)	2	5.8, 5.7	11.5	15	15	Fair	Fair	Slight lean, new growth, poor soil.

153	Black walnut (<i>Juglans nigra</i>)	1	7.7	7.7	12	25	Fair	Fair	Burrows at base, decent structure.
154	Black walnut (<i>Juglans nigra</i>)	3	6.2, 6.2, 6.1	18.5	20	25	Good-Fair	Fair	Decent structure, some dead branches, poor soil.
155	Unknown	1	7.4	7.4	20	20	Good-Fair	Fair	Burrow at base, new growth, decent shape.
156	Black walnut (<i>Juglans nigra</i>)	1	8.1	8.1	12	15	Fair	Fair	Abnormal trunk flare area, some new growth, multistem at five feet.
157	Black walnut (<i>Juglans nigra</i>)	1	12.7	12.7	18	25	Good-Fair	Fair	Decent structure, some new growth, in poor soil, some dead branches.
159	Unknown	3	10.3, 10.1, 10	30.4	20	40	Good-Fair	Fair	Multistem, growing adjacent to drainage, decent shape, included bark.
231	Chinese tallow (<i>Triadica sebifera</i>)	1	6.0	6.0	10	20	Fair	Fair	Growing adjacent to drainage, decent structure.
161	Willow (<i>Salix sp.</i>)	3	6.2, 5, 3	14.2	25	25	Fair-Poor	Fair-Poor	Water at trunk, growing in drainage, epicormic growth.
162	Willow (<i>Salix sp.</i>)	4	6.1, 4.2, 4, 3	17.3	12	20	Fair	Fair-Poor	Broken branches, in drainage, epicormic, Anna's hummingbird nest on low branch.
163	Ash (<i>Fraxinus sp.</i>)	3	7.8, 3.7, 3	14.5	12	20	Good-Fair	Fair	Growing by drainage, decent structure, new growth.
164	Black walnut (<i>Juglans nigra</i>)	2	10.4, 6.9	17.3	15	20	Fair	Fair	Multistem, on slope, decent structure, dead branches.
165	Ash (<i>Fraxinus sp.</i>)	4	10.2, 9.5, 9, 9	37.7	25	25	Fair-Poor	Fair-Poor	Dead branches, heavy lean, in drainage, epicormic growth.
166	Ash (<i>Fraxinus sp.</i>)	1	5.9	5.9	7	23	Fair	Fair	Some dead branches, growing above drainage, old CODIT.
167	Cottonwood (<i>Populus fremontii</i>)	4	24.2, 22, 20.1, 20	86.3	30	50	Fair	Fair-Poor	Multistem, CODIT over some old wounds, fallen branches, just above drainage.
168	Ash (<i>Fraxinus sp.</i>)	2	5.9, 3	8.9	7	20	Fair	Fair	Included bark, girdling root, decent new growth.

169	Ash (<i>Fraxinus sp.</i>)	1	11.8	11.8	10	30	Fair	Fair	Slight lean, on drainage bank, decent new growth.
170	Ash (<i>Fraxinus sp.</i>)	2	10.2, 10.1	20.3	17	30	Fair	Fair	Decent new growth, included bark, above drainage.
171	Ash (<i>Fraxinus sp.</i>)	2	8.4, 8.4	16.8	15	27	Good-Fair	Fair	Decent new growth, growing on drainage bank, some included bark.
172	Ash (<i>Fraxinus sp.</i>)	2	11.2, 4	15.2	20	25	Fair	Fair	Growing next to drainage, multistem above DBH, decent canopy.
234	Willow (<i>Salix sp.</i>)	1	13.0	13	30	25	Fair-Poor	Poor	Estimated DBH, inaccessible trunk, dense epicormic growth, dead wood and some decay, in drainage.
173	Willow (<i>Salix sp.</i>)	2	8.6, 7.2	15.8	17	25	Fair	Fair	Multistem with poor taper, epicormic growth, growing in drainage.
174	Cottonwood (<i>Populus fremontii</i>)	4	8.9, 8.8, 6.1, 6	29.8	15	27	Fair	Fair-Poor	Multistem, included bark, some dead wood, epicormic growth.
175	Cottonwood (<i>Populus fremontii</i>)	1	9.9	9.9	10	27	Fair	Fair	Epicormic growth, by drainage, new growth, decent structure.
176	Ash (<i>Fraxinus sp.</i>)	1	10.2	10.2	10	25	Good-Fair	Fair	Curve at base, on drainage bank, decent structure, new growth.
177	Ash (<i>Fraxinus sp.</i>)	1	9.2	9.2	20	25	Good-Fair	Fair	Growing on bank of drainage, decent structure, good new growth.
178	Ash (<i>Fraxinus sp.</i>)	2	10.2, 9.7	19.9	15	25	Fair	Fair-Poor	Exposed roots, growing in drainage, multistem.
179	Ash (<i>Fraxinus sp.</i>)	4	5.6, 4, 4, 3.5	17.1	12	25	Fair	Fair	On bank of drainage, multistem, decent new growth.
180	Cottonwood (<i>Populus fremontii</i>)	1	24.0	24.0	20	30	Fair	Fair-Poor	Heavy epicormic growth, estimated DBH due to epicormic growth, multistem at five feet.
181	Cottonwood (<i>Populus fremontii</i>)	1	11.0	11.0	12	25	Fair	Fair	Epicormic growth, decent new growth, growing within drainage area.
182	Ash (<i>Fraxinus sp.</i>)	5	18.4, 10.8,	53.0	30	35	Fair	Fair	Multistem, decent new growth, on bank of

			8.5, 8.3, 7						drainage, some broken and dead branches, epicormic growth.
235	Black walnut (<i>Juglans nigra</i>)	1	30.4	30.4	25	40	Fair	Fair	Overhang into Study Area, dead branches, codominant stems at eight feet.
236	Black walnut (<i>Juglans nigra</i>)	2	22.6, 19.6	42.2	25	40	Fair	Fair	Overhang into Study Area, codominant stems, old pruning cuts without CODIT.
237	Black walnut (<i>Juglans nigra</i>)	3	24.2, 20.6, 19.3	64.1	25	40	Fair	Fair	Overhang into Study Area, old pruning cuts, multistem.
238	Black walnut (<i>Juglans nigra</i>)	2	24.3, 15.9	40.2	25	40	Fair	Fair	Overhang into Study Area, burrows at base, codominant stems, broken branches, old pruning cuts without CODIT.
239	Black walnut (<i>Juglans nigra</i>)	2	36, 28.7	64.7	30	45	Fair	Fair-Poor	Overhang into Study Area, codominant stems, broken main leads, dead branches.
240	Black walnut (<i>Juglans nigra</i>)	1	30.8	30.8	23	40	Good-Fair	Fair	Overhang into Study Area, codominant stems, decent canopy, some dead branches.
241	English walnut (<i>Juglans regia</i>)	3	19.4, 12.6, 12.5, 12.4	168.5	27	40	Fair	Fair	Overhang into Study Area, multistem, some dead branches, big spreading canopy.
242	Black walnut (<i>Juglans nigra</i>)	5	12.8, 10.9, 9.7, 8, 5.2	46.6	22	25	Fair	Fair-Poor	Overhang into Study Area, trimmed down for utilities, new growth.
243	Black walnut (<i>Juglans nigra</i>)	6	10.6, 10.4, 9, 9, 8, 7.4	54.4	25	20	Fair	Fair-Poor	Overhang into Study Area, multistem, trimmed for utilities.
244	Black walnut (<i>Juglans nigra</i>)	3	25.8, 17.4, 14.4	57.6	24	40	Fair	Fair	Overhang into Study Area, multistem, some dead branches.
245	Black walnut (<i>Juglans nigra</i>)	3	12.4, 12, 11.3	35.7	25	40	Good-Fair	Fair	Overhang into Study Area, multistem, good canopy.
246	Black walnut (<i>Juglans nigra</i>)	5	5.3, 5.2, 5.2, 4.1, 4	23.8	20	30	Fair	Fair	Overhang into Study Area, lean, multistem.

247	Black walnut (<i>Juglans nigra</i>)	2	12.6, 9.9	22.5	25	35	Fair	Fair	Overhang into Study Area, new growth, decent canopy, dead branches.
248	Black walnut (<i>Juglans nigra</i>)	2	11.4, 9.9	21.3	25	20	Fair	Fair-Poor	Overhang into Study Area, heavy lean, uneven canopy, codominant stems.
249	Black walnut (<i>Juglans nigra</i>)	2	12.2, 10.6	22.8	22	25	Fair	Fair-Poor	Overhang into Study Area, codominant stems, lean.
250	Black walnut (<i>Juglans nigra</i>)	5	13.1, 13.1, 11.1, 9.5, 8.2	55.0	27	40	Fair	Fair	Overhang into Study Area, multistem, dead branches.
251	Black walnut (<i>Juglans nigra</i>)	3	16.7, 16.2, 10.4	43.3	24	35	Fair	Fair	Overhang into Study Area, multistem, mistletoe, codominant stems.
252	Black walnut (<i>Juglans nigra</i>)	1	21.1	21.1	23	32	Fair	Fair	Overhang into Study Area, owl box, new growth, codominant stems above DBH.
253	Black walnut (<i>Juglans nigra</i>)	1	24.4	24.4	23	30	Fair	Fair	Overhang into Study Area, multistem, dead branches.
254	Black walnut (<i>Juglans nigra</i>)	1	23.6	23.6	25	35	Fair	Fair	Overhang into Study Area, CODIT, codominant stems above DBH, decent canopy.
255	Ash (<i>Fraxinus</i> sp.)	2	12.7, 10.9	23.6	15	20	Fair-Poor	Poor	Heavy lean, trunk growing across drainage, multistem, dead branches.
256	California date palm (<i>Phoenix dactylifera</i>)	1	26.0	26.0	15	30	Good-Fair	Good-Fair	Estimated DBH. In drainage. Decent health.
257	Ash (<i>Fraxinus</i> sp.)	3	20.4, 16.5, 11.2	48.1	25	35	Fair-Poor	Fair-Poor	Dead branches, lean, on bank, heavily included bark.
258	Ash (<i>Fraxinus</i> sp.)	2	16, 9.4	25.4	12	25	Fair-Poor	Fair-Poor	Dead branches, codominant stems, sapsucker holes, heavy lean, included bark.
259	Cottonwood (<i>Populus fremontii</i>)	3	11.9, 10, 6.1	28.0	17	33	Fair	Fair-Poor	Multistem with included bark, decent canopy, growing on bank, new growth.

260	Ash (<i>Fraxinus sp.</i>)	3	7.2, 5.9, 5.8	18.9	10	25	Fair	Fair-Poor	Decent canopy, multistem/codominant with wound at base.
261	Ash (<i>Fraxinus sp.</i>)	10	15, 14, 9.5, 8, 7.6, 7, 4, 4, 4, 4	77.1	20	30	Fair-Poor	Fair-Poor	Owl hangout, growing over bank, dead branches, multistem, included bark.
262	Chinese hackberry (<i>Celtis occidentalis</i>)	13	5.5, 5, 5, 4.5, 4, 4, 4, 4, 4, 3, 3, 3, 3	52.0	20	25	Fair	Poor	Estimated DBH, dense sticks. Multistem, poor shape and structure, dead branches, new growth.
263	Black walnut (<i>Juglans nigra</i>)	4	12, 11, 9.5	32.5	25	40	Fair	Fair-Poor	Overhang into Study Area, multistem, broken leads, dead branches, new growth.
264	Black walnut (<i>Juglans nigra</i>)	4	11, 10, 9, 7	37.0	20	20	Fair	Fair	Overhang into Study Area, multistem, decent canopy.
265	Olive (<i>Olea europaea</i>)	3	11.3, 7, 5	23.3	13	20	Fair	Fair	Overhang into Study Area, multistem, growing by power pole, good canopy.
266	Chinese tallow (<i>Triadica sebifera</i>)	2	15.4, 14.3	29.7	15	25	Fair	Fair	Overhang into Study Area, codominant stems, trimmed for utilities, epicormic growth.
267	Black walnut (<i>Juglans nigra</i>)	4	12.2, 9.7, 8.5, 8.1	38.5	24	35	Fair	Fair	Multistem, surrounded by burrow complex, decent canopy.
280	Willow (<i>Salix sp.</i>)	2	17, 15	32.0	20	25	Poor	Poor	Unable to reach or tag.
281	Valley oak (<i>Quercus lobata</i>)	2	10.1, 3	13.1	10	35	Good-Fair	Good-Fair	Decent structure, new buds, codominant stems at ten feet, some epicormic growth.
282	Maple (<i>Acer sp.</i>)	4	11, 8, 6, 4	29.0	15	35	Fair	Fair-Poor	Estimated DBH, steep slope on bank, multistem, included bark, decent canopy, exposed roots.
285	Sycamore (<i>Platanus racemosa</i>)	2	5.4, 3	8.4	10	12	Fair	Fair	Multistem, CODIT around old trunk wound, epicormic growth.
286	Sycamore (<i>Platanus racemosa</i>)	1	7.7	7.7	12	23	Fair	Fair	Slightly uneven canopy, decent new growth, some epicormic growth.

287	Sycamore (<i>Platanus racemosa</i>)	1	5.4	5.4	7	20	Fair	Fair	Lean, decent canopy, epicormic growth.
290	Sycamore (<i>Platanus racemosa</i>)	1	6.2	6.2	6	30	Fair	Fair	Some epicormic growth, some downward growth, decent structure with some bending taper.
291	Black walnut (<i>Juglans nigra</i>)	4	10, 10, 9, 9	38.0	15	33	Fair	Fair-Poor	Estimated DBH, dense branches. Epicormic growth, new growth, multistem,
292	Sycamore (<i>Platanus racemosa</i>)	3	6.9, 4, 4	14.9	10	20	Fair	Fair-Poor	Epicormic growth, crossing branches, dead branches, new growth.
293	Valley oak (<i>Quercus lobata</i>)	2	5.1, 2.5	7.6	6	25	Fair	Fair	Epicormic growth, multistem, growing by fence.
294	Valley oak (<i>Quercus lobata</i>)	2	7.2, 3.9	11.1	15	30	Fair	Fair	Epicormic growth, multistem, decent canopy.
296	Valley oak (<i>Quercus lobata</i>)	2	14, 12	26.0	12	35	Fair	Fair	Galls, codominant stems, decent canopy.
298	Valley oak (<i>Quercus lobata</i>)	1	6.2	6.2	10	35	Fair	Fair	Epicormic growth, galls, codominant stems at ten feet, decent canopy.
299	Valley oak (<i>Quercus lobata</i>)	4	11, 11, 9, 8	39.0	20	35	Fair	Fair-Poor	Estimated DBH due to heavy epicormic growth. Multistem, galls, within dense brush.
300	Valley oak (<i>Quercus lobata</i>)	2	14, 8	22.0	15	40	Fair	Fair	Estimated DBH, dense brush. Multistem, some epicormic growth, decent canopy, some inclusion and codominant stems at ten feet.
302	Valley oak (<i>Quercus lobata</i>)	1	12.0	12.0	15	35	Fair	Fair	Dense epicormic growth, galls, new growth.
303	Valley oak (<i>Quercus lobata</i>)	1	6.2	6.2	10	20	Fair	Fair	Epicormic growth, good new growth, slight lean, galls.
304	Valley oak (<i>Quercus lobata</i>)	3	9.1, 5, 5	19.1	10	35	Fair	Fair	Multistem, epicormic growth, galls, some abnormal trunk taper.
305	Valley oak (<i>Quercus lobata</i>)	2	10, 9.3	19.3	15	35	Fair	Fair	Multistem, epicormic growth, galls, decent canopy.

306	Valley oak (<i>Quercus lobata</i>)	3	10.6, 4, 4	18.6	10	35	Fair	Fair	Multistem, epicormic growth, galls, decent new growth.
480	Valley oak (<i>Quercus lobata</i>)	1	6.6	6.6	15	25	Fair	Fair	Epicormic growth, galls, codominant stems at ten feet.
478	Valley oak (<i>Quercus lobata</i>)	3	9.3, 8.8, 7.1	25.2	15	32	Fair	Fair	Multistem, epicormic growth, galls.
477	Valley oak (<i>Quercus lobata</i>)	3	7.9, 6.4, 3.5	17.8	20	30	Fair	Fair	Multistem, abnormal trunk shape, epicormic growth, galls, decent canopy.
307	Valley oak (<i>Quercus lobata</i>)	1	6.6	6.6	10	23	Fair	Fair	Galls, epicormic growth, decent canopy.
309	Valley oak (<i>Quercus lobata</i>)	1	5.0	5.0	6	20	Fair	Fair	Epicormic, galls, codominant stems at seven feet.
481	Valley oak (<i>Quercus lobata</i>)	4	11.8, 6.1, 4.5, 4	26.4	15	30	Fair	Fair	Epicormic, galls, multistem, decent canopy.
482	Valley oak (<i>Quercus lobata</i>)	2	10.3, 5	15.3	15	35	Fair	Fair	Epicormic, galls, codominant stems at six feet, multistem.
312	Sycamore (<i>Platanus racemosa</i>)	1	10.4	10.4	15	30	Good-Fair	Good-Fair	Decent structure, some epicormic, bird box in canopy.
314	Sycamore (<i>Platanus racemosa</i>)	1	5.1	5.1	10	17	Fair	Fair	Epicormic, lean, decent canopy.
315	Sycamore (<i>Platanus racemosa</i>)	1	9.4	9.4	15	30	Good-Fair	Good-Fair	Decent structure, some epicormic growth.
316	Sycamore (<i>Platanus racemosa</i>)	1	5.1	5.1	7	20	Fair	Good-Fair	Epicormic, decent structure.
317	Black walnut (<i>Juglans nigra</i>)	1	6.0	6.0	15	20	Fair-Poor	Fair-Poor	Lean, dense epicormic growth.
318	Willow (<i>Salix sp.</i>)	4	28, 20, 20, 10	78.0	35	45	Fair	Fair-Poor	Estimated DBH, dense growth, in drainage, old removed lead, multistem.
319	Willow (<i>Salix sp.</i>)	5	13, 10, 10, 9, 8	50.0	25	30	Fair	Fair-Poor	Multistem, lean, on bank, dead branches.
320	Willow (<i>Salix sp.</i>)	2	25, 20	45.0	40	40	Fair	Fair-Poor	Estimated DBH, on bank with dense branches.

									Codominant stems with included bark.
323	Sycamore (<i>Platanus racemosa</i>)	1	6.5	6.5	10	20	Fair	Fair	Codominant stems at ten feet, epicormic growth, in bush.
324	Sycamore (<i>Platanus racemosa</i>)	2	10.4, 6.9	17.3	10	30	Good-Fair	Fair	Codominant stems, good canopy, CODIT.
325	Sycamore (<i>Platanus racemosa</i>)	1	11.1	11.1	25	35	Good-Fair	Good-Fair	Some epicormic growth, decent structure.
326	Sycamore (<i>Platanus racemosa</i>)	1	8.0	8.0	12	20	Good-Fair	Good-Fair	Some epicormic growth, decent structure.
467	Toyon (<i>Heteromeles arbutifolia</i>)	2	6.9, 6.8	13.7	15	20	Good	Good-Fair	Multistem, good canopy, CODIT.
327	Sycamore (<i>Platanus racemosa</i>)	1	16.9	16.9	15	30	Good-Fair	Good-Fair	Decent structure, minor lean.
328	Toyon (<i>Heteromeles arbutifolia</i>)	7	5.3, 4, 3.5, rest 3	12.8	12	17	Good-Fair	Fair	Multistem, good canopy.
329	Black walnut (<i>Juglans nigra</i>)	3	17, 17, 16	50.0	20	45	Fair	Fair	Estimated DBH, dense branches. Epicormic growth, multistem, included bark, decent canopy.
330	English walnut (<i>Juglans regia</i>)	6	10.1, 8, 7, 6.7, 6.6, 6.5	44.9	20	25	Fair	Fair	Multistem at four feet, sprawling growth, decent canopy.
331	Black walnut (<i>Juglans nigra</i>)	3	13.9, 11.3, 8	33.2	17	20	Fair	Fair	Multistem, decent canopy.
332	English walnut (<i>Juglans regia</i>)	5	9, 9, 8, 6, 5	37.0	15	20	Good-Fair	Fair	Good canopy, multistem.
333	Valley oak (<i>Quercus lobata</i>)	4	9.8, 9.1, 6, 5	29.9	20	35	Fair	Fair	Dense epicormic growth, galls, decent structure other than multistem.
334	Black walnut (<i>Juglans nigra</i>)	4	15.4, 19.6, 8.9, 8.2	52.1	17	30	Good-Fair	Fair	Multistem, decent canopy, dead branches.
335	Black walnut (<i>Juglans nigra</i>)	2	21.3, 12.1	33.4	20	30	Good-Fair	Fair	Multistem, some broken branches, decent canopy.

336	Black walnut (<i>Juglans nigra</i>)	3	6, 6, 5	17.0	15	15	Poor	Poor	Dying, old CODIT, dead leads.
337	Valley oak (<i>Quercus lobata</i>)	4	8, 7, 7, 6	28.0	15	30	Fair	Fair	Estimated DBH, dense growth, epicormic growth, galls, some downward growth, decent canopy.
338	Black walnut (<i>Juglans nigra</i>)	5	6.5, 6.4, 6.1, 5, 4	28.0	15	17	Fair	Fair-Poor	Multistem, swelling trunk, dead branches.
339	Coast live oak (<i>Quercus agrifolia</i>)	2	10, 5	15.0	15	20	Good-Fair	Fair	Estimated DBH, dense low canopy. Some dieback, good branch attachment.
340	English walnut (<i>Juglans regia</i>)	4	8.8, 8.5, 8.4, 5	30.7	20	20	Fair	Fair	Some dead branches, new growth, multistem, dead branches.
341	Black walnut (<i>Juglans nigra</i>)	1	13.1	13.1	20	25	Fair	Fair-Poor	New growth, old dead lead, dead branches, uneven canopy.
342	Black walnut (<i>Juglans nigra</i>)	2	8.9, 8.8	17.7	25	23	Fair	Fair-Poor	Multistem, new growth, some dead branches.
343	Valley oak (<i>Quercus lobata</i>)	3	12.5, 12, 8	32.5	20	35	Fair	Fair-Poor	Estimated DBH, dense epicormic growth, included bark, multistem, galls, downward growth.
344	Valley oak (<i>Quercus lobata</i>)	2	14, 5.5	19.5	15	25	Fair	Fair	Estimated DBH, dense epicormic, galls, decent canopy.
345	Black walnut (<i>Juglans nigra</i>)	1	19.6	19.6	20	35	Fair	Good-Fair	Multistem, good structure, mistletoe, some dead branches.
346	Black walnut (<i>Juglans nigra</i>)	4	16.1, 13.9, 9.7, 9.6	49.3	30	40	Good-Fair	Fair	Multistem with good branch attachments, mistletoe, new growth, decent canopy.
347	Black walnut (<i>Juglans nigra</i>)	4	9.3, 9.3, 9.2, 7	34.8	25	25	Good-Fair	Fair	Multistem, decent canopy with new growth, even weight.
348	Black walnut (<i>Juglans nigra</i>)	2	6.2, 6	12.2	15	20	Fair	Fair	Multistem, dead branches, abnormal branch growth, decent canopy, new growth.

349	Black walnut (<i>Juglans nigra</i>)	1	10.0	10.0	12	15	Fair	Fair-Poor	Some dead branches, multistem at base, thinning canopy.
350	Valley oak (<i>Quercus lobata</i>)	3	10.3, 6.5, 6	22.8	15	35	Good-Fair	Fair	Some galls, multistem, included bark, decent canopy.
351	Valley oak (<i>Quercus lobata</i>)	4	9, 9, 8, 7	33.0	15	30	Good-Fair	Fair	Estimated DBH, dense epicormic growth. Multistem, good canopy, even weight in canopy.
352	Black walnut (<i>Juglans nigra</i>)	1	15.2	15.2	25	30	Fair	Fair-Poor	Wound with peeling bark at base, good canopy, dead branches.
353	Black walnut (<i>Juglans nigra</i>)	1	11.2	11.2	15	25	Fair	Fair	Dead branches, even spread, some dieback.
354	Valley oak (<i>Quercus lobata</i>)	2	11.8	11.8	12	30	Fair	Fair	Decent structure, codominant at six feet, epicormic growth, good canopy.
355	Black walnut (<i>Juglans nigra</i>)	2	11.2, 11	22.2	15	20	Fair	Fair-Poor	Codominant stems, dead branches, new growth.
356	Valley oak (<i>Quercus lobata</i>)	1	11.3	11.3	15	35	Fair	Fair	Dense epicormic growth, downward growth, compact soil at base.
357	Black walnut (<i>Juglans nigra</i>)	2	11.5, 11.2	22.7	20	35	Good-Fair	Fair	Multistem, decent canopy.
358	Black walnut (<i>Juglans nigra</i>)	4	7.3, 7.2, 6, 5	25.5	15	30	Good-Fair	Fair	Dead branches, multistem.
359	Black walnut (<i>Juglans nigra</i>)	3	9.8, 9.6, 8.5	27.9	15	30	Good-Fair	Fair	New growth, multistem, included bark.
361	Black walnut (<i>Juglans nigra</i>)	2	7.2, 7	14.2	15	20	Fair	Fair-Poor	Codominant stems, new growth, dead lead.
362	Black walnut (<i>Juglans nigra</i>)	1	12.7	12.7	15	25	Fair	Fair	Codominant stems at five feet, uneven canopy, new growth, dead branches.
363	Black walnut (<i>Juglans nigra</i>)	3	13.5, 12.8, 10.7	37.0	15	30	Fair	Fair	Multistem, included bark, mistletoe in canopy.
364	Black walnut (<i>Juglans nigra</i>)	1	13.1	13.1	20	35	Fair	Fair-Poor	New growth, lean, dead branches.

365	Black walnut (<i>Juglans nigra</i>)	3	16.2, 15.9, 15.8	47.9	20	35	Fair	Fair	Multistem, dead branches, new growth.
366	Black walnut (<i>Juglans nigra</i>)	1	13.0	13.0	15	25	Good- Fair	Fair	Decent structure, codominant stems at seven feet, new growth.
367	Valley oak (<i>Quercus lobata</i>)	1	5.3	5.3	8	20	Good- Fair	Fair	Decent canopy, some galls, some epicormic growth.
368	English walnut (<i>Juglans regia</i>)	4	10.2, 7, 5, 5	27.2	20	25	Good- Fair	Fair	New growth, multistem, dead branches.
369	Black walnut (<i>Juglans nigra</i>)	1	12.2	12.2	20	30	Good- Fair	Fair	Codominant stems above breast height, new growth, good branch attachment.
370	Black walnut (<i>Juglans nigra</i>)	1	18.9	18.9	15	35	Fair	Fair	Some new growth, minor lean, codominant stems at ten feet.
371	Black walnut (<i>Juglans nigra</i>)	4	16, 9, 10, 7	42.0	20	35	Fair	Fair-Poor	Decent canopy, crossing limbs, included bark.
372	Black walnut (<i>Juglans nigra</i>)	1	8.9	8.9	8	30	Good- Fair	Fair	Good canopy and new growth, slight lean, dead branches.
373	Black walnut (<i>Juglans nigra</i>)	2	7.8, 6.9	14.7	15	25	Fair	Fair-Poor	Codominant stems with wide angle, new growth, dead branches.
374	Black walnut (<i>Juglans nigra</i>)	3	10, 9.8, 7	26.8	20	30	Fair	Fair-Poor	Multistem with included bark, uneven canopy, on slope.
375	Black walnut (<i>Juglans nigra</i>)	4	5.5, 4, 4, 3	16.5	12	12	Fair- Poor	Fair-Poor	Multistem, dead branches, some new growth, declining.
376	Black walnut (<i>Juglans nigra</i>)	2	10.7, 9.6	20.3	15	23	Fair	Fair-Poor	Codominant stems with included bark, some new growth, dead branches, old CODIT.
377	Black walnut (<i>Juglans nigra</i>)	6	10.4, 8, 7.3, 6.7, 6, 6	44.4	15	25	Fair	Fair-Poor	New growth, multistem with included bark, some dead branches.
378	California buckeye (<i>Aesculus californica</i>)	9	5, 5, 4, 4, 3, 3, 3, 2, 2	31.0	10	13	Good- Fair	Fair-Poor	Healthy new growth, multistem, CODIT over dead wood on one of the leads.
379	English walnut	4	12.2, 11.1, 10.9, 10	44.2	22	30	Fair	Fair-Poor	Some new growth, multistem, fungus, old wounds, decent canopy.

	<i>(Juglans regia)</i>								
381	Black walnut <i>(Juglans nigra)</i>	4	12.4, 10.9, 10.8, 10	44.1	25	30	Fair	Fair-Poor	Codominant stems with some fungus, some new growth, dead branches.
382	Black walnut <i>(Juglans nigra)</i>	1	6.6	6.6	15	20	Good-Fair	Fair	New growth, decent canopy, dead branches, lean.
383	Black walnut <i>(Juglans nigra)</i>	3	8.8, 7.9, 5.6	22.3	15	30	Fair	Fair-Poor	Burrows at base, abnormal trunk growth, new bud growth.
384	Valley oak <i>(Quercus lobata)</i>	1	6.2	6.2	7	20	Fair	Fair	Under utility lines, epicormic growth.
385	Black walnut <i>(Juglans nigra)</i>	4	8, 7, 6, 6	27.0	15	20	Fair	Fair-Poor	Multistem, under utility lines, included bark, new growth.
386	Black walnut <i>(Juglans nigra)</i>	1	8.6	8.6	15	20	Good-Fair	Fair	Good new growth, trimmed for utilities, decent structure.
387	Black walnut <i>(Juglans nigra)</i>	2	26, 18	44.0	25	30	Fair	Fair	Uneven canopy from utilities, included bark, new growth.
388	English walnut <i>(Juglans regia)</i>	2	13.3, 10	23.3	20	30	Fair-Poor	Poor	Dead leads, fungus on main lead, sapsucker activity, multistem, some new growth.
389	Black walnut <i>(Juglans nigra)</i>	3	9, 9, 7	25.0	20	30	Fair	Poor	Estimated DBH, dense growth, dead leads, dead branches, new growth.
390	Valley oak <i>(Quercus lobata)</i>	1	6.6	6.6	10	25	Good-Fair	Fair	Heavy epicormic, trimmed for utilities, good new growth.
392	English walnut <i>(Juglans regia)</i>	2	8.5, 8	16.5	20	25	Fair	Fair-Poor	Good new growth, sprawling codominant stems, poor soil.
393	English walnut <i>(Juglans regia)</i>	2	13.8, 10.8	24.6	15	30	Fair	Fair-Poor	Multistem with several dead leads, good new growth.
394	Black walnut <i>(Juglans nigra)</i>	1	19.4	19.4	25	40	Fair	Fair-Poor	New growth, lean, dead branches.
395	Black walnut <i>(Juglans nigra)</i>	1	6.3	6.3	15	30	Fair	Fair-Poor	Good new growth, lean, dead branches.

396	Valley oak (<i>Quercus lobata</i>)	4	14, 14, 13, 10	51.0	25	40	Fair	Fair	Estimated DBH, dense growth. Multistem, galls, downward growth, lean, uneven canopy, one of the leads has a good structure.
397	California buckeye (<i>Aesculus californica</i>)	10	5.3, 4.5, 4.5, 4, 4, 3, 3, 3, 3	34.3	15	15	Good-Fair	Fair	Good new growth, multistem, CODIT.
398	Black walnut (<i>Juglans nigra</i>)	3	5, 5, 5	15.0	10	15	Fair-Poor	Fair-Poor	Estimated DBH, dense bush surrounding the tree. Not much new growth, multistem.
399	Chinese tallow (<i>Triadica sebifera</i>)	1	9.4	9.4	12	25	Fair	Fair	Not a lot of new growth, included bark.
400	Black walnut (<i>Juglans nigra</i>)	7	10, 9, 8, 8, 7, 6, 5	53.0	20	30	Fair	Fair-Poor	Estimated DBH, dense branches. Multistem, good new growth.
401	Black walnut (<i>Juglans nigra</i>)	5	9, 8, 8, 7, 4	36.0	20	30	Fair	Fair	Dense branch growth, estimated DBH. Multistem, good new growth.
402	English walnut (<i>Juglans regia</i>)	5	12.1, 7.9, 7, 6, 5	38.0	20	30	Good-Fair	Fair	Multistem, good new growth, old CODIT, included bark.
403	Black walnut (<i>Juglans nigra</i>)	6	5.1, 3, 2, 2, 2, 1	15.1	15	25	Fair	Fair-Poor	Good new growth, dead main leads, multistem.
404	English walnut (<i>Juglans regia</i>)	3	12.3, 10, 8.8	31.1	20	25	Fair	Fair-Poor	Multistem, dead branches, some new growth.
405	Black walnut (<i>Juglans nigra</i>)	1	30.3	30.3	35	45	Fair	Fair-Poor	Lean, multistem at five feet, new growth, epicormic growth.
465	Sycamore (<i>Platanus racemosa</i>)	1	7.9	7.9	12	33	Fair	Fair	Decent structure, epicormic growth, new buds, some dead branches, codominant stems at 12 feet, old nest in canopy.
406	Valley oak (<i>Quercus lobata</i>)	1	16.1	16.1	17	37	Fair	Fair	Dense epicormic growth, some galls, codominant stems at five feet,

									included bark, CODIT, new buds.
407	Valley oak (<i>Quercus lobata</i>)	1	10.1	10.1	15	35	Good-Fair	Good-Fair	Slight lean, some epicormic growth, CODIT, new growth.
408	Valley oak (<i>Quercus lobata</i>)	2	5.9, 4.8	10.7	13	30	Good-Fair	Fair	Codominant stems, decent structure, new growth.
409	Elderberry (<i>Sambucus nigra</i>)	20	8, 7, 7, rest between 2-6	22.0+	15	25	Fair-Poor	Fair-Poor	Estimated DBH due to dense growth. Very dense mangled growth, epicormic growth, CODIT, new growth.
410	Valley oak (<i>Quercus lobata</i>)	2	14.8, 11.6	26.4	25	33	Good-Fair	Fair	Codominant stems and multistem just above DBH, decent structure, CODIT, new growth.
411	Valley oak (<i>Quercus lobata</i>)	1	11.4	11.4	25	38	Fair	Good-Fair	Good structure, epicormic growth, galls, some CODIT and some lack of CODIT.
412	Elm (<i>Ulmus sp.</i>)	3	12, 11, 10	33.0	10	35	Fair-Poor	Fair-Poor	Estimated DBH, removed lead, dense epicormic growth, multistem with included bark at base, some peeling bark.
413	Coast live oak (<i>Quercus agrifolia</i>)	2	28.6, 19.5	48.1	25	48	Fair	Fair	Healthy canopy on one side of codominant stems, other side has dieback. Included bark at codominant stems.
414	Coast live oak (<i>Quercus agrifolia</i>)	3	14.4, 12.4, 10.4	37.2	30	35	Fair	Fair-Poor	Fallen coast live oak that has continued to grow and has corrected its growth. Healthy, dense canopy.
459	California buckeye (<i>Aesculus californica</i>)	7	7.2, 5, 4.6, 4, 4, 4, 3	31.8	20	20	Good-Fair	Fair	Multistem, good canopy, recently pruned.
458	Valley oak (<i>Quercus lobata</i>)	1	22.0	22.0	30	45	Fair	Fair	Estimated DBH, dense epicormic growth. Multistem at 15 feet, galls, new growth, even canopy.
415	Prunus (<i>Prunus sp.</i>)	2	9, 7	16.0	25	33	Good-Fair	Good-Fair	Estimated DBH, dense brush. Decent even canopy, new growth, codominant stems.

416	Black walnut (<i>Juglans nigra</i>)	1	19.0	19.0	30	30	Good-Fair	Fair	Estimated DBH, dense brush. Good new growth, multistem and poor structure at six feet.
417	Chinaberry tree (<i>Melia azedarach</i>)	3	8, 6, 5	19.0	17	20	Good-Fair	Fair	Estimated DBH, dense brush. Decent even canopy, multistem with included bark.
418	California buckeye (<i>Aesculus californica</i>)	6	6.1, 5.2, 5.1, 4.6, 3, 2.5	26.5	15	15	Good-Fair	Fair	Multistem at base, healthy canopy, CODIT.
419	Ceanothus (<i>Ceanothus sp.</i>)	10	6, 6, 5, 5, 4, 4, 4, 3, 3, 3	43.0	20	20	Fair	Fair	Estimated DBH, dense branch growth. Multistem with dead branches, lack of CODIT, decent canopy.
420	Black walnut (<i>Juglans nigra</i>)	3	5.8, 5.4, 4	15.2	15	25	Good-Fair	Fair	Multistem at one foot, good canopy, new growth, some epicormic growth.
421	Black walnut (<i>Juglans nigra</i>)	4	12.2, 10.6, 10.3, 10.1	43.2	23	35	Good-Fair	Fair	Multistem at one and three feet, new growth, even canopy, some dead branches.
422	Black walnut (<i>Juglans nigra</i>)	3	7.2, 7.1, 6.4	20.7	20	35	Good-Fair	Fair	Multistem with decent branch attachment, some dead branches, good new growth, even canopy
423	Unknown	3	10.2, 9, 4.7	23.9	23	30	Fair	Fair-Poor	Deep included bark and winding trunks, decent canopy, some dead branches and epicormic growth.
424	Valley oak (<i>Quercus lobata</i>)	2	13.8, 6.3	20.1	25	45	Fair	Fair	Codominant stems at base with included bark, some galls, compact soil, epicormic growth, good new growth, minor lean.
425	Chinaberry tree (<i>Melia azedarach</i>)	1	18.0	18.0	25	30	Good-Fair	Fair	Estimated DBH, behind bramble. Decent canopy, multistem above DBH with included bark.
426	Valley oak (<i>Quercus lobata</i>)	2	17.2, 14.5	31.7	25	45	Fair	Fair	Codominant stems with included bark, epicormic growth, pruning cuts without CODIT, decent

									canopy, even weight, old CODIT, new growth.
427	Valley oak (<i>Quercus lobata</i>)	2	16.7, 10.4	27.1	20	40	Fair	Fair	New growth, multistem with included bark, galls, CODIT, some lack of CODIT.
428	Valley oak (<i>Quercus lobata</i>)	1	20.6	20.6	25	45	Fair	Fair	Codominant stems at 12 feet, some galls, downward growth and epicormic growth, decent canopy and new growth, CODIT.
429	Valley oak (<i>Quercus lobata</i>)	2	16.2, 12.8	29.0	25	45	Fair	Fair	Decent canopy with new growth, codominant stems with deep inclusion, some galls and dead branches, even canopy.
430	Coast live oak (<i>Quercus agrifolia</i>)	1	11.6	11.6	15	25	Fair	Fair-Poor	Growing with Valley oak (<i>Quercus lobata</i>), heavy lean, epicormic growth, good canopy, CODIT and lack of CODIT.
431	Valley oak (<i>Quercus lobata</i>)	2	21.1, 10	31.1	25	45	Fair	Fair-Poor	Growing with coast live oak, codominant at three feet, included bark, galls, downward growth, new growth, decent canopy.
697	Coast live oak (<i>Quercus agrifolia</i>)	1	9.0	9.0	15	25	Good-Fair	Fair	Estimated DBH, dense bramble, codominant stems at five feet, lean, good canopy, CODIT, new growth.
698	Valley oak (<i>Quercus lobata</i>)	2	22.9, 5.5	28.4	25	50	Good-Fair	Fair	CODIT, codominant stems at ten feet, even canopy, pruning cuts without CODIT.
432	Valley oak (<i>Quercus lobata</i>)	1	24.1	24.1	30	45	Fair	Fair-Poor	Codominant stems with heavily included bark at ten feet, bird box in tree, downward growth, good canopy with new growth, some galls, slight lean away from path.
433	Black walnut (<i>Juglans nigra</i>)	3	12.1, 10.6, 10.4	33.1	23	35	Good-Fair	Fair	Multistem with removed lead, pruning cuts, healthy new growth, even spread, decent canopy.

434	Black walnut (<i>Juglans nigra</i>)	6	8.5, 8.3, 8.3, 4, 3.5, 3	35.6	25	35	Good-Fair	Fair	Multistem at base, good canopy and even structure, new growth.
435	Black walnut (<i>Juglans nigra</i>)	1	9.0	9.0	17	35	Fair	Fair	Estimated DBH, next to owl roost. Codominant stems above DBH, decent canopy, uneven structure, some dead branches.
436	Black walnut (<i>Juglans nigra</i>)	4	9, 9, 7, 6	31.0	25	35	Good-Fair	Fair	Estimated DBH, next to owl roost. Multistem, decent canopy, new growth, some included bark.
437	Black walnut (<i>Juglans nigra</i>)	1	29.7	29.7	25	40	Good-Fair	Good-Fair	Codominant stems at five feet with good branch attachment, decent canopy, some dead branches, new growth
438	Black walnut (<i>Juglans nigra</i>)	3	25.7, 14.9, 14.7	55.3	30	45	Good-Fair	Fair	Multistem with good branch attachment, dead branches, good canopy, new growth, some CODIT.
439	English walnut (<i>Juglans regia</i>)	2	9.2, 8.3	17.5	28	30	Fair	Fair	Codominant stems with decent branch attachment, peeling bark, some new growth, dead branches, epicormic.
440	Black walnut (<i>Juglans nigra</i>)	3	26, 20.6, 15.8	62.4	25	40	Fair	Fair	Decent canopy, some dieback and dead branches, multistem, new growth.
441	English walnut (<i>Juglans regia</i>)	4	8.1, 7.5, 7.2, 6.8	29.6	20	25	Fair	Fair	Multistem, new growth, decent structure, dead branches.
442	Black walnut (<i>Juglans nigra</i>)	3	31, 30.5, 26.5	88.0	35	45	Good-Fair	Fair	Decent canopy, multistem, even canopy with new growth, some dead branches.
443	English walnut (<i>Juglans regia</i>)	2	7.7, 7.4	15.1	17	25	Good-Fair	Fair	Good new growth, decent canopy, codominant at base with included bark.

444	English walnut (<i>Juglans regia</i>)	5	13.2, 10, 9.9, 8.7, 8.4	50.2	25	35	Good-Fair	Fair	Decent canopy, multistem, new growth.
445	English walnut (<i>Juglans regia</i>)	3	10.5, 10.4, 9.2, 4	34.1	25	30	Poor	Fair-Poor	Fungus, multistem with included bark, peeling bark, dead branches.
446	English walnut (<i>Juglans regia</i>)	4	7.8, 7.7, 7.2, 6.8	29.5	25	30	Fair-Poor	Fair-Poor	Multistem with dead lead, dead branches, peeling bark.
447	Black walnut (<i>Juglans nigra</i>)	5	6, 5.8, 3, 3, 3	20.8	15	30	Good-Fair	Fair	Decent canopy and new growth, slight lean, multistem.
448	Black walnut (<i>Juglans nigra</i>)	3	25.5, 19.1, 17.9	62.5	25	40	Fair	Fair	Multistem, some downward growth and dead branches, new growth, even canopy.
449	English walnut (<i>Juglans regia</i>)	1	14.4	14.4	25	33	Fair	Fair	Low spreading canopy, dead branches, new growth, codominant stems at five feet.
450	Black walnut (<i>Juglans nigra</i>)	3	36, 18.2, 20.5	74.7	30	45	Fair	Fair-Poor	New growth, dead branches and fallen lead, spreading low canopy.
982	Chinese tallow (<i>Triadica sebifera</i>)	1	15.7	15.7	17	30	Good-Fair	Good-Fair	New growth, one spot of mistletoe, old pruning wounds, good even structure.
983	Chinese tallow (<i>Triadica sebifera</i>)	1	15.5	15.5	15	30	Good-Fair	Good-Fair	Good structure, new growth, old pruning wounds, good branch attachments, even canopy.
984	Black walnut (<i>Juglans nigra</i>)	9	17.9, 16.8, 15.2, 14.9, 13.9, 13.8, 13.7, 9.6, 7.5	123.3	35	35	Good-Fair	Fair-Poor	Multistem sprawling structure with a couple dead leads, new growth, even canopy, good branch attachments.

*CODIT = Compartmentalization of Decay in Trees

Trees highlighted in red are offsite trees

Trees highlighted in green are onsite trees

Attachment D

Tree Protection Measures

GENERAL PROTECTION GUIDELINES FOR TREES PLANNED FOR PRESERVATION

To prevent soil compaction:

- Six to eight inches of wood chips should be spread inside the dripline of trees where temporary construction traffic or staging would occur. Chips should be removed after project completion, or the depth reduced to no more than four inches. Alternatively, bridging root areas with steel plates would reduce damage to roots within construction traffic areas.
- A circle with a radius measurement from the trunk of the tree to the tip of its longest limb, plus one foot, shall constitute the critical root zone protection area of each protected tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each protected tree. Removing limbs that make up the dripline does not change the protected area.

To reduce damage due to raising the existing grade:

- Grading within the protected zone of a protected tree shall be minimized. Cuts within the protected zone shall be maintained at less than 20 percent of the critical root zone area. Grade cuts shall be monitored by the Project Arborist. Any damaged roots encountered shall be root pruned and properly treated as deemed necessary by the Project Arborist.
- Construct an open-joint wall of shell, brick, rock, or masonry in a circle around the tree trunk, with at least one to two feet between the wall and trunk. This wall should be as high as the top of the new grade. This opening is commonly referred to as a tree well.
- If fills exceed one foot in depth up to 20 percent of the critical root zone area, aeration systems may serve to mitigate the presence of the fill materials as determined by the Project Arborist.
- Construct an aeration system using four-inch agricultural clay tile or four-inch perforated plastic pipe arranged in five to six horizontal lines radiating from the tree well, like spokes in a wheel, to a point beyond the branch spread. Allow excess moisture to drain away by installing the radial lines so they slope away from the trunk. Connect the outer ends of the radiating system with a circle of tile or perforated plastic pipe.
- To provide vents, place four- or six-inch plastic pipe or bell tile upright over the junction of the radial lines with the circle. They should extend to the surface of the planned grade level. Extend the lower end of the aeration system to a curb or storm drain to carry excess moisture away from the root system.
- Cover the exposed soil and tile system with rock or coarse gravel to a depth of six to 18 inches, depending on the amount of fill. Follow this with a covering layer of gravel. Place a thin layer of straw, woven plastic, or other porous material over the gravel to prevent soil from filtering into the gravel and stone. Fill with good topsoil to the desired grade.
- When fill materials are deemed necessary on two or three sides of a tree, it is critical to provide for drainage away from the critical root zone area of the tree (particularly when considering heavy winter rainfalls). Overland releases and subterranean drains dug outside the critical root zone area and tied directly to the main storm drain system are two options.
- The construction of impervious surfaces within the dripline of a protected tree shall be minimized. When necessary, a piped aeration system shall be installed under the direct supervision of the Project Arborist.
- Preservation devices such as aeration systems, tree wells, drains, and special paving and cabling systems must be installed in conformance with approved plans and certified by the Project Arborist.

- To discourage rodents, fill the tree well with enough coarse gravel to cover the ends of the lines opening into the well. Also fill the upright bell tile and cover with a screen or grill.
- Minor roots less than one inch in diameter encountered during approved excavation and/or grading activities may be cut, but damaged roots shall be traced back and cleanly cut behind any split, cracked, or damaged area as deemed necessary by the Project Arborist.
- Major roots greater than one inch in diameter encountered during approved excavation and/or grading activities may not be cut without approval of the Project Arborist. Depending upon the type of improvement being proposed, bridging techniques or a new site design may need to be employed to protect the roots and the tree.
- Cut faces, which will be exposed for more than two to three days, shall be covered with dense burlap fabric and watered to maintain soil moisture at least on a daily basis (or possibly more frequently during summer months). If any native ground surface fabric within the protected zone must be removed for any reason, it shall be replaced within 48 hours.
- In cases where a permit has been approved for construction of a retaining wall(s) within the protected zone of a protected tree the applicant will be required to provide for immediate protection of exposed roots from moisture loss during the time prior to completion of the wall. The retaining wall within the protected zone of the protected tree shall be constructed within 72 hours after completion of grading within the root protection zone.

General Construction Site Recommendations

- A minimum four-foot-tall, brightly colored, synthetic fence should be installed around the limits of the work area or around outermost edge of the protected zone of trees that are designated for retention on-site. Encroachment into the fenced areas should be restricted to the minimum amount feasible and fencing should remain in place until all construction activities have ceased. The protected zone is defined as the “dripline” (which is an imaginary line that is drawn on the ground around the tree at the outermost limit of the canopy) or in cases where construction is encroaching on the dripline of a retained tree, the protected zone is the portion of the tree’s dripline that is being protected. Fencing shall be installed in accordance with the approved fencing plan prior to the commencement of any grading operations or such other time as determined by the City of Davis. The developer shall contact the Project Arborist and the Planning Department for an inspection of the fencing prior to commencing construction activities on-site.
- Signs shall be installed on the protective fence in four equidistant locations around each individual tree. The size of the sign must be a minimum of two by two feet and must contain the following language: “Warning: This Fence Shall Not Be Removed or Relocated Without Written Authorization From City of Davis” Protective fencing shall remain in place throughout the entire construction period and shall not be removed, relocated, taken down, or otherwise modified without prior written authorization.
- All portions of permanent fencing that will encroach into the protected zone of a protected tree shall be constructed using posts set no closer than 10 feet on center. Posts shall be spaced in such a manner as to maximize the separation between the tree trunks and the posts in order to reduce impacts to the trees(s).
- The fenced area should be kept clear of building materials, waste, and excess soil.
- No digging, trenching, compaction, or other soil disturbance should be allowed in the fenced area.

- The storage of construction equipment or hazardous materials such as gasoline, oil, or other toxic chemicals should not be allowed in or adjacent to the fenced area.
- Storage areas for equipment, soil, and construction materials, as well as burn sites (if permitted), cement washout pits, and construction work zones, should be kept away from protected trees and outside the fenced-in area.
- Cable, chain, rope, or signage should not be attached to retained trees.
- Designated roads and parking areas should be established. All construction personnel should be restricted to driving and parking in designated areas. Discharge of exhaust from construction vehicles and equipment should not be allowed near the protected zone of trees.
- Grade changes should be avoided near fenced areas to the maximum extent possible.
- No sprinkler or irrigation system shall be installed in such a manner that sprays water or required trenching within the dripline of a protected tree. An above-ground drip irrigation system is recommended. An independent low-flow drip irrigation system may be used for establishing drought-tolerant plants within the protected zone of a protected tree. Irrigation shall be gradually reduced and discontinued after a two-year period.
- Landscaping beneath native oak trees may include non-plant materials such as bark mulch, wood chips, boulders, etc. Planting live material under protected native oak trees is generally discouraged and is not recommended within six feet of the trunk of a native oak tree with a diameter at breast height (DBH) of 18 inches or less, or within 10 feet of the trunk of a native oak tree with DBH of more than 18 inches. The only plant species that shall be planted within the dripline of native oak trees are those that are tolerant of the natural, semi-arid environs of the tree(s).

Recommendations for Construction Activities in the Vicinity of Retained Trees

- Any protected trees on-site that require pruning shall be pruned by an International Society of Arboriculture (ISA) Certified Arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute (ANSI) A300 pruning standards, ANSI Standard 2133.1-2000 regarding safety practices, and the ISA “Tree Pruning Guidelines” and Best Management Practices.
- Trenching within the dripline of retained trees should be avoided to the maximum extent practicable and kept a minimum distance of 10 times the diameter of the tree away from its trunk. If necessary, this trenching should be conducted using hand excavation or compressed air to reduce impacts to tree roots. Machine trenching should not be allowed within the dripline of retained trees. Trenching inside the dripline should be monitored by a certified arborist who may direct the construction crew to use hand tools rather than heavy equipment. Hand saws, pass-through pruners, shovels and trowels, burlap cloth, and water should be available at all times during trenching inside the dripline. If pipes must be installed closer to the tree than a distance of 10 times the diameter of the tree away from its trunk, they should be bored beneath the tree a minimum of three feet below the ground surface to reduce impacts to roots.
- Excavation should also be minimized within the dripline of retained trees. Construction within the dripline of retained trees should be conducted in a manner that minimizes excavation and provides for the best preservation of roots as determined by the Project Arborist.
- If tree roots are severed outside of the fenced area, they should be severed cleanly and kept moist. All exposed roots outside of fenced areas should be covered with protective material during construction such as mulch or plywood sheets to reduce soil compaction. Protective material should be removed upon completion of construction activities.

- Construction activities involving soil disturbance should be avoided during hot, dry weather and trees shall be watered before, during, and after trenching and excavation within the dripline of retained trees to offset water loss due to cut roots.
- Grading within the driplines of retained trees should be avoided wherever feasible.
- Any removal of paving or structures (i.e. demolition) that occurs within the dripline of a protected tree shall be done under the direct supervision of the Project Arborist.
- No signs, ropes, cables (except those which may be installed by an ISA Certified Arborist to provide limb support) or any other items shall be attached to the protected trees. Small metallic numbering tags for the purpose of identification in preparing tree reports and inventories shall be allowed.
- No vehicles, construction equipment, mobile homes/office, supplies, materials, or facilities shall be driven, parked, stockpiled, or located within driplines of protected trees.
- Drainage patterns on the site shall not be modified so that water collects, stands, or is diverted across the dripline of any protected tree.
- No trenching shall be allowed within the driplines of protected trees, except as specifically approved by the Planning Department as set forth in the project's Conditions of Approval and/or approved tree permit. If it is necessary to install underground utilities within the dripline of a protected tree, hand tools should be utilized to avoid root injury under the direct supervision of the Project Arborist.

Recommendations for Protection of Trees Post-Construction

- Post-construction inspections of the trees should be conducted by a Certified Arborist or Certified Tree Worker to determine if retained trees are stressed (e.g., water stress, nutrient stress) or damaged (e.g., broken branches, trunk damage). Appropriate corrective actions should be implemented as necessary. Such corrective actions may include remediation of severe soil compaction through vertical mulching or a similar technique, remedial pruning to repair damaged or broken limbs, application of mulch, application of root stimulant to encourage new root growth in trees that have a significant portion of their roots lost due to cutting or soil compaction, etc.
- Aeration of soil by vertical mulching or similar technique should be implemented around retained trees to offset the impacts of soil compaction that has already occurred due to construction activities and other site uses.
- Long term maintenance should also be conducted by a Certified Arborist or tree care specialist to assist the trees with recovering from construction-related stress and may include watering, fertilization, pruning, and/or pest/disease control.