Arborist Report
Ashby Road Campus
December 2019

Prepared for:

Jason Vine, P.E.

Real Engineering

1767 Market Street, Suite C
Redding, CA 96001

Oak Tree, Shasta County, California

Prepared by:

John Alderson M.S.

Certified Arborist

CONTENTS

Introduction……3

General Overview……3

Stand Descriptions……5

Wildlife……7

Forest Management Plan……7

Tree Removal and Replacement……8

Summary……9

Figure 1 – Stand Map……10

Figure 2 – Tree Removal and Replacement Plan - Sheet L3……11

Table 1 – Comprehensive Tree Inventory……12

Table 2 – Protected Tree Inventory……13

INTRODUCTION

The purpose of this report is to develop a plan that will serve to guide the planning, design, construction and short and long-range management of both the project and associated forest on the property. The goal of this plan is to cost effectively develop a thriving business enterprise while fully complying with the Shasta Lake Tree Conservation Ordinance Chapter 12:36. In doing this it is the goal of the owners to develop and implement a forest management plan that will preserve the existing forest resources on the property to the greatest extent possible while also providing for the long term management of both the individual trees and the community of trees on the property that is part of the Urban forest in the City of Shasta Lake.

GENERAL OVERVIEW

The proposed Ashby Road Campus property (Shasta County APNs 006-020-056 & 057) has a diverse range of vegetation on the property that begins with a typical riparian forest with associated blackberries and poison oak along the stream on the south side. The meadows on the slopes above to the north have widely spaced oak trees typical of an oak savanna. Further to the north the oak savanna transitions into an upland forest on the ridge with an over story of grey pine, and an intermediate story of blue, black and interior oaks with an understory of oak, manzanita, poison oak and Toyon. This understory forms thickets of dense brush. This diversity provides habitats for a wide range of wildlife that are endemic to this area, but also a heavy loading of fire fuels along the stream and on the ridge.

Soils of the property are a tight clay loam with small angular gravel. Clay holds moisture in the soil tightly and makes water stress more of a factor in the summer. Therefore, trees and vegetation on this property do not exhibit rapid growth rates unless they are located in an area with higher soil moisture.

The property experienced a fire 20-plus years ago, that burned from the southwest to the northeast and heavily scarred many of the oaks on the southwest side. Some of these trees have serious decay, developing cavities which will eventually cause them to die or break and fall. Other trees have been able to heal (and even seal off wounds) and will live a long and normal life without risk of structural failure. The cavities are important for wildlife, but there are many oaks on the property with serious wounds from the fire, which was a factor in their ratings in the tree inventory.

Decades ago many interior and blue oaks were harvested on this property possibly for firewood or wood for other uses. Their stumps have sprouted and grown into clumps that form two to as many as twelve or more stems, or “mottes”. These trees can be significant features in the landscape aesthetically and often provide shelter for wildlife. Unfortunately, many of these stems have decay at the point of attachment to the old stump, which can spread into the trunk and cause basal decay and cavities that make the trees structurally weak and prone to failure. Similar to the trees that were heavily scarred by fire, these trees develop into mottes that have the same problems. The stems can also form pockets that hold water at their bases where they

grow closely together. This can also result in decay that causes structural weaknesses. Some of the trees, particularly interior oaks, heal over decay at the attachment to the old stump or over developed problems and will seal it off – allowing for development of structurally sound trees. A second problem that develops on trees that have grown from harvested or fire killed stumps, as well as other trees from a variety of causes, is the formation of included bark. Included bark results when two stems grow together at their points of origin and press against each other but are not joined by wood. This results in flattened, instead of round, stems that are structurally weaker and prone to decay at the point where they fork. This also occurs in the forks of trees that branch into two or more stems near the base of forks or forks formed by branches in the crowns of trees. Grey pine in particular is prone to included bark between their branches in the crowns.

This property has many mature grey pines which are notorious for wind throw due to their weak root systems and the prevalence of hard pans in the soil in this region which prevent the formation of deep well anchored root systems. No wind thrown grey pine were found on this property and only one interior oak appears to be growing in an area with wet spring soil. This is attributed to the soil on the property and the absence of a hard pan which is more likely to form on level sites. There are many leaning grey pine and other leaning species on this property. Leaning trees often lean for decades without falling. It is not necessary to remove leaning trees just because they are leaning. However, if the soil on the side away from the lean begins to lift, that is an indicator that the tree is beginning to move and should be removed if there is a risk that it would fall on something of value which includes other trees.

This is true for all the structurally compromised trees on the property that have been identified by the tree inventory tables in Table I as well as other trees. Trees frequently develop defects or rooting problems that can result in structural failure. This is not considered to be a great concern unless there is what is called a target. This means if the tree has the potential to fall on structures, vehicles, people, livestock, valuable trees or other assets in the landscape. This means that some protected trees which pose a risk may have to be removed and replaced to eliminate unacceptable risk during development.

In the area of risk, it is necessary to mention the dense brush and high fuel loading that exists on the ridge that runs roughly from east and west on the northern portion of the property. This report includes proposed management plans to reduce the risk of wildfire that could damage the forest, development on the property and pose a risk to people that will work there. The risk of fire is increased by the use of this property as a homeless encampment at times and the occasional use by neighbors as a park. It is anticipated that activity on the property will reduce the level of homeless activity and it was noted that the Sheriff's Department is actively discouraging this type of activity.

STAND DESCRIPTIONS

Random Trees
For the purpose of the report, random trees are trees growing either singularly or in small mottes or clumps that are not large enough to be considered a stand or have a canopy that is contiguous with a stand. These trees are scattered randomly over the property and consist of blue oak *Quercus douglasii,* interior oak *Quercus wislinzenii,* black oak *Quercus kelloggii,* grey pine *Pinus sabinianna* and oracle oak *Quercus X morehus* Kell.

Stand A
Stand A consist of blue oak *Quercus douglasii,* interior oak *Quercus wislinzenii,* black oak *Quercus kelloggii,* grey pine *Pinus sabinianna* and oracle oak *Quercus X morehus* Kell. If you enter the property from the southernmost entrance from Ashby Road, this stand begins at the top of the slope to your right. This stand has an over story of mature scattered grey pine over an intermediate canopy of mature oaks with either very little or no understory of brush to dense oak brush that create a heavy fuel loading. The location of all the stands can be seen in **Figure 1**.

Stand B
Moving north across the proposed road, you enter stand B which continues to the north property line. This stand has occasional grey pine as tall as 100 feet. Other species include blue oak*,* interior oak*,* black oak, grey pine, and oracle oak. This stand is mostly open but also has areas of understory that form thick brush consisting mostly of oak saplings. This creates a heavy loading of fire fuels in some areas.

Stand C
In the northwest corner of the property, Stand C also has an over story of grey pine that are more numerous than in Stands A and B. There is an intermediate story of mostly interior oak but also a scattering of blue, black and oracle oak. The primarily difference in this stand, is that the understory transitions from thick oak saplings forming dense brush in places to white leaf manzanita *Arctostapbylos viscida* and toyon *Heteromeles arbutifolia* that also form thick brush and heavy fuel loadings.

Stand D
This is a smaller stand along the west property line consisting of over story of mature grey pine with an open understory of mostly interior oak to 20 feet and occasional black oak and blue oak, all of which form small patches of brush. This stand forms a connection between the large forested track to the west and this property. However, the deer are more likely to travel through the north south trails in Stand F and the open meadows where they feed on their way to the thick brush area on the ridge where they sometimes bed. Approximately 20 mature grey pines were removed from this stand prior to the most recent survey, as they were deemed a threat to the power lines that run along the west property line by the Electric Utility.

Stand E

Consists of blue and interior oaks, forming a circular stand in the meadow that runs through the center of the property. These trees range in diameter at breast height (DBH) from five to almost twenty inches. Many have scars from past fires and some are mottes sprouting from stumps that were cut for firewood or other uses. A high percentage have decay and cavities at their base. This stand is unique on this property because there is no understory or regeneration. It will be necessary to plant trees to form a widely-spaced understory that will replace the many over mature trees in this stand as they die out. This stand is an attractive feature on the property.

Stand F

Stand F are those trees that grow within the riparian zone along the creek on the south border of the property. This stand has more species diversity than the other stands in that the interior oaks, blue oaks and grey pine that are present, but also cottonwoods *Populus trichocarpa,* incense cedar *Libocedrus decurrens, and* willow *Salix sp.* In this stand, trees are more widely spaced and are seldom grouped by species and grow in mixed stands. They also tend to be larger specimens for each species along the creek due to the alluvial soils and the potential to sink roots down to the water table associated with the creek. There is thick brush along the creek consisting of a mixture of tree saplings, bushes such as poison oak *Toxicodendron diversilobun,* Himalayan blackberries *Rubus armemoacus,* and native blackberries *Rubus ursinus*.

The Himalayan black berries form thick brambles, and the poison oak both grow as bushes and vines that climb the trees. Anyone venturing into the brush along the creek would do well to heed the translation of the genus species of this plant which means “diverse toxic leaves”. The diverse designation refers to the chameleon like leaves that are highly diverse in their shape, size, and color, making them hard to recognize. After this species drops its leaves in early fall the branches and vines become virtually indistinguishable from other species they grow in association with. Both the blackberries and poison oak are considered aggressive weeds, but have value as preferred by browsing species such as deer which feed along the creek and on the emerging forbs and legumes in the meadow on the slope to the north.

WILDLIFE

There is abundant wildlife on the property. Some spotted wildlife were vultures *Buteo vulgarias,* ravens *Corvus coorax,* crows *Corvus bracbynchos,* owls *Bubo virginianus*, hawks *Buteo sp*., scrub jays *Aphelocoma coerolescens*, robins *Turdus migratorus*, yellow warblers *Dendroica petechia*, wood peckers *Palaeopicus sp*., and humming birds *Archilochus sp.*.
The property abounds with black tailed deer *Odocolleus hemionus* sign and deer are frequently sighted on the property. Black Bear *Ursus americanus* scat can be found in the berry patches, and the trees are filled with an abundance of bird nests. The prevalence of bird nests is so high that it is possible that the area is used by one of the smaller herons or egrets as a rookery. Crows and ravens also sometimes nest in association with each other. Some of the nest could be squirrel *Sciurus nigria* nests that sometimes use the platforms built by nesting birds to build a globular nest on top the bird nest. At least a half dozen dusky footed wood rats *Neotoma fuscipes* nests were found at the base of trees. This is a very clean beautiful arboreal and nocturnal rodent that is seldom seen, also known as a pack rat. These are also reported to nest in trees and may account for some of the tree nests. The grey pine often have large mounds of pine cones that have been chewed up at their bases which might be either squirrels or the pack rats.
The abundance of wildlife on the property is a direct result of the diversity of trees and vegetation on the property. It is the intent of the property owners to develop and manage the property in a manner that will retain and enhance this healthy ecosystem.

FOREST MANAGEMENT PLAN

To support the development of a specific tree removal and replacement plan as well as communities of trees, seven distinct stands of trees were identified (**Figure I)**. Protected trees that are not part of a stand of trees have been tagged and inventoried as random trees. Protected trees on the perimeter of a stand of trees near a proposed road or structures have been tagged and inventoried with all relevant information. Protected trees that will be removed during the construction of this project have been surveyed and tagged per this project's grading and construction plans (Please see Tree Removal and Replacement Plan - Sheet L3, attached).
Of concern to the developer and the Shasta Lake Fire Protection District, is the heavy fuel loading from an understory of thick brush in Stands A, B, and C. In particular, Stand C is located directly adjacent to an existing large industrial operation (Sierra Pacific Industries Saw Mill) that could pose a serious threat to the security of the City of Shasta Lake in the event of a wildfire. To reduce the risk of wildfire to the property, the proposed project, and the neighboring large industrial operation, it is proposed that the thick brush in Stands A and B be thinned, and that the majority of Stand C be removed. Thinning would be done by selectively removing individual trees and brush, to create an uneven age stand of trees that would provide for a natural succession of the younger understory that will replace the over mature trees as they age, fall apart, and die. This would include instances of older defective protected class trees being

removed to allow the release of younger healthier trees, where deemed beneficial to the forest. The slash from the brush removal would be chipped and broadcast on site.
The thinning would be done a manner that would provide for a canopy that provides enough shade that the regrowth of brush would be shaded out as the thinned stand grows and the canopy closes as far as possible. However, it should be noted that oaks and other plants are shade tolerant, and where necessary herbicides would be used to prevent the regrowth of brush sprouts and regeneration in excessive amounts. In addition, where there are openings in the canopy, it will be necessary to provide for the long-term control of brush. To accomplish this, interior oaks, blue oaks, and black oaks are proposed for planting that will eventually shade out the brush. Oak tree planting to fill in the canopy where necessary would be accomplished by using chips from the brush that was removed to make rings of chips six feet in diameter, and at least six inches deep. All organic matter would be removed in the ring down to bare soil then treated with a pre-emergent herbicide to reduce the germination of seeds in the soil that would compete with the new tree. The tree would then be planted, and chips would be placed in the ring.

TREE REMOVAL AND REPLACEMENT

A comprehensive tree survey was performed of the property to inform a specific tree removal and replacement plan that complies with the City of Shasta Lake's Tree Conservation Ordinance. 239 trees were identified, evaluated, and surveyed on the property (please see Table 1). 38 of these trees were considered to be dead, dying, and/or dangerous. There are 133 Protected Trees on the property, meaning that they are living and have at least one trunk of greater than ten inches DBH, excluding grey pines (please see Table 2). Of the 133 Protected Trees, 48 will be removed as a result of project development, leaving 85 Protected Trees on the property following project development. 109 of the 239 trees identified, evaluated, and surveyed on the property will be removed as a result of project development and thinning to establish a fire resilient forest on the property.
To comply with the tree planting standards of the City's Tree Conservation Ordinance, the developer proposes to plant 327 trees in 15-gallon pots throughout the property (please see Tree Removal and Replacement Plan - Sheet L3, attached). We propose that the Planning Commission accept our Forest Management Plan and Tree Removal and Replacement as meeting the requirements for preserving and replacing Protected Trees as a result of project development as allowed by Section 12.36.065 of the City's Tree Conservation ordinance on the following grounds:

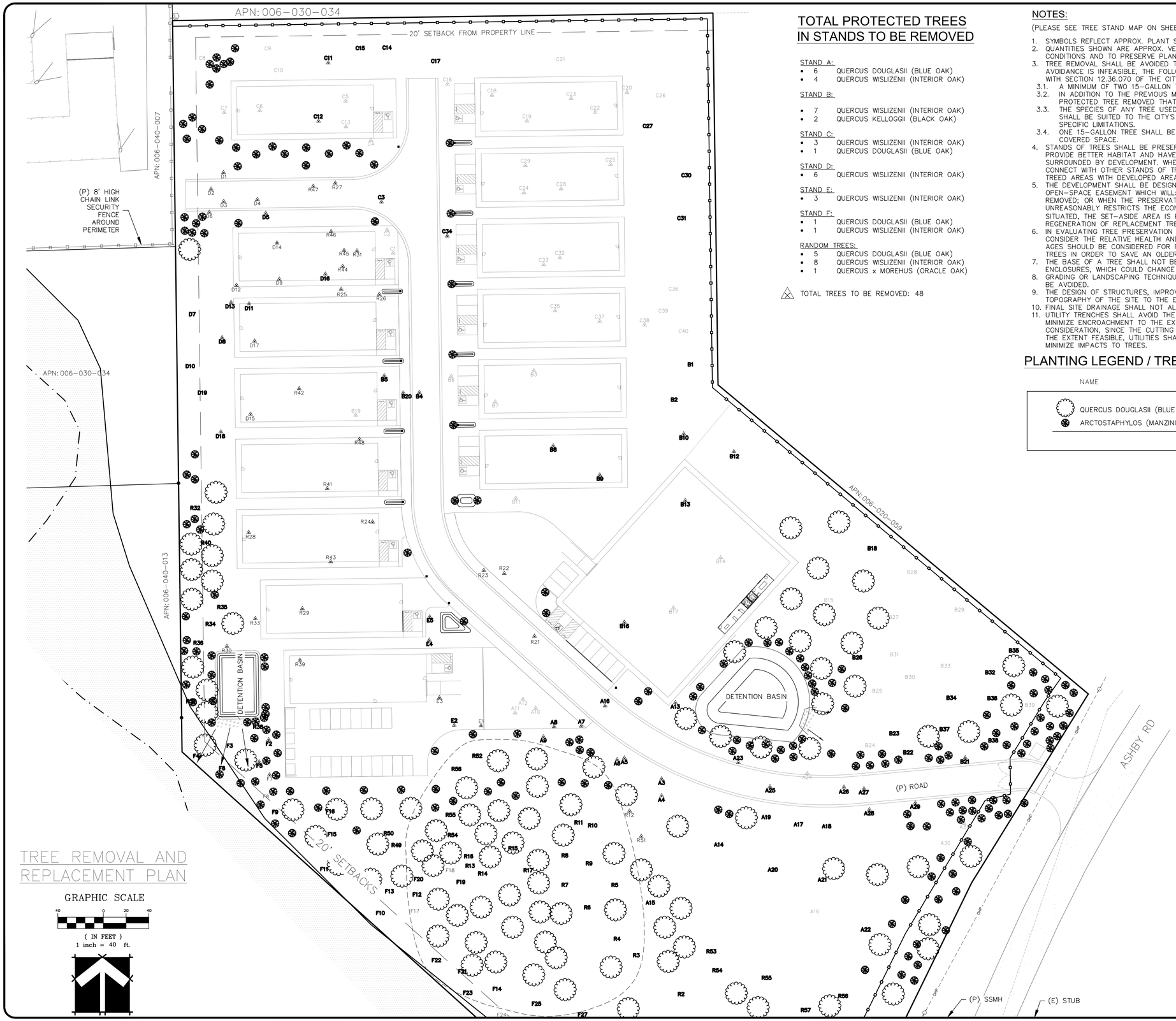
- More Protected Trees will be preserved (85) than will be removed (48) as a result of project development;
- The preservation of additional Protected Trees would unreasonably restrict the economic potential of the light industrial-zoned property upon which the trees are situated;
- Upon completion of project development and replanting, more area of the property will be forested than will be un-forested.

Furthermore, the thinning and replanting in and around stands A, B, and C would increase the number of desirable and protected class trees with an increased canopy area as well as a healthier forest than would result from natural selection. Additionally, we propose that the areas of Stands A, B, and F that are not removed as a result of project development, be designated as natural areas that are set aside to offset the removal of protected class trees removed by this project.

SUMMARY

239 trees have been identified, evaluated, and surveyed on the Project Property, of which 133 are "Protected Trees". 109 trees will be removed as a result of project development and thinning to establish a fire resilient forest on the property, of which 48 are "Protected Trees". More Protected Trees will be preserved (85) than will be removed (48) as a result of project development, and upon completion of project development and replanting, more area of the property will be forested than will be un-forested. Areas of Stands A, B, and F that are not removed as a result of project development (southern and eastern portions of Project property), will be designated as natural areas and set aside to offset the removal of protected class trees removed as a result of project development.
Following project development, the developer plans to establish healthy fire resilient forests around the Project property through thinning and planting to achieve a forest that has an uneven age population of trees resulting in the natural succession of younger trees into the over story. The proposed thinning and planting will be done in a manner that will result in an over story of trees that will suppress the under story of brush and reduce fuels to the greatest extent possible. Implementation of this plan will result in the protection of existing protected trees to maximum extent possible, while developing the proposed project and a healthy forest that will sustain itself through natural succession for generations to come with less risk of catastrophic fires.

Ashby Campus
Stand Map 4/25/18
Stand C
Stand D
Stand B
Stand E
Stand A
Stand F
Ashby Rd
600 ft
N
Google Earth
© SPOT IMAGE
© 2018 Google



TREE REMOVAL AND REPLACEMENT PLAN

GRAPHIC SCALE

40 0 20 40

(IN FEET)
1 inch = 40 ft.

TOTAL PROTECTED TREES IN STANDS TO BE REMOVED

STAND A:
- 6 QUERCUS DOUGLASII (BLUE OAK)
- 4 QUERCUS WISLIZENII (INTERIOR OAK)

STAND B:
- 7 QUERCUS WISLIZENII (INTERIOR OAK)
- 2 QUERCUS KELLOGGII (BLACK OAK)

STAND C:
- 3 QUERCUS WISLIZENII (INTERIOR OAK)
- 1 QUERCUS DOUGLASII (BLUE OAK)

STAND D:
- 6 QUERCUS WISLIZENII (INTERIOR OAK)

STAND E:
- 3 QUERCUS WISLIZENII (INTERIOR OAK)

STAND F:
- 1 QUERCUS DOUGLASII (BLUE OAK)
- 1 QUERCUS WISLIZENII (INTERIOR OAK)

RANDOM TREES:
- 5 QUERCUS DOUGLASII (BLUE OAK)
- 8 QUERCUS WISLIZENII (INTERIOR OAK)
- 1 QUERCUS x MOREHUS (ORACLE OAK)

TOTAL TREES TO BE REMOVED: 48

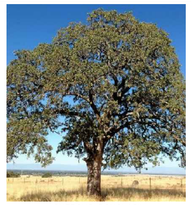
NOTES:

(PLEASE SEE TREE STAND MAP ON SHEET L2 OR REFER TO ARBORIST REPORT)

1. SYMBOLS REFLECT APPROX. PLANT SIZE WITH 5 YEARS GROWTH.
2. QUANTITIES SHOWN ARE APPROX. VERIFY QUANTITIES IN THE FIELD TO ACCOMMODATE ACTUAL SITE CONDITIONS AND TO PRESERVE PLAN SPACING & LAYOUT.
3. TREE REMOVAL SHALL BE AVOIDED TO THE MAXIMUM EXTENT FEASIBLE; HOWEVER, IN THE EVENT THAT AVOIDANCE IS INFEASIBLE, THE FOLLOWING TREE-PLANTING STANDARD SHALL BE ADHERED TO CONSISTENT WITH SECTION 12.36.070 OF THE CITY OF SHASTA LAKE TREE PROTECTION ORDINANCE:
   - 3.1. A MINIMUM OF TWO 15-GALLON TREES SHALL BE PLANTED FOR EVERY ONE PROTECTED TREE REMOVED.
   - 3.2. IN ADDITION TO THE PREVIOUS MEASURE, THREE 15-GALLON TREES SHALL BE PLANTED FOR EACH PROTECTED TREE REMOVED THAT EXCEEDS TEN INCHES DBH.
   - 3.3. THE SPECIES OF ANY TREE USED FOR REPLACEMENT PURSUANT TO THE TREE PROTECTION ORDINANCE SHALL BE SUITED TO THE CITY'S CLIMATE ZONE AND BE CHOSEN WITH CONSIDERATION OF ANY SITE SPECIFIC LIMITATIONS.
   - 3.4. ONE 15-GALLON TREE SHALL BE PLANTED FOR EACH 2,000 SQUARE FEET OF GROSS FLOOR AREA OR COVERED SPACE.
4. STANDS OF TREES SHALL BE PRESERVED WHERE FEASIBLE, RATHER THAN INDIVIDUAL TREES, AS THEY PROVIDE BETTER HABITAT AND HAVE A MORE LIKELY CHANCE OF SURVIVAL THAN INDIVIDUAL TREES SURROUNDED BY DEVELOPMENT. WHERE POSSIBLE, STANDS OF TREES SHALL BE LEFT IN PLACE SO AS TO CONNECT WITH OTHER STANDS OF TREES ON ADJACENT PROPERTIES, RATHER THAN SEPARATING NATURAL TREED AREAS WITH DEVELOPED AREAS.
5. THE DEVELOPMENT SHALL BE DESIGNED SUCH THAT SUITABLE LAND WILL BE SET ASIDE IN AN OPEN-SPACE EASEMENT WHICH WILL: RETAIN AS MANY PROTECTED TREES AS ARE PROPOSED TO BE REMOVED; OR WHEN THE PRESERVATION OF AS MANY PROTECTED TREES AS ARE PROPOSED TO BE REMOVED UNREASONABLY RESTRICTS THE ECONOMIC POTENTIAL OF THE PROPERTY UPON WHICH THE TREES ARE SITUATED, THE SET-ASIDE AREA IS PARTICULARLY SUITABLE FOR THE PLANTING AND/OR NATURAL REGENERATION OF REPLACEMENT TREES REQUIRED TO BE PLANTED BY THE DEVELOPER.
6. IN EVALUATING TREE PRESERVATION WITH RESPECT TO BUILDING PLACEMENT, THE DEVELOPMENT SHALL CONSIDER THE RELATIVE HEALTH AND VIABILITY OF TREES. HEALTHY TREES OF VARYING AGES SHOULD BE CONSIDERED FOR PRESERVATION, RATHER THAN REMOVING SEVERAL YOUNGER TREES IN ORDER TO SAVE AN OLDER SPECIMEN TREE, WHICH MAY BE OVER-MATURE.
7. THE BASE OF A TREE SHALL NOT BE PAVED OVER OR ENCASED IN PLANTERS OR OTHER ENCLOSURES, WHICH COULD CHANGE THE GRADE AT THE BASE OF THE TREE.
8. GRADING OR LANDSCAPING TECHNIQUES THAT INVOLVE BACKFILLING OF SOIL AROUND TREES SHALL BE AVOIDED.
9. THE DESIGN OF STRUCTURES, IMPROVEMENTS AND SITE GRADES SHALL CONFORM TO THE NATURAL TOPOGRAPHY OF THE SITE TO THE EXTENT FEASIBLE, TO ENSURE SURVIVAL OF REMAINING TREES.
10. FINAL SITE DRAINAGE SHALL NOT ALLOW SURFACE WATER TO POND AROUND THE BASE OF TREES.
11. UTILITY TRENCHES SHALL AVOID THE CRITICAL ROOT ZONEOF ANY MATURE TREE TO BE RETAINED ON SITE OR MINIMIZE ENCROACHMENT TO THE EXTENT FEASIBLE. THE WIDTH OR DEPTH OF UTILITY TRENCHES IS NOT A CONSIDERATION, SINCE THE CUTTING OF ROOTS FOR ANY SIZE TRENCH MAY DAMAGE A TREE SEVERELY. TO THE EXTENT FEASIBLE, UTILITIES SHALL BE RUN ALONG THE EDGE OF DRIVEWAYS OR OTHER PAVED AREAS TO MINIMIZE IMPACTS TO TREES.

PLANTING LEGEND / TREES TO BE REPLANTED

NAME	WATER USE	SIZE	QUANTITY
QUERCUS DOUGLASII (BLUE OAK)	LOW	15 GAL	122
ARCTOSTAPHYLOS (MANZINITA)	LOW	15 GAL	205
	TOTAL:		327



QUERCUS DOUGLASII (BLUE OAK)

ARCTOSTAPHYLOS (MANZINITA)

LEGEND:

X5 PROTECTED TREE TO REMAIN

X5 PROTECTED TREE TO BE REMOVED

X5 NON-PROTECTED TREE TO REMAIN

X5 NON-PROTECTED TREE TO BE REMOVED

Revisions:

REALM ENGINEERING
CIVIL ENGINEERING, SURVEYING & PLANNING
1767 MARKET STREET SUITE C
REDDING, CA. 96001
530-526-7493

REGISTERED PROFESSIONAL ENGINEER
JASON B. VINE
No. 67800
Exp. 6/30/21
CIVIL
STATE OF CALIFORNIA

TREE REMOVAL AND REPLACEMENT PLAN

MAMMATH RANCH ESTATES, LLC
ASHBY ROAD
CITY OF SHASTA LAKE
APN# 006-020-056 & 006-020-057

PLOTTED BY: ---
DATE PLOTTED: 1/6/20
SCALE OF DRAWING: SEE PLAN
JOB NUMBER:
CADD FILE:
SHEET: L3

Table 1 Comprehensive Tree Inventory

Random Trees

Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.

Tree #	Common Name	To be Removed	*Species*	Condition	DBH (in)	Height (ft)	Crown	Comments
R-1	Interior Oak		*Quercus wislizenii*	F	28	78	36	Tree has a 15 degree lean to NW and forks at 7ft. Bird nest in tree.
R-2	Blue Oak		*Quercus douglasii*	F	9	20	18	Tree with two 9" dbh trunks growing form a stump that could have decay.
					9			
R-3	Blue Oak		*Quercus douglasii*	**X**	9			Double trunk tree with weak crotches and included bark that could lead to structural failure.
					7			
R-4	Blue Oak		*Quercus douglasii*	E	13.5	20	20	
R-5	Blue Oak		*Quercus douglasii*	F	10.5	18	16	Broken leader on smaller fork.
					7			
R-6	Blue Oak		*Quercus douglasii*	F	8.7	18	20	Low fork with probable decay at base of tree.
R-7	Blue Oak		*Quercus douglasii*	E	12			
R-8	Blue Oak		*Quercus douglasii*	F	12.5	25	20	Has a small stem (5") growing at base of tree that will result in Included bark and decay.
R-9	Blue Oak		*Quercus douglasii*	E	10	23	15	
R-10	Blue Oak		*Quercus douglasii*	**X**	10	27	10	Tree is a blow down that is well rooted, branched skyward and is growing vigorously. Has value for wildlife.
R-11	Blue Oak		*Quercus douglasii*	E	9.3	24	12	Tree will soon grow to 10" dbh.
R-12	Blue Oak	YES	*Quercus douglasii*	G	10	24	26	Forked tree has included bark.
					8.2			
R-13	Blue Oak		*Quercus douglasii*	E	10	30	15	An old bird nest in tree.
R-14	Blue Oak		*Quercus douglasii*	P	13.4	18	10	
R-15	Interior Oak		*Quercus wislizenii*	E	15.6	45	25	Bird nest in tree
R-16	Interior Oak		*Quercus wislizenii*	E	18	15	20	Motte of 12 stems 2 to 5" dbh.
R-17	Interior Oak		*Quercus wislizenii*	G	3 to 5	15	15	Motte of 4 stems.
R-18	Interior Oak		*Quercus wislizenii*	G	Motte	25	17	Sixteen stems 2-6" in diameter
R-19	Interior Oak		*Quercus wislizenii*	P	11.5	40	18	Main trunk forks into five stems with included bark causing weak structure. Tree grows at the center of a motte of Blue Oaks and Black Oaks with 15 plus stems 1" to 7".
R-20	Interior Oak		*Quercus wislizenii*	P	10	35	10	Forks at 5.5 ft. with included bark. Small cavity at 3 ft.
R-21	Blue Oak	YES	*Quercus douglasii*	G	9.6	30	14	There is a 4ft. healed fire scare on the south side of tree. Tree will grow to 10" this spring.
R-22	Interior Oak	YES	*Quercus wislizenii*	F	12.2	23	17	Fork at 4.5' with included bark.
R-23	Blue Oak	YES	*Quercus douglasii*	E	12.4	32	14	
R-24	Interior Oak		*Quercus wislizenii*	G	12.2	28	40	These four stems branched from a common stump long ago. The larger two stems can be expected to live a long time.
				X	6	6		
				X	8.9	18		
R-25	Interior Oak	YES	*Quercus wislizenii*	F	19	35	35	Three stems growing from an old stump. Some included bark and the potential for decay.
					17			
					18			
R-26	Blue Oak	YES	*Quercus douglasii*	E	15.4	35	25	
R-27	Grey Pine	YES	*Pinus sabiniana*	F	28	78	36	Tree leans to NW surrounded by sapling interior oaks.
R-28	Blue Oak	YES	*Quercus douglasii*	F	14.5	30	25	Fork at 3.5' with included bark.
R-29	Grey Pine	YES	*Pinus sabiniana*	P	29.5	90	20	Limbs only on south side. Two large limbs cut off on north side.
R-30	Interior Oak	YES	*Quercus wislizenii*	**X**	11.5	22	18	Large cavity at base, leans badly and poor branching.
R-31	Interior Oak	YES	*Quercus wislizenii*	F	13	37	22	Leaning tree with branches only on one side.
R-32	Blue Oak		*Quercus douglasii*	E	12.3	36	20	
R-33	Interior Oak	YES	*Quercus wislizenii*	**X**	10	20	14	Weak low Branching, large wound at 3 ft., very poor branch structure
R-34	Interior Oak		*Quercus wislizenii*	F	18.8	40	25	Fork at 4.5" with included bark.

Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name	To be Removed	*Species*	Condition	DBH (in)	Height (ft)	Crown	Comments
R-35	Blue Oak		*Quercus douglasii*	G	12	38	25	Branches on only one side.
R-36	Interior Oak		*Quercus wislizenii*	F	12.3	42	23	Fork with included bar. Cavity at base.
R-37	Blue Oak		*Quercus douglasii*	F	11.3	30	20	Low fork with included bark.
R-38	Interior Oak		*Quercus wislizenii*	F	13.3	48	30	Low fork (2.5) with included bark.
					10.3			
R-39	Interior Oak	YES	*Quercus wislizenii*	E	16.5	35	27	Bird nest in top of tree. Note: state law protects birds while actively nesting.
R-40	Blue Oak		*Quercus douglasii*	E	11	30	20	
R-41	Interior Oak	YES	*Quercus wislizenii*	P	9.7	22	24	
					9.9			
					9.1			
R-42	Interior Oak	YES	*Quercus wislizenii*	G	15.2	22	30	Four stems growing from an old stump but only minor included bark and decay with strong wood structure.
					9			
					8			
					7			
R-43	Blue Oak	YES	*Quercus douglasii*	**X**	22.2	30	20	Major decay and cavities from base to 10 ft. Important wildlife tree. Bat, birds, owls, snakes, squirrels, rodents.
R-44	Blue Oak	YES	*Quercus douglasii*	E	10.6	20	18	
R-45	Interior Oak	YES	*Quercus wislizenii*	G	14.5	30	35	Low 7in. Dia. Branch horizontal with ground. Fork @ 5.5 " with included bark.
					10			
R-46	Oracle Oak	YES	*Q. X morehus Kell.*	G	11.9	25	25	Tree is a cross between black oak *Quercus kelloggii* and interior oak *Quercus wislinzenii* forks at base but has solid wood with no evidence of decay.
R-47	Interior Oak	YES	*Quercus wislizenii*	F	12	25	20	Three trees sprouting from an old stump. No significant basal decay. Poor branching and a large broken branch.
					11			
					7			
R-48	Interior Oak	YES	*Quercus wislizenii*	G	10.8	23	35	Four stems growing from an old stump.
					10			
					9			
					5			
R-49	Interior Oak		*Quercus wislizenii*	P	10.8	18	18	Suppressed tree leaning and bent with poor form
R-50	Interior Oak		*Quercus wislizenii*	E	12.5	42	17	
					6			
R-51	Interior Oak	YES	*Quercus wislizenii*	**X**	18.3	40	25	Three forks at base and one fork has fallen and the second fork could fall any time. **Tree is dangerous**
					14			
R-52	Interior Oak		*Quercus wislizenii*	G	17.2	40	35	Tree forks at four feet with included bark but still has strong wood in fork.
R-53	Interior Oak		*Quercus wislizenii*	F	11	35	40	12 stems growing from old stump from 1.5" to 11" with major decay and cavities at base.
R-54	Blue Oak		*Quercus douglasii*	E	10.3	33	20	
R-55	Blue Oak		*Quercus wislizenii*	E	10.2	28	15	
R-56	Black Oak		*Quercus kelloggii*	F	10	30	20	Low fork with included bark.
R-57	Interior Oak		*Quercus wislizenii*	G	11	28	20	Tree has a low 4" branch.

Stand A Trees

Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name		*Species*	Condition	DBH (in)	Height(ft.)	Crown	Comments
A-3	Blue Oak		*Quercus douglasii*	F	16.5	45	20	Tree has slight down hill lean. Nine inch dia. branch broken off at eight feet. Branching on only one side of crown.

Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name	To be Removed	*Species*	Condition	DBH (in)	Height (ft)	Crown	Comments
A-4	Blue Oak		*Quercus douglasii*	E	15	45	18	
A-5	Blue Oak		*Quercus wislizenii*	P	12.7	45	15	Decay at base of tree, slight lean. Branches on only one side of crown.
A-6	Interior Oak		*Quercus wislizenii*	P	18.5	48	40	The second stem branches low and has included bark and probable decay. The second trunk grows parallel with ground for 30ft.
A-7	Blue Oak	YES	*Quercus douglasii*	G	10	35	18	
A-8	Blue Oak	YES	*Quercus douglasii*	G	10	30	15	
A-9	Blue Oak	YES	*Quercus douglasii*	G	11.7	25	20	
A-10	Blue Oak	YES	*Quercus douglasii*	G	9.3	22	15	
A-11	Blue Oak	YES	*Quercus douglasii*	G	9.7	25	16	
A-12	Blue Oak	YES	*Quercus douglasii*	P	12.9	28	16	Tree Forks at 4.5 feet with significant included bark.
A-13	Interior Oak	YES	*Quercus wislizenii*	E	19	40	30	
A-14	Blue Oak		*Quercus douglasii*	F	11	30	25	Tree is overtopped by adjacent A-13 to east.
					9			
A-15	Interior Oak		*Quercus wislizenii*	E	15.3	52	20	
A-16	Interior Oak	YES	*Quercus wislizenii*	E		15	25	Motte of 12 stems two to five inches dbh
A-50	Interior Oak		*Quercus wislizenii*	G	13.5	50	32	Tree was also numbered A-16 but will be renumbered in field to A-50. Two weak forks with included bark at 6 ft.
A-17	Interior Oak		*Quercus wislizenii*	F	16	55	40	Motte of 12 stems two to five inches dbh
A-18	Interior Oak		*Quercus wislizenii*	G	18	55	35	Solid forks without included bark. Cavity at base of tree.
A-19	Interior Oak		*Quercus wislizenii*	P	12.1	40	40	Tree is over topped and suppressed by A-18. Leaders are badly bent.
A-20	Interior Oak		*Quercus wislizenii*	P	19	60	48	Tree is over topped and suppressed by A-18. Leaders are bent.
A-21	Interior Oak		*Quercus wislizenii*	F	16.2	55	50	Very weak fork at 6.5 ft. with included bark and decay.
A-22	Interior Oak		*Quercus wislizenii*	G	19	60	48	Generally good forks with minimal included bark. One large branch (19") with included bark in crotch.
A-23	Interior Oak	YES	*Quercus wislizenii*	F	21.2	66	60	Included bark in a low fork with evidence of slime flow necrosis serious cavities present at 15 ft. Numerous stubs from broken limbs. Bird nest. This tree is in decline but still a valuable asset to the landscape/forest.
A-24	Black Oak	YES	*Quercus Kelloggii*	**X**	47.4	92	60	Ten plus large forks with minimal included bark. Three large cavities at base of tree. One with standing water and one with *Ganoderma applanatum* and California Oak Root Rot *Armilaria mellea* rot. Thickness of healthy wood in vertical column appears to be less than 6 inches. This should be 16 inches to be considered a structurally sound tree. **Tree is dangerous.**
A-25	Blue Oak	YES	*Quercus douglasii*	G	10.4	35	15	Tree is suppressed by A-24 and leans with branches only on one side.
A-26	Interior Oak	YES	*Quercus wislizenii*	E	16.7	57	25	One broken 6 inch diameter limb 6ft. Long at 6 ft. height.
A-27	Interior Oak	YES	*Quercus wislizenii*	P	10	28	20	Low forks with included bark. Tree leans with branches only on one side.
					5			
					4			
A-28	Interior Oak	YES	*Quercus wislizenii*	E	15.7	54	23	There is a bird nest in this tree.
A-29	Blue Oak	YES	*Quercus douglasii*	E	10.9	26	22	
A-30	Grey Pine		*Pinus sabinianna*	G	29	100	45	A few weak forks in crown. Tree leans away form purposed road to south.

Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name	To be Removed	*Species*	Condition	DBH (in)	Height (ft)	Crown	Comments
A-31	Grey Pine		*Pinus sabinianna*	F	18	90	25	Poor branch structure. Tree is entwined with adjacent interior oaks.

Stand B Trees								
Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dB are protected trees.								
Tree #	Common Name		*Species*	Condition	DBH (in)	Height(ft.)	Crown	Comments
B-1	Interior Oak		*Quercus wislizenii*	F	10.9	35	17	Poor branching due to competition. Grows in a motte of 11 interior oaks from 1 inch. to 10.9 inches.
B-2	Interior Oak		*Quercus wislizenii*	F	11.2	30	12	Generally poor branching and structure with included bark. Bird or squirrel nest in tree.
B-3	Interior Oak	YES	*Quercus wislizenii*	**X**	10	23	28	Tree has major decay at base of both stems. **Tree is dangerous.**
					9			
B-4	Interior Oak	YES	*Quercus wislizenii*	F	13	30	35	No decay is visible at this time but three larger stems have significant included bark at this time that will result in future structural weakness (10)years.
					10			
					8.8			
					7.7			
					9			
B-5	interior Oak	YES	*Quercus wislizenii*	G	10.1	32	13	Tree has one sided crown due to competition from B-4
B-6	Grey pine	YES	*Pinus sabinianna*	F	30.5	114	30	Tree has six weak forks in crown. Slight lean to south.
B-7	Grey pine	YES	*Pinus sabinianna*	P	31.5	118	25	Tree branches into multiple 8 in. to 12 in. branches with weak structure. Two large dead broken hanging limbs.
B-8	Interior Oak	YES	*Quercus wislizenii*	P	10.2			
					6			
					5			
					4.5			
					4.5			
B-9	Interior Oak	YES	*Quercus wislizenii*	P	10.2	35	39	Protected 10.2 inch tree grows in a motte of five stems fro 4.5 to 10.2. Trees sprouted from a stump. One stem broken off at 9 ft.
B-10	Black Oak	YES	*Quercus kelloggii*	F	10	30	10	Three stem tree sprouting from a stump. Beginning to develop included bark at the base. Should be a stable tree for 20 years.
					9			
					9			
B-11	Grey pine	YES	*Pinus sabinianna*	F	30	87	40	Six plus weak forks in crown of tree.
B-12	Interior Oak		*Quercus wislizenii*	F	10.6	38	20	Three stem tree growing from a stump. Included bark but no decay. One stem has two stems that have grown together with a hole between tem. Very rare. Some broken limbs.
					9			
					8			
B-13	Black Oak	YES	*Quercus kelloggii*	G	18	40	35	Two low forks with some included bark. A vine grows through included bark in one place.
B-14	Grey pine	YES	*Pinus sabinianna*	E	20.2	65	20	Some weak forks at 50 ft. and above.
B-15	Grey pine	YES	*Pinus sabinianna*	G	15.2	65	15	Branching is one sided..
B-16	Interior Oak	YES	*Quercus wislizenii*	F	10.6	30	25	Nest in tree. Four stems growing form a stump.
B-17	Black Oak	YES	*Quercus kelloggii*	F	9			
					4			
					4			

Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name	To be Removed	*Species*	Condition	DBH (in)	Height (ft)	Crown	Comments
B-18	Interior Oak		*Quercus wislizenii*	G	11	28	20	Tree has a low 4" branch.
B-19	Interior Oak	YES	*Quercus wislizenii*	**X**	15.5	45	38	These stems sprouted from a stump decades ago and there is decay and cavities at the base of each tree. This tree leans and
				X	9.3			
				X	14.3			
B-20	Interior Oak	YES	*Quercus wislizenii*	G	17.5	45	45	Tree consists of three co-joined stems at the base. Forks appear solid with minimal or no decay. Tree sprouted from a stump in al probability. Remnants of bird nest in tree.
					11.7			
					11.3			
B-21	Interior Oak	YES	*Quercus wislizenii*	E	36	65	55	Beautiful high vigor tree worth protecting during development. Minor decay on one side of base that appears well healed over. There is a 40 ft. long 16 inch dia. Limb on the south side of tree. It would be necessary to swing the proposed road location to the south to avoid damaging the low branch and more importantly the root system of this tree.
B-22	Black Oak		*Quercus Kelloggii*	G	11	30	16	Branches on only one side of crown. Very old cinder block foundation at base of tree.
B-23	Interior Oak		*Quercus Kelloggii*	P	36	50	45	Dusky footed wood rat nest at base of tree. Bird nest in crown. Tree forks at 18 inch stems at 6 ft. South stem is seriously decayed and infested with ants.
B-24	Blue Oak		*Quercus douglasii*	E	9.7	25	20	Not a protected tree but on edge of proposed road alignment.
B-25	Blue Oak		*Quercus douglasii*	F	8.3	28	10	Not a protected tree but on edge of proposed road alignment. Tree grew from an old stump.
B-26	Interior Oak		*Quercus wislizenii*	F	10	30	25	Weak branch structure in several places.
B-27	Blue Oak		*Quercus douglasii*	G	8.3	30	10	Not a protected tree but a good tree in proposed Rd. alignment.
B-28	Blue Oak		*Quercus douglasii*	G	8	25	12	Not a protected tree but a good tree in proposed Rd. alignment.
B-29	Interior Oak		*Quercus wislizenii*	G	8.4	24	15	Low fork with included bark.
					4			
B-30	Oracle Oak		*Q. X morehus Kell.*	F	6	30	30	Motte of 6 stems 3 to 6 inches dbh on edge of proposed Rd. alignment.
B-31	Oracle Oak		*Q.X morehus Kell.*	G		30	30	Motte of 8 stems on edge of road from 1.5 in. to 6 in. dB on edge of proposed road.
B-32	Interior Oak		*Quercus wislizenii*	G	15.9	50	30	Weak fork near base and girdling root on east side of base.
					6			
B-33	Interior Oak		*Quercus wislizenii*	P	8.2	30	36	Tree on edge of road suppressed and leaning badly.
					6			
					5			
					3			
B-34	Interior Oak		*Quercus wislizenii*	E	12.7	45	25	Tree has a slight lean.
B-35	Interior Oak		*Quercus wislizenii*	P	13.2	30	30	Tree forks into three stems at 2.5 ft. Two stems have serious decay and cavities.
					10			
					9			
B-36	Interior Oak		*Quercus wislizenii*	P	13.1	35	30	Low fork with included bark. Many broken leaders.
B-37	Interior Oak		*Quercus wislizenii*	G	15	50	50	Tree forks into two stems 2.5 ft. above ground. Included bark is present but appears structurally sound for 10 plus years. Poisonous red mushrooms at base of tree.
					13			
B-38	Interior Oak		*Quercus wislizenii*	P	10.5	25	20	Sprouts from a stump and leans badly. Poor branch structure.
					10.2			

Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name	To be Removed	*Species*	Condition	DBH (in)	Height (ft)	Crown	Comments
					8			
B-49	Blue & Interior Oaks		*Quercus douglassii & wislizenii*	G		25	30	Motte of 6 stems from 2 inches to 8 inches dbh. Tree located close to road alignment. Good condition

Stand C Trees								
Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name		*Species*	Condition	DBH (in)	Height(ft.)	Crown	Comments
C-1	Grey pine	YES	*Pinus sabinianna*	G	20.8	84	20	Slight lean to south and curvature of trunk
C-2	Grey pine	YES	*Pinus sabinianna*	F	21.6	83	20	Leans 15 degrees to west with a weak fork at 60ft.
C-3	Interior Oak	YES	*Quercus wislizenii*	G	17.6	30	42	Tree has a low fork a 2ft and is growing on fence line (barbed wire embeded in trunk).
					16			
C-4	Interior Oak	YES	*Quercus wislizenii*	**X**	13.1	28	18	There is a large scar on south side of tree and a bird nest in tree (**Tree is dangerous**).
C-5	Blue Oak	YES	*Quercus douglasii*	G	9	25	20	Fork at 2ft has solid wood. Four inch stem on south side is broken off at 6ft.
					8			
					4			
C-6	Interior Oak	YES	*Quercus wislizenii*	P	8.6	30	25	Motte of sprouts growing from an old stump. One is dead and decaying. Poor structural configuration.
					8			
					4			
					2			
					2			
					4.5			
C-7	Grey pine	YES	*Pinus sabinianna*	F	15	80	10	Trunk is bent. Small canopy compared to height.
C-8	Grey pine		*Pinus sabinianna*	F	14.8	78	15	Tree and trunk is bent severely. Tree is being suppressed by adjacent grey pine (G-9).
C-9	Grey pine		*Pinus sabinianna*	G	18.8	85	20	Some curvature to trunk.
C-10	Interior Oak		*Quercus wislizenii*	G	8	20	10	Motte of four stems growing from a stump.
					7			
					6			
					4			
C-11	Interior Oak	YES	*Quercus wislizenii*	P	10.5	21	8	Tree has a bad lean with a small crown. Is on fence line.
C-12	Interior Oak	YES	*Quercus wislizenii*	F	12.5	20	22	Some lean and curvature. In competition with other trees for sunlight.
C-13	Interior Oak	YES	*Quercus wislizenii*	F	8	30	13	Motte of five stems with some included bark.
					7			
					6			
					2			
					3			
C-14	Interior Oak		*Quercus wislizenii*	E	26	35	40	Excellent tree that forks into three stems at 4.5ft that then fork again. Has sound wood in forks. Significant tree on property.
C-15	Interior Oak		*Quercus wislizenii*	P	13.7	35	26	Forked trunks but the north fork is broken at 6ft and decaying which will spread to the other fork at base.
C-16	Interior Oak	YES	*Quercus wislizenii*	**X**	10.9	30	20	Tree leans badly with weak structure. Large scar with decay from 5.5ft to 10ft.
C-17	Interior Oak		*Quercus wislizenii*	G	13.4	25	20	Three stems growing from a stump. Largest stem has a scar at 4.5ft that is healing without decay.

Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name	To be Removed	*Species*	Condition	DBH (in)	Height (ft)	Crown	Comments
					11			
					8			
C-18	Blue Oak	YES	*Quercus douglasii*	**X**	12.2	28	16	Large scar on North side of tree from ground to 6ft. May eventually heal but the tree could also break.
C-19	Grey pine	YES	*Pinus sabinianna*	G	15.8	72	16	Slight curvature to trunk. Is growing 6 inches from Blue Oak (C-18). Cut pine and leave oak.
C-20	Interior Oak	YES	*Quercus wislizenii*	**X**	13.1	30	3	Seroius decay at base and leans toward two track road to top of hill.
C-21	Grey pine		*Pinus sabinianna*	F	28.4	102	25	Tree leans west and has weak forks in crown.
C-22	Grey pine	YES	*Pinus sabinianna*	F	21.2	100	20	Weak forks in crown.
C-23	Grey pine	YES	*Pinus sabinianna*	**X**	26.9	90	15	Large scar and a large limb broke out at a fork with included bark. Tree has additional scars and decay. Tree is dangerous.
C-24	Interior Oak	YES	*Quercus wislizenii*	**X**	18.3	36	25	Two large stems have cavities at base to 5ft. Tree is dangerous.
					18			
					6			
C-25	Interior Oak	YES	*Quercus wislizenii*	**X**	13.5	30	15	Tree has a cavity at 4ft and leans 20 degrees to west with decay at base from the stump next to it.
C-26	Grey pine		*Pinus sabinianna*	P	29.9	90	25	Fifteen degree lean to east with a weak fork in crown.
C-27	Interior Oak		*Quercus wislizenii*	P	15.2	32	33	Cavity with serious decay at 5.6ft at the attachment of a large limb.
C-28	Grey pine	YES	*Pinus sabinianna*	P	20.2	75	15	Leans 15 degrees downhill to west.
C-29	Grey pine	YES	*Pinus sabinianna*	**X**	21.8	75	10	Crown of tree is dying with very little foliage left.
C-30	Interior Oak		*Quercus wislizenii*	G	13.9	40	30	Motte of three stems from an old stump.
					10			
					10			
C-31	Interior Oak		*Quercus wislizenii*	F	18.5	30	30	Tree has a low fork and the main stem has a scar with some decay but is healing over the would.
					10			
C-32	Grey pine	YES	*Pinus sabinianna*	**X**	27.3	95	30	Tree has a very weak fork at 15ft. Tree is dangerous.
C-33	Black Oak	YES	*Quercus kelloggii*	**X**	12.3	17	10	Tree is dying.
C-34	Blue Oak	YES	*Quercus douglasii*	F	12.2	33	14	
C-35	Grey pine	YES	*Pinus sabinianna*	F	34.5	90	28	Fork at 25ft with poor branch structure.
C-36	Grey pine		*Pinus sabinianna*	F	16	45	15	Spindly thin crown that is suppressed by adjoining trees.
C-37	Grey pine	YES	*Pinus sabinianna*	X	10.9	40	10	Tree is in decline and expected to die soon.
C-38	Grey pine	YES	*Pinus sabinianna*	X	11.9	40	10	Tree is in advanced stages of decline.
C-39	Grey pine		*Pinus sabinianna*	P	20.2	55	24	Two 8in limbs have broken in crown. Generally poor branch structure and one sided crown.
C-40	Grey pine		*Pinus sabinianna*	E	8	15	14	Not a protected tree. Located in SW corner of graded area inside fence.

Stand D Trees								
Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name		*Species*	Condition	DBH (in)	Height(ft.)	Crown	Comments
D-1	Grey pine	YES	*Pinus sabinianna*	P	16	60	12	Branching is one sided.
D-2	Grey pine	YES	*Pinus sabinianna*	F	15.2	65	15	Lean to west 25 degrees.
D-3	Grey pine	YES	*Pinus sabinianna*	P	9	45	10	Weak branch structure in several places.
D-4	Grey pine	YES	*Pinus sabinianna*	F	14	50	12	Poor branch structure.
D-5	Interior Oak	YES	*Quercus wislizenii*	P	16	45	25	Some weak forks at 30 ft. and above.

Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name	To be Removed	*Species*	Condition	DBH (in)	Height (ft)	Crown	Comments
D-6	Interior Oak	YES	*Quercus wislizenii*	F	7	25	20	Branching is one sided.
D-7	Interior Oak		*Quercus wislizenii*	F	12	30	18	A few weak forks in crown.
D-8	Interior Oak	YES	*Quercus wislizenii*	P	17	55	22	Decay at base of tree
D-9	Interior Oak		*Quercus wislizenii*	F	9	32	17	Branching is one sided.
D-10	Interior Oak		*Quercus wislizenii*	P	16	28	25	Two dead branches in crown.
D-11	Interior Oak	YES	*Quercus wislizenii*	F	12	60	15	Slight curvature and lean.
D-12	Grey pine	YES	*Pinus sabinianna*	P	19	90	45	Serious decay at base of tree
D-13	Interior Oak	YES	*Quercus wislizenii*	F	15	45	30	Slight lean to east.
D-14	Grey pine	YES	*Pinus sabinianna*	P	18.2	75	35	Fork at 6 ft. with dead branch.
D-15	Grey pine	YES	*Pinus sabinianna*	F	16	65	25	Branching is one sided.
D-16	Interior Oak	YES	*Quercus wislizenii*	P	15	45	30	Decay at base of tree and a small cavity at 12ft.
D-17	Grey pine	YES	*Pinus sabinianna*	F	12	50	18	Branching is one sided.
D-18	Interior Oak	YES	*Quercus wislizenii*	F	12	40	15	Slight curvature and lean.
D-19	Interior Oak		*Quercus wislizenii*	P	14.5	55	24	Tree has minor decay where it sprouted from an old stump

Stand E Trees								
Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name		*Species*	Condition	DBH (in)	Height(ft.)	Crown	Comments
E-1	Blue Oak	YES	*Quercus douglasii*	P	8.3	30	10	There is a fork 6 in. above grade that will result in poor structural strength.
					6.4			
E-2	Interior Oak	YES	*Quercus wislizenii*	F	15	45	30	Decay at base of tree and a small cavity at 20ft.
E-3	Interior Oak	YES	*Quercus wislizenii*	**X**	12	30	18	Low forks with included bark and serious decay in both stems to 6 ft.
					11			
E-4	Interior Oak	YES	*Quercus wislizenii*	P	14	30	15	Low fork with included bark. The 14 in. stem leans 10 degrees and the 8 in. stem is broken at 4 ft.
					8			
					9.1			
E-5	Interior Oak	YES	*Quercus wislizenii*	G	17.5	30	25	Healed wounds on south side of tree and base of tree. Possible internal decay.

Stand F Trees								
Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name		*Species*	Condition	DBH (in)	Height(ft.)	Crown	Comments
F-2	Blue Oak	YES	*Quercus douglasii*	F	27	55	40	Tree is at the top of a ten foot creek bank on north side of creek.
F-3	Cotton Wood		*Populus trichocarpa*	G	39	80	48	Tree is 10 feet from edge of creek. Slight lean towards creek with three four inch to eight inch broken branches in canopy.
F-4	Interior Oak		*Quercus wislizenii*	G	7	25	20	Tree has four stems.
					6			
					6			
					6			
F-5	Interior Oak	YES	*Quercus wislizenii*	p	48	45	40	Serious decay at base of tree and *Ganoderma applanatum* canker present.
F-6	Grey Pine		*Pinus sabinianna*	E	16	60	12	
F-7	Incense cedar	YES	*Libocedrus decurrens.*	**X**	22	60	27	Low vigor tree with drought damage that has lost 50% of foliage. On 50% chance it will live. Tree grows at top of creek bank.

Tree condition ratings: E -excellent, G-good, F-fair, P-poor, X-Dead, dying or dangerous. Trees over 10 inches dbh are protected trees.								
Tree #	Common Name	To be Removed	*Species*	Condition	DBH (in)	Height (ft)	Crown	Comments
F-8	Incense cedar		*Libocedrus decurrens*	**X**	15.1	45	17	All three leaders in tree are dead.
F-9	Willow		*Salix sp.*	F	12			Low fork with included bark.
					11			
F-10	Grey Pine		*Pinus sabinianna*	F	29.7	105	45	Leans 30 degree toward creek.
F-11	Interior Oak		*Quercus wislizenii*	P	12	35	25	
					8			
					6			
F-12	Cotton Wood		*Populus trichocarpa*	G	37.2	115	50	One large broken and one dead branch in crown.
F-13	Blue Oak		*Quercus wislizenii*	G	11.1	35	30	
F-14	Cotton Wood		*Populus trichocarpa*	P	28	90	30	Growing at top of creek bank and leaning 15 degrees toward creek.
F-15	Willow		*Salix sp.*	**X**	14	60	20	Tree is still growing vigorously but has fallen across creek.
F-16	Interior Oak		*Quercus wislizenii*	G	15.5	50	35	Tree has minor decay where it sprouted from an old stump. Tree leans 15 degrees.
F-17	Oracle Oak		*Q. X morehus Kell.*	G	5	25	35	Motte of 12 stems 2" to 5" that have sprouted from an old stump
F-18	Interior Oak		*Quercus wislizenii*	**X**	12	40	20	Slight lean. Decay to 15 ft. on main stem.
F-19	Interior Oak		*Quercus wislizenii*	G	11.2	35	22	Nest in crown of tree.
F-20	Interior Oak		*Quercus wislizenii*	G	16.8	30	22	Fork at 8 ft. with included bark. Broken limb in crown.
F-21	Grey Pine		*Pinus sabinianna*	G	12.6	78	10	
F-22	Grey Pine		*Pinus sabinianna*	G	19.2	82	18	Slight curvature and lean.
F-23	Grey Pine		*Pinus sabinianna*	**X**	12	45	20	Over mature tree suppressed by F-22. Poor branching.
F-24	Interior Oak		*Quercus wislizenii*	**X**	11.8	28	15	Major decay to 8 ft. Tree has low vigor to the point that it is almost dead.
F-25	Interior Oak		*Quercus wislizenii*	P	12.4	35	20	Fork at 4.5 ft. with dead branch.
F-26	Blue Oak		*Quercus douglasii*	F	10	35	16	One sided branches on a leaning crown.
F-27	Grey Pine		*Pinus sabinianna*	G	18.2	90	45	Lean to west 15 degrees.
F-28	Grey Pine		*Pinus sabinianna*	P	10.8	30	10	Main leader is broken out and leans west badly.
F-29	Willow		*Salix sp.*	G	18	25	40	Bent and twisted willow with three stems that has fallen across creek creating a brush dam which is considered positive for stream health.
F-30	Blue Oak		*Quercus douglasii*	G	15.3	55	26	Tree leans with some bend in leader.
F-31	Interior Oak		*Quercus wislizenii*	P	12.5	35	40	Tree is bent, leaning with poor branching and decay in main stem.
F-32	Interior Oak		*Quercus wislizenii*	F	14	50	45	Small cavity at base with some dead wood and a loss of vigor.
F-33	Grey Pine		*Pinus sabinianna*	**X**	13.4	80	15	Thirty degree lean to east with some ground swell on side away from lean indicating movement of root system and that the tree may fall in the near future.
F-34	Blue Oak		*Quercus douglasii*	E	19	60	50	
F-35	Interior Oak		*Quercus wislizenii*	F	13.6	50	30	Thirty degree lean to North but the root system is entwined with the adjacent blue oak and should be stable for many years.
F-36	Grey Pine		*Pinus sabinianna*	G	23	110	25	Slight lean and curvature to trunk.
F-37	Grey Pine		*Pinus sabinianna*	G	15.5	35	35	Slight lean to east.
F-38	Willow		*Salix sp.*	G	20.3	30	10	This tree is on edge of creek where old fence line begins to diverge from creek and go north west.
F-39	Blue Oak		*Quercus douglasii*	E	11.3	40	25	
F-40	Interior Oak		*Quercus wislizenii*	E	19.7	50	40	
F-41	Interior Oak		*Quercus wislizenii*	G	10.3	32	35	The 10.3 stem is the central stem in a motte of 14 stems from 1.5 to 10.3 inches that grow from an old stump with some decay at base of tree.

Table 2 Protected Tree Inventory

Tree #	Common Name		*Species*	Condition	DBH (in)	Height(ft.)	Crown
R-1	Interior Oak		*Quercus wislizenii*	F	28	78	36
R-4	Blue Oak		*Quercus douglasii*	E	13.5	20	20
R-5	Blue Oak		*Quercus douglasii*	F	10.5	18	16
R-7	Blue Oak		*Quercus douglasii*	E	12		
R-8	Blue Oak		*Quercus douglasii*	F	12.5	25	20
R-9	Blue Oak		*Quercus douglasii*	E	10	23	15
R-12	Blue Oak	YES	*Quercus douglasii*	G	10	24	26
R-13	Blue Oak		*Quercus douglasii*	E	10	30	15
R-14	Blue Oak		*Quercus douglasii*	P	13.4	18	10
R-15	Interior Oak		*Quercus wislizenii*	E	15.6	45	25
R-16	Interior Oak		*Quercus wislizenii*	E	18	15	20
R-19	Interior Oak		*Quercus wislizenii*	P	11.5	40	18
R-20	Interior Oak		*Quercus wislizenii*	P	10	35	10
R-22	Interior Oak	YES	*Quercus wislizenii*	F	12.2	23	17
R-23	Blue Oak	YES	*Quercus douglasii*	E	12.4	32	14
R-24	Interior Oak		*Quercus wislizenii*	G	12.2	28	40
R-25	Interior Oak	YES	*Quercus wislizenii*	F	19	35	35
R-26	Blue Oak	YES	*Quercus douglasii*	E	15.4	35	25
R-28	Blue Oak	YES	*Quercus douglasii*	F	14.5	30	25
R-31	Interior Oak	YES	*Quercus wislizenii*	F	13	37	22
R-32	Blue Oak		*Quercus douglasii*	E	12.3	36	20
R-34	Interior Oak		*Quercus wislizenii*	F	18.8	40	25
R-35	Blue Oak		*Quercus douglasii*	G	12	38	25
R-36	Interior Oak		*Quercus wislizenii*	F	12.3	42	23
R-37	Blue Oak		*Quercus douglasii*	F	11.3	30	20
R-38	Interior Oak		*Quercus wislizenii*	F	13.3	48	30
R-39	Interior Oak	YES	*Quercus wislizenii*	E	16.5	35	27
R-40	Blue Oak		*Quercus douglasii*	E	11	30	20
R-42	Interior Oak	YES	*Quercus wislizenii*	G	15.2	22	30
R-44	Blue Oak	YES	*Quercus douglasii*	E	10.6	20	18
R-45	Interior Oak	YES	*Quercus wislizenii*	G	14.5	30	35
R-46	Oracle Oak	YES	*Q. X morehus Kell.*	G	11.9	25	25
R-47	Interior Oak	YES	*Quercus wislizenii*	F	12	25	20
R-48	Interior Oak	YES	*Quercus wislizenii*	G	10.8	23	35
R-49	Interior Oak		*Quercus wislizenii*	P	10.8	18	18
R-50	Interior Oak		*Quercus wislizenii*	E	12.5	42	17
R-52	Interior Oak		*Quercus wislizenii*	G	17.2	40	35
R-53	Interior Oak		*Quercus wislizenii*	F	11	35	40
R-54	Blue Oak		*Quercus douglasii*	E	10.3	33	20
R-55	Blue Oak		*Quercus wislizenii*	E	10.2	28	15
R-56	Black Oak		*Quercus kelloggii*	F	10	30	20
R-57	Interior Oak		*Quercus wislizenii*	G	11	28	20
A-3	Blue Oak		*Quercus douglasii*	F	16.5	45	20
A-4	Blue Oak		*Quercus douglasii*	E	15	45	18

Tree #	Common Name		*Species*	Condition	DBH (in)	Height(ft.)	Crown
A-5	Blue Oak		*Quercus wislizenii*	P	12.7	45	15
A-6	Interior Oak		*Quercus wislizenii*	P	18.5	48	40
A-7	Blue Oak	YES	*Quercus douglasii*	G	10	35	18
A-8	Blue Oak	YES	*Quercus douglasii*	G	10	30	15
A-9	Blue Oak	YES	*Quercus douglasii*	G	11.7	25	20
A-12	Blue Oak	YES	*Quercus douglasii*	P	12.9	28	16
A-13	Interior Oak	YES	*Quercus wislizenii*	E	19	40	30
A-14	Blue Oak		*Quercus douglasii*	F	11	30	25
A-15	Interior Oak		*Quercus wislizenii*	E	15.3	52	20
A-50	Interior Oak		*Quercus wislizenii*	G	13.5	50	32
A-17	Interior Oak		*Quercus wislizenii*	F	16	55	40
A-18	Interior Oak		*Quercus wislizenii*	G	18	55	35
A-19	Interior Oak		*Quercus wislizenii*	P	12.1	40	40
A-20	Interior Oak		*Quercus wislizenii*	P	19	60	48
A-21	Interior Oak		*Quercus wislizenii*	F	16.2	55	50
A-22	Interior Oak		*Quercus wislizenii*	G	19	60	48
A-23	Interior Oak	YES	*Quercus wislizenii*	F	21.2	66	60
A-25	Blue Oak	YES	*Quercus douglasii*	G	10.4	35	15
A-26	Interior Oak	YES	*Quercus wislizenii*	E	16.7	57	25
A-27	Interior Oak	YES	*Quercus wislizenii*	P	10	28	20
A-28	Interior Oak	YES	*Quercus wislizenii*	E	15.7	54	23
A-29	Blue Oak	YES	*Quercus douglasii*	E	10.9	26	22
B-1	Interior Oak		*Quercus wislizenii*	F	10.9	35	17
B-2	Interior Oak		*Quercus wislizenii*	F	11.2	30	12
B-4	Interior Oak	YES	*Quercus wislizenii*	F	13	30	35
B-5	interior Oak	YES	*Quercus wislizenii*	G	10.1	32	13
B-8	Interior Oak	YES	*Quercus wislizenii*	P	10.2		
B-9	Interior Oak	YES	*Quercus wislizenii*	P	10.2	35	39
B-10	Black Oak	YES	*Quercus kelloggii*	F	10	30	10
B-12	Interior Oak		*Quercus wislizenii*	F	10.6	38	20
B-13	Black Oak	YES	*Quercus kelloggii*	G	18	40	35
B-16	Interior Oak	YES	*Quercus wislizenii*	F	10.6	30	25
B-18	Interior Oak		*Quercus wislizenii*	G	11	28	20
B-20	Interior Oak	YES	*Quercus wislizenii*	G	17.5	45	45
B-21	Interior Oak	YES	*Quercus wislizenii*	E	36	65	55
B-22	Black Oak		*Quercus Kelloggii*	G	11	30	16
B-23	Interior Oak		*Quercus Kelloggii*	P	36	50	45
B-26	Interior Oak		*Quercus wislizenii*	F	10	30	25
B-32	Interior Oak		*Quercus wislizenii*	G	15.9	50	30
B-34	Interior Oak		*Quercus wislizenii*	E	12.7	45	25
B-35	Interior Oak		*Quercus wislizenii*	P	13.2	30	30
B-36	Interior Oak		*Quercus wislizenii*	P	13.1	35	30
B-37	Interior Oak		*Quercus wislizenii*	G	15	50	50
B-38	Interior Oak		*Quercus wislizenii*	P	10.5	25	20

Tree #	Common Name		*Species*	Condition	DBH (in)	Height(ft.)	Crown
C-3	Interior Oak	YES	*Quercus wislizenii*	G	17.6	30	42
C-11	Interior Oak	YES	*Quercus wislizenii*	P	10.5	21	8
C-12	Interior Oak	YES	*Quercus wislizenii*	F	12.5	20	22
C-14	Interior Oak		*Quercus wislizenii*	E	26	35	40
C-15	Interior Oak		*Quercus wislizenii*	P	13.7	35	26
C-17	Interior Oak		*Quercus wislizenii*	G	13.4	25	20
C-27	Interior Oak		*Quercus wislizenii*	P	15.2	32	33
C-30	Interior Oak		*Quercus wislizenii*	G	13.9	40	30
C-31	Interior Oak		*Quercus wislizenii*	F	18.5	30	30
C-34	Blue Oak	YES	*Quercus douglasii*	F	12.2	33	14
D-5	Interior Oak	YES	*Quercus wislizenii*	P	16	45	25
D-7	Interior Oak		*Quercus wislizenii*	F	12	30	18
D-8	Interior Oak	YES	*Quercus wislizenii*	P	17	55	22
D-10	Interior Oak		*Quercus wislizenii*	P	16	28	25
D-11	Interior Oak	YES	*Quercus wislizenii*	F	12	60	15
D-13	Interior Oak	YES	*Quercus wislizenii*	F	15	45	30
D-16	Interior Oak	YES	*Quercus wislizenii*	P	15	45	30
D-18	Interior Oak	YES	*Quercus wislizenii*	F	12	40	15
D-19	Interior Oak		*Quercus wislizenii*	P	14.5	55	24
E-2	Interior Oak	YES	*Quercus wislizenii*	F	15	45	30
E-4	Interior Oak	YES	*Quercus wislizenii*	P	14	30	15
E-5	Interior Oak	YES	*Quercus wislizenii*	G	17.5	30	25
F-2	Blue Oak	YES	*Quercus douglasii*	F	27	55	40
F-3	Cottonwood		*Populus trichocarpa*	G	39	80	48
F-5	Interior Oak	YES	*Quercus wislizenii*	p	48	45	40
F-9	Willow		*Salix sp.*	F	12		
F-11	Interior Oak		*Quercus wislizenii*	P	12	35	25
F-12	Cotton Wood		*Populus trichocarpa*	G	37.2	115	50
F-13	Blue Oak		*Quercus wislizenii*	G	11.1	35	30
F-14	Cottonwood		*Populus trichocarpa*	P	28	90	30
F-16	Interior Oak		*Quercus wislizenii*	G	15.5	50	35
F-19	Interior Oak		*Quercus wislizenii*	G	11.2	35	22
F-20	Interior Oak		*Quercus wislizenii*	G	16.8	30	22
F-25	Interior Oak		*Quercus wislizenii*	P	12.4	35	20
F-26	Interior Oak		*Quercus douglasii*	F	10	35	16
F-29	Willow		*Salix sp.*	G	18	25	40
F-30	Blue Oak		*Quercus douglasii*	G	15.3	55	26
F-31	Interior Oak		*Quercus wislizenii*	P	12.5	35	40
F-32	Interior Oak		*Quercus wislizenii*	F	14	50	45
F-34	Blue Oak		*Quercus douglasii*	E	19	60	50
F-35	Interior Oak		*Quercus wislizenii*	F	13.6	50	30
F-36	Interior Oak		*Quercus wislizenii*	G	23	110	25
F-38	Willow		*Salix sp.*	G	20.3	30	10
F-39	Blue Oak		*Quercus douglasii*	E	11.3	40	25

Tree #	Common Name		*Species*	Condition	DBH (in)	Height(ft.)	Crown
F-40	Interior Oak		*Quercus wislizenii*	E	19.7	50	40
F-41	Interior Oak		*Quercus wislizenii*	G	10.3	32	35