# Appendix C

Arborist Inventory Report



March 22, 2022

Mr. Ryan Patterson President Vintage Housing 369 San Miguel Drive, Suite 135 Newport Beach, CA 92660

#### Subject: Arborist Inventory Letter Report for 102 Natoma Street, City of Folsom, CA

Dear Mr. Patterson:

HELIX Environmental Planning, Inc. (HELIX) has prepared this arborist inventory letter report in support of the proposed 102 Natoma Street project (proposed project) on behalf of Vintage Housing. The purpose of the arborist inventory was to evaluate protected trees and/or other sensitive biological habitats to occur on the project site and/or be impacted by the proposed project. This letter report describes the methods and results of our arborist inventory and provides recommended mitigation measures to reduce impacts.

## INTRODUCTION

## **Project Location and Description**

The approximately 4.86-acre project site (also referred to as the Study Area) is located within the City of Folsom approximately 350-feet northeast of the intersection of Fargo Way and Natoma Street in Sacramento County, CA (Figure 1). The approximate center of the site is latitude 38.683517 and longitude -121.158532, NAD 83. The approximate boundary of the project site depicted on aerial imagery is included as Figure 2. All figures are included in Attachment A.

The proposed project intends to construct and operate a senior living community on the subject parcel.

## **METHODS**

Studies conducted in support of this report included an arborist inventory as conducted by an arborist certified by the International Society of Arboriculture (ISA).

## **Arborist Inventory**

The arborist inventory was conducted on September 24, 2020 by HELIX Biologist and ISA Certified Arborist Stephanie McLaughlin, M.S. (WE-12922A). Woody plants in the project area with a trunk diameter of at least 4-inches at 4.5-feet above grade (diameter at breast height) were located and assessed. A diameter tape or calipers were used to verify each trunk diameter. The measurement from the trunk to the end of the longest lateral limb was estimated and used as the dripline radius. All Letter to Ryan Patterson October 21, 2020

accessible trees were numbered with a pre-printed aluminum tag. Approximate trunk locations were mapped using a sub-meter accurate global positioning system (GPS). Approximate tree locations are identified in Figure 3 and detailed tree data may be found in Attachment B.

The condition of each tree was rated one a scale of 1 to 5, with 1 indicating poor condition, 3 indicating fair condition, and 5 indicating good condition. The rating considers factors health and structural factors such as the size, color, and density of the foliage; the amount of deadwood within the canopy; bud viability; evidence of wound closure; and the presence or evidence of stress, disease, nutrient deficiency, and/or insect infestation; trunk and branch configuration; canopy balance; the presence of included bark and other structural defects such as decay; and the potential for structural failure.

#### RESULTS

## **Environmental Setting**

The project site is a vacant, wooded parcel within the City of Folsom. The site is generally bordered by residential parcels and small commercial buildings, as well as the paved Oak Parkway cycling trail. Folsom State Prison is located north of the project site, on the opposite side of Natoma Street.

## **Site Conditions**

The entire project site is considered to be blue oak woodland, surrounded by urban development. Historic aerial imagery shows that the project site has changed little since 1952 and has consisted of oak woodland with a drainage running through the site. The site is moderately disturbed. There is evidence of recreational use by bicycles and the site has a constructed dirt track with several constructed dirt ramps and jumps for bicycles, presumably constructed by kids from the adjacent residential neighborhood. It also has debris piles and other evidence of use by transients.

## Habitat Types/Vegetation Communities

Habitat types/vegetation communities in the project site include blue oak woodland and ephemeral and intermittent drainages. Representative site photographs are included as Attachment C.

#### Blue Oak Woodland

Blue oak woodland is the predominant habitat type in the project site and occupies 4.82-acres within the site. Vegetation in the blue oak woodland habitat consists primarily of blue oak (*Quercus douglasii*) and interior live oak (*Quercus wislizeni*), with some non-native species including mulberry (*Morus alba*), Chinese tallow (*Triadica sebifera*), Chinese hackberry (*Celtis sinensis*), and ornamental cherry (*Prunus sp.*). The understory is dominated by non-native grasses and forbs, including cultivated oats (*Avena sp.*), Italian rye grass (*Festuca perennis*), and yellow star-thistle (*Centaurea solstitialis*). Disturbed areas, such as bike trails and jumps occur beneath the canopy of the oak woodland, and there is a significant amount of trash and debris in these areas. A small segment of the bike trail occurs in this habitat.

## Topography

The terrain in the project site and vicinity is locally flat. The elevation on the project site ranges from 350- to 370-feet above mean sea level and has low to moderate sloping from east to west.



## Soils

The project site includes two soil mapping units (NRCS 2020): Argonaut-Auburn-Urban land complex, 3 to 8 percent slopes and Argonaut-Auburn complex, 3 to 8 percent slopes. Soils on the National Hydric Soils List for Sacramento County (NRCS 2015) are not present in the project site.

Both soils occur on hills and are derived from residuum weathered from metamorphic rock. A typical profile of the Argonaut-Auburn-Urban land complex and Argonaut-Auburn complex, 3 to 8 percent slopes include loam from 0- to 14-inches, clay from 14- to 29-inches and bedrock from 29- to 33-inches; the depth to water table is more than 80-inches.

## **Special-Status Plant Species**

No special-status plant species were determined to have the potential to occur on the project site or be impacted by the proposed project. Of the 17 regionally occurring special-status plant species that were identified during the database queries and desktop review, the majority occur in wetland habitats such as vernal pools or seeps, which are absent from the site. Several others are limited to grassland or cismontane woodland habitats. Although the site contains blue oak woodland, the study area is located in an urban area dominated by non-native species that does not provide suitable habitat for special-status plant species. Therefore, no impacts to special-status plants are anticipated as a result of the proposed project.

## **Protected Trees**

A total of 111 trees are present on the site, including 94 blue oaks, seven Fremont's cottonwoods (*Populus fremontii*), four interior live oaks, two Gooding's black willow (*Salix gooddingii*), one mulberry, one Chinese hackberry, one Chinese tallow, and one ornamental cherry (Figure 3). The City of Folsom regulates trees under Section 12.16 of the Folsom Municipal Code (Tree Preservation Ordinance). A permit is required to remove native oaks (defined as valley oak, blue oak, interior live oak, and coast live oak) measuring 6-inches in diameter at standard height (i.e., 54-inches above natural grade, DSH), or a multi-stemmed native oak measuring a total of 20-inches at DSH. For a tree with a common root system that branches at the ground, DSH is defined as the sum of the diameter of the largest trunk and one-half the cumulative diameter of the remaining trunks measured at 4.5-feet above natural grade. If protected trees will be removed by the proposed project, mitigation will be required per Section 12.16.150.

A total of 71 trees on the project site are considered protected by Folsom City Code; 69 blue oaks are protected, and two interior live oaks are protected. None of the Fremont's cottonwood, Chinese hackberry, Chinese tallow, mulberry, ornamental cherry or Gooding's black willow are protected. See Attachment B for additional data on the trees found on the project site.

## **RECOMMENDED MITIGATION MEASURES**

## **Protected Trees**

Of the 111 trees on the project site, 71 trees are considered protected by Folsom City Code; 69 blue oaks, and two interior live oaks. If protected trees will be removed by the proposed project mitigation will be required per Section 12.16.150.



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Protected trees rated 3, 4 or 5 shall be replaced at a ratio of one-inch equivalent for every one-inch of DSH removed as shown in Table 1. Protected trees rated 2 shall be replaced at a ratio of one-half-inch equivalent for every one-inch removed. Protected trees rated 0 or 1 require no replacement or any other mitigation. Mitigation for trees can be done through on-site replacement planting, payment of in-lieu fees, or a combination thereof.

Replacement Tree Size	DSH Equivalency
A sapling tree; or	0.5-inch DSH
Tree in container less than 15 gallons	0.5-inch DSH
15-gallon container tree	1-inch DSH
24-inch box tree	2-inch DSH
36-inch box tree	3-inch DSH

Table 1: Tree	Replacement	Equivalency	/ Table

Of the 71 trees protected by Folsom City Code, only 57 trees require mitigation based on having a health rating of 5, 4, 3, or 2. Based on the DSH equivalency ratio, mitigation for a total of 935.6-inches is required if all protected trees subject to mitigation requirements are impacted.

## SUMMARY/CONCLUSION

## **Protected Trees**

Of the 111 trees on the project site, 71 trees are considered protected by Folsom City Code. If protected trees will be removed by the proposed project, mitigation will be required per Section 12.16.150. Of the 71 trees that are protected by Folsom City Code, only 57 trees require mitigation based on having a health rating of 5, 4, 3, or 2. Based on the DSH equivalency ratio, mitigation for a total of 935.6-inches is required if all protected trees subject to mitigation are impacted.

I appreciate the opportunity to assist you on this project. Feel free to contact me with any questions at 916-365-8712.

Stephen String-

Stephen Stringer, M.S. Principal Biologist/ Biology Group Manager

Attachments: A – Figures B – Tree Inventory C – Site Photographs



## REFERENCES

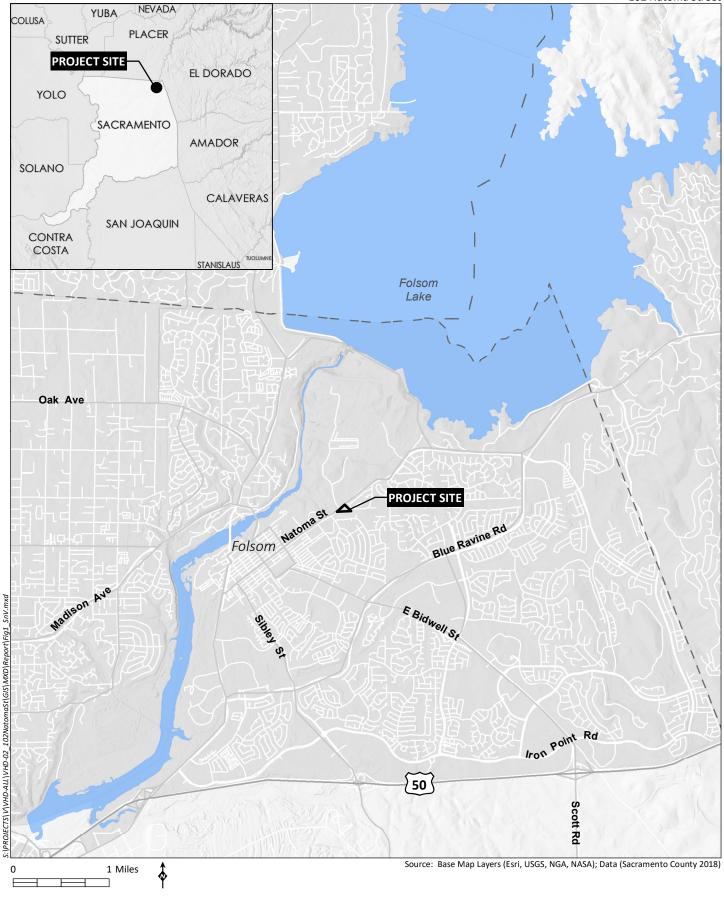
California Native Plant Society (CNPS). 2020. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). Website <u>http://www.rareplants.cnps.org</u> [Accessed 1 October 2020].

NETR Online (NETR). 2020. Historic Aerials. <u>https://www.historicaerials.com/viewer</u>.



# Attachment A

Figures





Vicinity Map

Figure 1

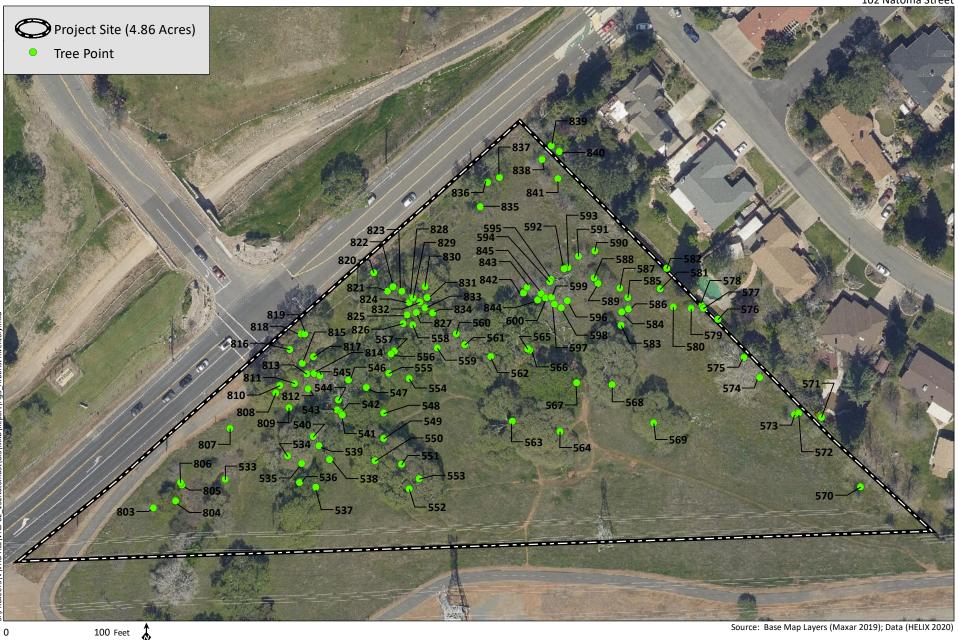


HELIX Environmental Planning

Source: Base Map Layers (Maxar 2019)



102 Natoma Street





**Arborist Inventory** 

Figure 3

## Attachment B

Tree Inventory

Tree Number	Species	DSH (in)	Dripline (ft)	Height (ft)	Health	Structure	Notes	Protected?	Mitigation?	Replace. Inches*
	Blue Oak							Yes	Yes - Full	
533	Quercus douglasii	17.8	17	58	5	4				17.8
	Blue Oak							Yes	Yes – Full	
534	Quercus douglasii	14	25	65	5	3	lean			14
	Blue Oak							Yes	Yes - Full	
535	Quercus douglasii	20.4	35	75	5	4				20.4
	Blue Oak							Yes	Yes - Half	7.5
536	Quercus douglasii	15	18	55	2	3	crown dieback, lean			
	Blue Oak							Yes	Yes - Full	16.5
537	Quercus douglasii	16.5	30	72	3	4	crown dieback			
	Blue Oak							Yes	Yes - Half	9.2
538	Quercus douglasii	18.4	20	70	2	4	crown dieback			
	Blue Oak							Yes	Yes - Half	8.5
539	Quercus douglasii	16.9	25	70	2	5	Tree is in decline			
	Blue Oak				_	-		Yes	Yes- Half	8.3
540	Quercus douglasii	16.7	25	65	2	3	crown dieback, lean			
0.0	Blue Oak				-			Yes	No	
541	Quercus douglasii	11.5	20	15	1	1	crown dieback, lean			
-	Blue Oak			-			crown dieback, lean,	Yes	No	
542	Quercus douglasii	12.6	20	15	1	1	nearly dead			
	Blue Oak						crown dieback,	Yes	Yes- Half	10.7
543	Quercus douglasii	21.5	25	45	2	3	included bark, lean			
	Blue Oak							No	No	
544	Quercus douglasii	17.7	0	0	0	0	dead			
	Mulberry	5.3,						No	No	
545	Morus alba	3, 3, 3, 2	15	15	4	3	codominant leaders			
	Blue Oak						crown dieback, nearly	Yes	No	
546	Quercus douglasii	13.2	20	55	1	4	dead			
	Blue Oak							Yes	Yes - Half	8
547	Quercus douglasii	16.1	30	58	2	4	crown dieback			
	Blue Oak							Yes	No	
548	Quercus douglasii	19.8	28	70	3	4	crown dieback			
	Blue Oak							Yes	No	
549	Quercus douglasii	17.8	17	55	1	4	crown dieback			
550	Blue Oak	22	25	68	1	4	crown dieback	Yes	No	

	Quercus douglasii									
	Blue Oak							Yes	Yes - Half	7.2
551	Quercus douglasii	14.5	20	55	2	4	crown dieback			
	Blue Oak							Yes	Yes - Half	12.6
552	Quercus douglasii	25.2	16	65	2	4	crown dieback			
	Blue Oak							Yes	Yes - Full	26.5
553	Quercus douglasii	26.5	25	65	4	4				
	Blue Oak						crown dieback, nearly	Yes	No	
554	Quercus douglasii	26.6	25	65	1	3	dead			
	Blue Oak							Yes	No	
555	Quercus douglasii	19.2	30	65	1	4	crown dieback			
	Blue Oak						codominant leaders,	Yes	Yes – Half	8.5
556	Quercus douglasii	17	35	60	2	3	crown dieback			
	Blue Oak							No	No	
557	Quercus douglasii	14.4	0	0	0	0	dead			
	Blue Oak							No	No	
558	Quercus douglasii	16.3	0	0	0	0	dead			
	Blue Oak							Yes	Yes – Full	
559	Quercus douglasii	20.5	30	68	3	3	crown dieback, lean			20.5
	Blue Oak						codominant leaders,	Yes	Yes – Full	
560	Quercus douglasii	28.7	35	75	3	4	crown dieback			28.7
	Blue Oak							Yes	Yes – Full	
561	Quercus douglasii	15.8, 19.8	25	68	4	4	codominant leaders			35.6
	Blue Oak							Yes	Yes – Full	
562	Quercus douglasii	23.7	40	70	4	4				23.7
	Blue Oak							Yes	Yes – Half	
563	Quercus douglasii	33.5	20	70	2	3	trunk wound, trunk rot			16.75
	Blue Oak							Yes	Yes - Full	
564	Quercus douglasii	32.1	25	75	5	5				32.1
	Blue Oak							Yes	Yes - Half	15
565	Quercus douglasii	30	40	80	2	4	crown dieback			
	Blue Oak							Yes	Yes – Half	
566	Quercus douglasii	27.3	28	70	2	4	codominant leaders			13.65
	Blue Oak							Yes	Yes - Full	
567	Quercus douglasii	26.6	35	75	4	4	lean			26.6
	Blue Oak							Yes	Yes – Full	
568	Quercus douglasii	35.5	40	75	5	4				35.5

							codominant leaders,	Yes	Yes - Full	
	Blue Oak						included bark, trunk			
569	Quercus douglasii	41	50	80	4	4	rot			41
	Blue Oak							No	No	
570	Quercus douglasii	5.6, 5.7	7	14	4	4	codominant leaders			
	Ornamental cherry	6, 6, 5.8, 4,						No	No	
571	Prunus sp.	3.5, 2	11	15	4	3	codominant leaders			
	Chinese hackberry							No	No	
572	Celtis sinensis	7.2	16	22	5	4				
	Blue Oak							Yes	Yes – Full	
573	Quercus douglasii	7.2	7	11	5	5				7.2
	Blue Oak							Yes	Yes - Full	
574	Quercus douglasii	6.1	8	12	5	5				6.1
	Fremont's cottonwood						codominant leaders,	No	No	
575	Populus fremontii	20, 35	35	65	4	4	included bark			
	Blue Oak							No	No	
576	Quercus douglasii	5.6	5	11	4	4				
	Blue Oak							Yes	Yes – Full	
577	Quercus douglasii	6.7	8	17	4	4				6.7
	Blue Oak							Yes	Yes - Full	
578	Quercus douglasii	7.3	10	15	4	3				7.3
	Blue Oak							No	No	
579	Quercus douglasii	4.5	7	11	5	5				
	Blue Oak							Yes	Yes - Full	6
580	Quercus douglasii	6	6	10	5	5				
	Blue Oak						codominant leaders,	No	No	
581	Quercus douglasii	4, 4.8	11	12	5	4	included bark			
	Chinese Tallow							No	No	
582	Triadica sebifera	4.8, 4.7, 3.7	10	15	4	3	codominant leaders			
	Blue Oak							Yes	Yes – Full	
583	Quercus douglasii	6.5	6	11	4	4				6.5
	Blue Oak							Yes	Yes - Full	
584	Quercus douglasii	6.2	7	16	4	4				6.2
	Blue Oak							No	No	
585	Quercus douglasii	4.5	4	11	5	5				
	Blue Oak						codominant leaders,	No	No	
586	Quercus douglasii	4.2, 2.8, 3.5	6	12	4	3	included			

	Blue Oak						included bark,	Yes	Yes – Full	8.8
587	Quercus douglasii	6.5, 6	10	18	4	3	codominant leaders			
	Blue Oak							Yes	Yes – Full	10.9
588	Quercus douglasii	8.6, 6.7	11	19	5	4	codominant leaders			
	Interior Live Oak							No	No	
589	Quercus wislizeni	5.5, 5, 2.3	9	9	4	3	codominant leaders			
	Blue Oak							Yes	Yes – Full	
590	Quercus douglasii	6	7	15	5	5				6
	Blue Oak							Yes	Yes - Full	
591	Quercus douglasii	6.5	5	12	4	4				6.5
	Blue Oak							No	No	
592	Quercus douglasii	4.5	6	12	4	4	codominant leaders			
	Blue Oak							No	No	
593	Quercus douglasii	4	4	12	5	5				
	Blue Oak							Yes	Yes - Full	6.2
594	Quercus douglasii	6.2	6	13	5	4				
	Blue Oak							No	No	
595	Quercus douglasii	5	6	12	4	4				
	Fremont's cottonwood							No	No	
596	Populus fremontii	6.9, 6.7, 5.7	12	15	4	3	codominant leaders			
	Fremont's cottonwood							No	No	
597	Populus fremontii	4.3	5	18	5	4				
	Fremont's cottonwood							No	No	
598	Populus fremontii	5.7, 6.2, 2.5	11	19	5	3	codominant leaders			
	Blue Oak							No	No	
599	Quercus douglasii	5.9	4	16	4	4				
	Fremont's cottonwood							No	No	
600	Populus fremontii	8.6	11	20	5	5				
	Blue Oak							Yes	Yes – Full	
803	Quercus douglasii	6.4	6	18	5	4				6.4
	Blue Oak							Yes	Yes – Full	
804	Quercus douglasii	10.9	11	22	5	4				10.9
	Blue Oak							Yes	Yes - Full	
805	Quercus douglasii	7.2	5	16	5	5				7.2
	Blue Oak							No	No	
806	Quercus douglasii	4.2, 5.5	7	11	4	3	codominant leaders			
807	Blue Oak	6.7	5	11	4	3	codominant leaders	Yes	Yes - Full	6.7

## **Attachment B – Tree Inventory**

	Quercus douglasii									
	Blue Oak							Yes	Yes - Full	
808	Quercus douglasii	18.6	19	65	3	4	lean			18.6
	Interior Live Oak						trunk wound, trunk	Yes	Yes - Half	7.8
809	Quercus wislizeni	15.7	6	13	2	1	rot, lean			
	Blue Oak							Yes	Yes - Full	
810	Quercus douglasii	32.5	25	65	5	4				32.5
	Blue Oak							Yes	Yes - Full	
811	Quercus douglasii	14.4	11	35	5	4				14.4
	Blue Oak							Yes	Yes - Full	
812	Quercus douglasii	15.3	9	40	3	4	exposed roots			15.3
	Blue Oak							Yes	Yes - Full	
813	Quercus douglasii	12	12	32	4	4	included bark			12
	Blue Oak							Yes	Yes – Full	
814	Quercus douglasii	11.8	16	35	4	2	lean			11.8
	Blue Oak							Yes	Yes – Full	
815	Quercus douglasii	13	16	36	4	3	lean			13
	Blue Oak							Yes	Yes - Full	
816	Quercus douglasii	22	25	60	5	4				22
	Blue Oak							Yes	No	
817	Quercus douglasii	14.4	18	25	1	1	crown dieback, lean			
	Blue Oak							Yes	Yes – Full	
818	Quercus douglasii	28	35	70	4	3	codominant leaders			28
	Blue Oak							Yes	Yes - Full	
819	Quercus douglasii	20	33	65	4	4	codominant leaders			20
	Blue Oak							No	No	
820	Quercus douglasii	5.2	5	8	5	4				
	Blue Oak							Yes	Yes - Half	8.7
821	Quercus douglasii	17.8	25	60	2	4	crown dieback			
	Blue Oak						crown dieback, lean,	Yes	No	
822	Quercus douglasii	12.2, 9.2	18	20	1	1	codominant leaders			
	Blue Oak							Yes	Yes - Full	
823	Quercus douglasii	17	30	68	3	2	codominant leaders			17
	Blue Oak							Yes	Yes - Full	
824	Quercus douglasii	9.5	10	35	3	4	crown dieback			9.5
	Blue Oak							No	No	
825	Quercus douglasii	9.6, 8.8	0	0	1	1	dead			

	Blue Oak							No	No	
826	Quercus douglasii	7.6, 6.8	0	0	1	1	dead			
	Blue Oak							Yes	No	
827	Quercus douglasii	12.5	15	35	1	1	crown dieback, lean			
	Blue Oak							Yes	No	
828	Quercus douglasii	18.5	17	45	1	1	crown dieback			
	Blue Oak							Yes	Yes - Full	
829	Quercus douglasii	12.8	25	10	4	1	lean			12.8
	Blue Oak							Yes	Yes - Full	
830	Quercus douglasii	16.6	20	35	4	2	lean			16.6
	Blue Oak							Yes	Yes - Full	
831	Quercus douglasii	25	35	70	4	4	trunk wound, lean			25
	Blue Oak							No	No	
832	Quercus douglasii	5.8	5	17	4	3				
	Blue Oak							Yes	Yes - Full	
833	Quercus douglasii	9	7	20	4	4	codominant leaders			9
	Blue Oak							Yes	Yes - Full	
834	Quercus douglasii	14.1	40	68	3	3	crown dieback, lean			14.1
	Interior Live Oak							Yes	Yes – Full	7.9
835	Quercus wislizeni	6.4, 4.6	7	16	5	4	codominant leaders			
	Interior Live Oak							Yes	Yes – Full	9.4
836	Quercus wislizeni	7.7, 5.5	11	19	5	4	codominant leaders			
	Blue Oak						codominant leaders,	No	No	
837	Quercus douglasii	5.7, 2.7	6	12	5	3	included bark			
	Blue Oak							Yes	Yes - Full	12.5
838	Quercus douglasii	12.5	7	18	4	4	included bark			
	Gooding's black willow						included bark, crown	No	No	
839	Salix gooddingii	9.2, 10.4, 7.2	10	18	2	3	dieback			
	Gooding's black willow						included bark, crown	No	No	
840	Salix gooddingii	8.9, 9	11	16	2	2	dieback			
	Blue Oak							Yes	Yes – Full	11
841	Quercus douglasii	9.5, 5.6	13	21	4	4	codominant leaders			
	Fremont's cottonwood							No	No	
842	Populus fremontii	5.2, 5	7	16	4	4	codominant leaders			
	Blue Oak							Yes	Yes – Full	6.3
843	Quercus douglasii	6.3	6	18	5	5				
844	Fremont's cottonwood	6.8	5	17	5	5		No	No	

#### Attachment B – Tree Inventory

	Populus fremontii									
	Blue Oak							No	No	
845	Quercus douglasii	5.9, 2.7	8	13	5	4	codominant leaders			
							Totals:	77 trees	65 trees	935.6
										inches

\* = Indicates estimated mitigation inches that would be required if tree is removed to be determined by the City of Folsom. No impact assessment was conducted.

## Attachment C

Site Photographs



**Photo 1:** View of intermittent drainage feature running through blue oak woodland. Photo taken facing northeast.



**Photo 2:** View of intermittent drainage feature running through blue oak woodland. Photo taken facing west.





**Photo 3:** View of cycling trail and traffic on Natoma Street, along the northern boundary of the project site. Photo taken facing west.



**Photo 4:** View along the boundary of the site at Natoma Street. Photo taken facing northeast.





**Photo 5:** View of electrical towers along the southern boundary of the project site. Photo taken facing southwest.



**Photo 6:** View of blue oak woodland habitat on the project site. Photo taken facing west.





**Photo 7:** View of informal bike trails and jumps constructed beneath the canopy of oak trees. Photo taken facing south.



**Photo 8:** View of the intermittent drainage running through the project site. Photo taken facing northeast.





**Photo 9:** View of the ephemeral drainage running through the project site. Photo taken facing southeast.



**Photo 10:** View of the "Y" intersection of the intermittent and ephemeral drainages on the project site. Photo taken facing west.

