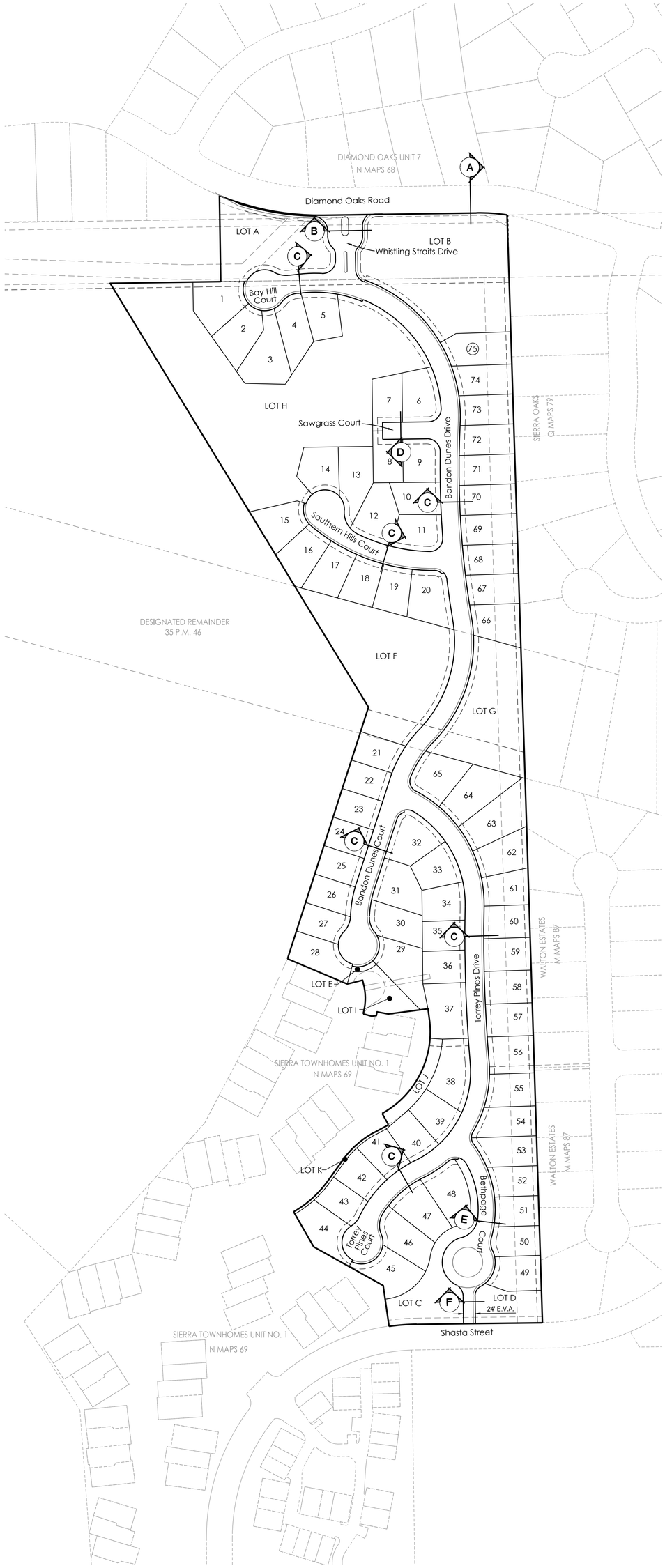
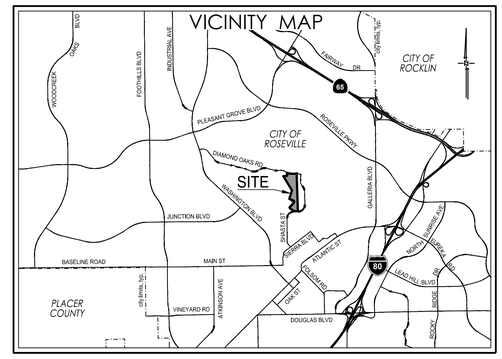


TENTATIVE MAP INFORMATION

APPLICANT:	WP Sierra View, LLC 1420 Rocky Ridge Drive, Suite 265 Roseville, CA 95661
OWNER:	SVLC 23, LLC
ENGINEER:	MacKay & Somps Civil Engineers, Inc. 1025 Creekside Ridge Drive, Suite 150 Roseville, CA 95678 916-773-1189
SITE ADDRESS:	360 Diamond Oaks Road Roseville, CA 95678
ASSESSOR'S PARCEL NUMBER:	015-011-029
SITE AREA:	23.10 ± AC.
GENERAL PLAN LAND USE:	
Existing:	LDR & MDR
Proposed:	LDR
ZONING:	
Existing:	R1 & R3
Proposed:	RS/DS
NUMBER OF LOTS/PARCELS:	86 TOTAL LOTS 75 LDR Lots 4 Landscape / Detention Lots 5 Landscape Lots 1 Open Space Lot 1 Private Park Lot
SERVICE PROVIDERS:	
Parks & Recreation:	City of Roseville
Police & Fire Protection:	City of Roseville
Sanitary Sewer:	City of Roseville
Domestic & Recycled Water:	City of Roseville
Electricity:	City of Roseville
Telephone:	AT&T & Consolidated Communications
Gas:	PG&E
Cable:	Comcast/Consolidated Communications



TENTATIVE MAP NOTES

1. PROPERTY DESCRIPTION: The land described herein is situated in the state of California, County of Placer, City of Roseville, described as follows: Parcel 1 of Sierra View Parcel Map #2, Subdivision No. 000142, filed for record May 3, 2013, in Book 35 of Parcel Maps, at Page 46. Together with that portion of 'Resultant Parcel 2' of Lot Line Adjustment filed for record March 5, 2013, in Document No. 2013-0021343, Official Records, Placer County; more particularly described as follows:

   Beginning at a point being the Southeast corner of said 'Resultant Parcel 2' of Lot Line Adjustment filed for record March 5, 2013, in Document No. 2013-0021343, Official Records, Placer County and also being the Northeast corner of Parcel 1 of Sierra View Parcel Map #2, Subdivision No. 000142, filed for record May 3, 2013, in Book 35 of Parcel Maps, at Page 46; thence North 00°09'20" East 125.00 feet to the Southerly right of way of Diamond Oaks Road; thence along said right of way, the following four (4) courses:

   1) North 89°50'40" West 2.13 feet to a point of cusp with a non-tangent curve, concave South, having a radius of 373.00 feet, the initial radial of which bears North 09°32'51" East;

   2) Along said curve an arc distance of 61.14 feet through a central angle of 09°23'31", said curve being subtended by a chord bearing North 85°08' 54" West 61.07 feet, a radial to said point which bears North 00°09'20" East;

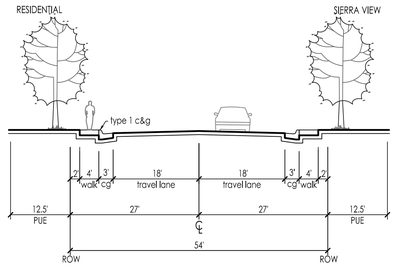
   3) North 89°50'40" West 307.36 feet to the beginning of a tangent curve, concave North, having a radius of 527.00 feet;

   4) Along said curve an arc distance of 213.35 feet, through a central angle of 23°11'42", said curve being subtended by a chord bearing North 78°14' 48" West 211.89 feet, a radial to said point which bears South 23°21'03" West,being the northeast corner of 'Resultant Parcel1' of Lot Line Adjustment filed for record March 5, 2013, in Document No. 2013-0021343, Official Records, Placer County;

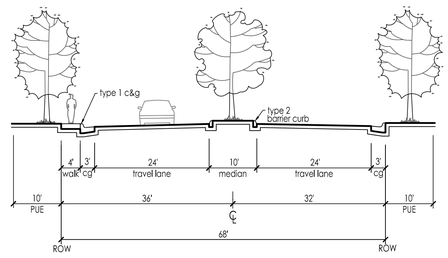
   thence along Easterly lot line of said 'Resultant Parcel 1' of Lot Line Adjustment filed for record March 5, 2013, in Document No. 2013-0021343, Official Records,Placer County South 00°09'20"West 47.60 feet to the Southeast corner of said 'Resultant Parcel 1'; thence South 00°09'20" West 125.07 feet to a point on the Northerly boundary line of Parcel 1 of Sierra View Parcel Map #2, Subdivision No. 000142, filed for record May 3, 2013, in Book 35 of Parcel Maps, at Page 46; thence along said Northerly boundary line South 89°51'05"East 577.92 feet back to the Point of Beginning.

   The above legal description is made pursuant to that certain 'Lot Line Adjustment and Certificate of Compliance' recorded March 6, 2014, Instrument No. 2014-0014272, Official Records, and being "Resultant Parcel 1" as described therein.

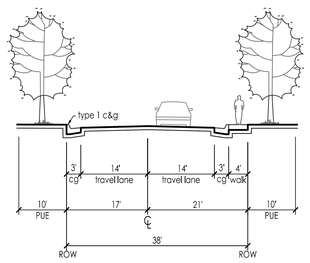
   Reserving therefrom, a 50' Private Access Easement for the benefit of the 'Remainder Parcel', as shown on said Parcel Map entitled 'Sierra View Parcel Map #2, Subdivision No. 000142', filed for record May 3, 2013, in Book 35 of Parcel Maps, at Page 46.
2. Lot dimensions and acreages are approximate and are subject to change.
3. Lot lines and lot areas may be adjusted at the time of Final Map(s) preparation provided no additional lots are created, subject to approval by the City of Roseville.
4. The Final Mapping and subsequent development of parcels and streets may be phased. Project improvements are deferred to individual Small Lot Final Maps or project development plans.
5. Pursuant to Government Code Section 66463.1, the subdivider may file multiple Final Maps based upon this Tentative Subdivision Map. The filing of a Final Map on a portion of this Tentative Subdivision Map shall not invalidate any part of this Tentative Subdivision Map.
6. The Final Mapping and subsequent development of parcels and streets may be phased. Phasing is to be consistent with the applicable infrastructure phasing matrix.
7. Additional easements to accommodate new public utility improvements, access required for parcel development, rights to construct, or other similar mapping requirements needed to accomplish the final design may be added prior to each Small Lot Final Map based on this Tentative Subdivision Map.
8. Pursuant to California Government Code Section 66499.20.2, the land shown hereon may be merged and resubdivided without reversion to acreage and may constitute abandonment of portions of the existing easements, subject to the approval of the City of Roseville, including the following:
   a. A 10' wide P.U.E. per 35 P.M. 46.
   b. A 50' private access easement per 35 P.M. 46.
   c. An access and utility easement per 937 O.R. 692.
   d. A 10' wide drainage easement per 2583 O.R. 163.
9. A minimum 10' Public Utility Public Easement (PUE) will be located adjacent to all rights-of-way unless otherwise noted.
10. The following lots are to be dedicated to the Sierra Townhomes HOA with the corresponding phase at the time of each Final Map: Lots I, J and K.
11. Landscape lots and open space lots are not to be counted as "lots" towards any future boundary line adjustment.
10. Sierra View will be a gated community, an HOA will be formed for the maintenance of the following lots Lots A, B, C, D, E, F, G and H and private roads within this project.
11. This project will contain private streets and drainage systems. Water and Sewer will be public service.



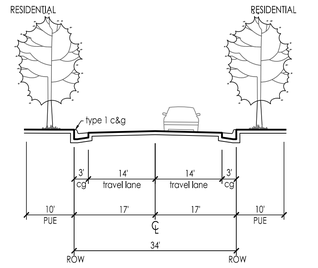
A DIAMOND OAKS ROAD
54' ROW
n.t.s.



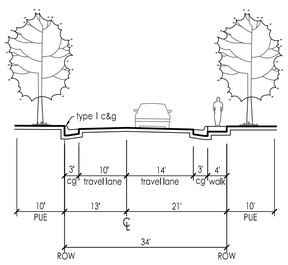
B RESIDENTIAL ENTRY
(MODIFIED CITY OF ROSEVILLE STD. DWG ST-25)
n.t.s.



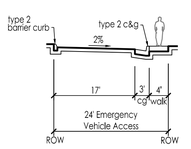
C MINOR RESIDENTIAL STREET
(MODIFIED CITY OF ROSEVILLE STD. DWG ST-2)
n.t.s.



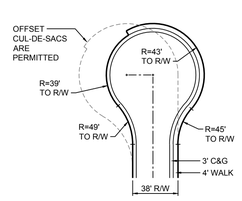
D SAWGRASS COURT
34' ROW
n.t.s.



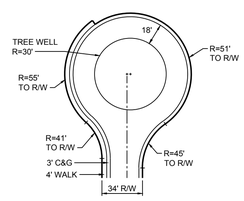
E MINOR RESIDENTIAL STREET
(NO PARKING WEST SIDE)
n.t.s.



F EMERGENCY VEHICLE ACCESS
n.t.s.



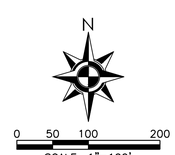
STANDARD CUL-DE-SAC
(CITY OF ROSEVILLE STD. DWG ST-14 & 15)
n.t.s.



MODIFIED CUL-DE-SAC
n.t.s.

PARCEL SUMMARY TABLE

Parcel	Acres	Units	Lot Size (typ)
Sierra View (LDR)	15.35 ac.	75 du	60' x 85'
Parks, Open Space & Landscape			
Lot A (Landscape)	0.66 ac.		
Lot B (Landscape/Detention)	1.42 ac.		
Lot C (Landscape/Detention)	0.38 ac.		
Lot D (Landscape/Detention)	0.22 ac.		
Lot E (Landscape)	0.01 ac.		
Lot F (Park)	1.19 ac.		
Lot G (Landscape/Detention)	0.77 ac.		
Lot H (Open Space)	2.79 ac.		
Lot I (Landscape)	0.17 ac.		
Lot J (Landscape)	0.11 ac.		
Lot K (Landsacpe)	0.03 ac.		
subtotal	7.75 ac.		
TOTAL	**23.10 ac.**	**75 du**	



COVER SHEET
TENTATIVE SUBDIVISION MAP

SIERRA VIEW

Roseville, CA

August 3, 2021

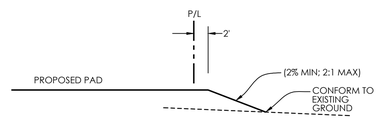
8-03-2021 10:37:57 bborgen P:\18512\PLN\Applications\TM\01-SV-SLTM-COVER.dwg
[1] P:\18512\PLN\Applications\TM\P-CS_SV.dwg [2] P:\18512\SRVCS\Working\01-ADJ.dwg [3] P:\18512\PLN\Applications\TM\SV Street Sections.dwg

LEGEND

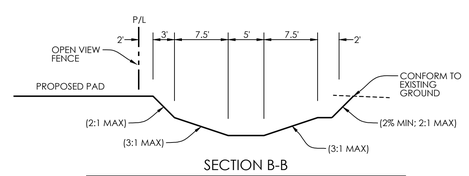
PROPOSED	DESCRIPTION	EXISTING
SS	SANITARY SEWER PIPE	EX. SS
	SANITARY SEWER MANHOLE	
12"W	WATER LINE	12"W
12"RW	RECYCLED WATER LINE	12"RW
	GATE VALVE	
	FIRE HYDRANT	
	BLOW-OFF VALVE	
SD	STORM DRAIN PIPE	EX. SD
	STORM DRAIN MANHOLE	
	DROP INLET	
	STORMWATER FACILITY	
P=XXX.X	PAD GRADE	P=XXX.X
	OVERLAND RELEASE FOR DRAINAGE	
	MASONRY RETAINING WALL	
	WOOD RETAINING WALL	
	ROCKERY RETANING WALL	
1	CLASS III (REAR DRAINING LOTS)	

UTILITY NOTES

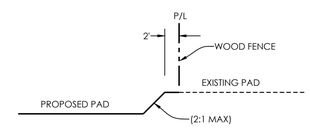
1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE.
2. UTILITIES MAY BE PHASED DEPENDING UPON THE DEVELOPMENT SEQUENCE OF THE PROJECT, SUBJECT TO THE REVIEW OF THE CITY OF ROSEVILLE.
3. THE SIZE AND LOCATION OF PROPOSED WATER, RECYCLED WATER, SEWER, AND STORM DRAINAGE INFRASTRUCTURE IS SUBJECT TO CHANGE DURING FINAL DESIGN, SUBJECT TO REVIEW AND APPROVAL BY THE CITY OF ROSEVILLE WITH IMPROVEMENT PLANS.
4. ANY OFFSITE GRADING SHALL REQUIRE RIGHT OF ENTRY FROM ADJOINING PROPERTY OWNERS. IF A RIGHT OF ENTRY CANNOT BE OBTAINED, RETAINING WALLS ALONG PROPERTY LINES ARE TO BE CONSTRUCTED AS SHOWN HEREON.
5. UNLESS OTHERWISE NOTED, ALL LOTS ARE TO HAVE CLASS 1 LOT DRAINAGE AS SUCH, 2% SWALES, YARD DRAINS,AND UNDERGROUND PIPE SYSTEMS WITH BUBBLE UPS SHALL BE IMPLEMENTED IN LIEU OF 1% MINIMUM SWALES. AN OVERLAND RELEASE TO THE STREET RIGHT-OF-WAY SHALL BE INCLUDED AS PART OF THE FINISHED LOT GRADING DESIGN TO PRECLUDE ANY PONDING AGAINST FUTURE BUILDING FOUNDATION. POSITIVE DRAINAGE AWAY FROM THE BUILDING AT A SLOPE OF 5% MINIMUM SHALL BE PROVIDED, CONSISTENT WITH SECTION 2304.11 OF THE CALIFORNIA BLDG CODE.



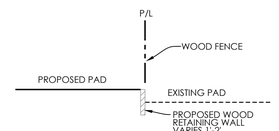
SECTION A-A
PROPERTY LINE
N.T.S.



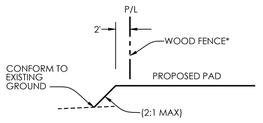
SECTION B-B
SWQ OUTFALL SWALE
N.T.S.



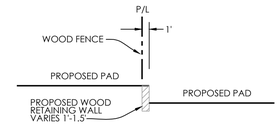
SECTION C-C
PROPERTY LINE
N.T.S.



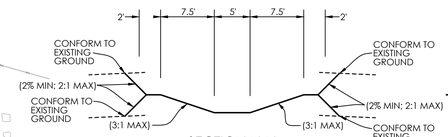
SECTION D-D
PROPERTY LINE
N.T.S.



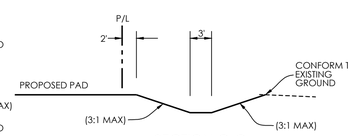
SECTION E-E
PROPERTY LINE
N.T.S.
*OPEN VIEW FENCE WHEN ADJACENT TO GOLF COURSE



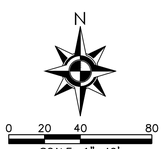
SECTION J-J
PROPERTY LINE
N.T.S.
NOTE: SIDEYARD SLOPES ARE PERMITTED IN LIEU OF RETAINING WALL



SECTION N-N
SWQ OUTFALL SWALE
N.T.S.



SECTION O-O
SWQ SWALE
N.T.S.



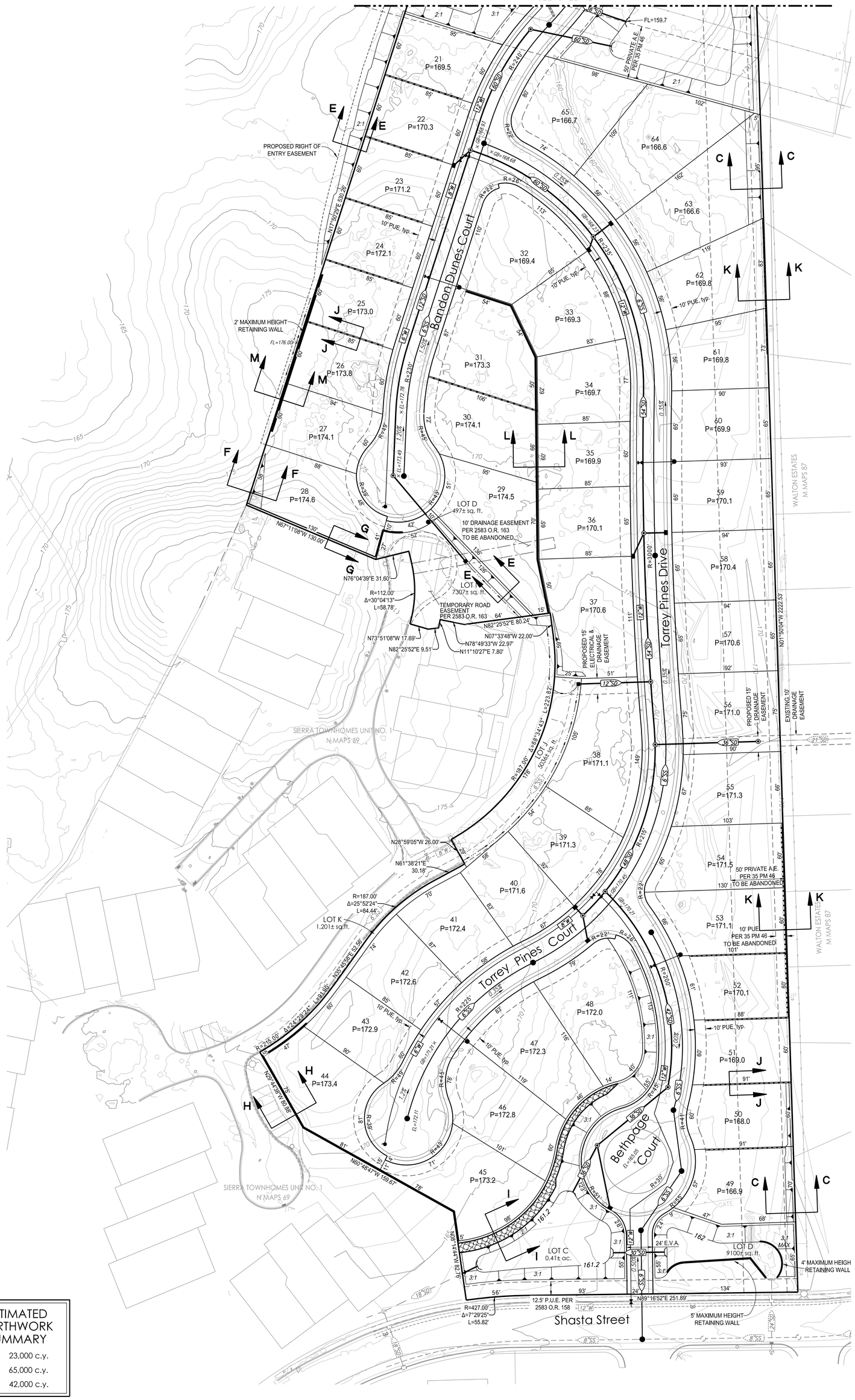
ESTIMATED EARTHWORK SUMMARY	
CUT:	23,000 c.y.
FILL:	65,000 c.y.
NET:	42,000 c.y.

CONCEPTUAL GRADING, DRAINAGE AND UTILITIES TENTATIVE SUBDIVISION MAP

SIERRA VIEW

Roseville, CA

August 2, 2021



LEGEND

PROPOSED	DESCRIPTION	EXISTING
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	SANITARY SEWER MANHOLE	
12"W	WATER LINE	12"W
12"RW	RECYCLED WATER LINE	12"RW
	GATE VALVE	
	FIRE HYDRANT	
	BLOW-OFF VALVE	
SD	STORM DRAIN PIPE	EX. SD
	STORM DRAIN MANHOLE	
	DROP INLET	
	STORMWATER FACILITY	
P=XXX.X	PAD GRADE	P=XXX.X
	OVERLAND RELEASE FOR DRAINAGE	
	MASONRY RETAINING WALL	
	WOOD RETAINING WALL	
	ROCKERY RETANING WALL	
1	CLASS III (REAR DRAINING LOTS)	

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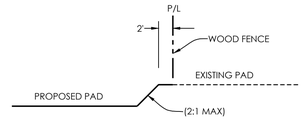
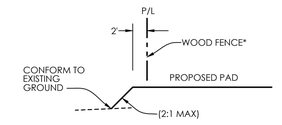
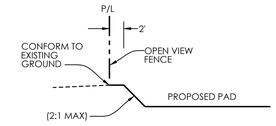


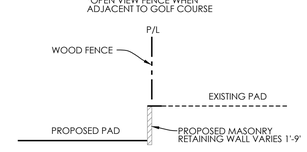
SECTION C-C
PROPERTY LINE
N.T.S.



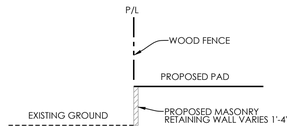
SECTION E-E
PROPERTY LINE
N.T.S.
*OPEN VIEW FENCE WHEN ADJACENT TO GOLF COURSE



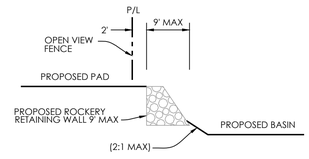
SECTION F-F
PROPERTY LINE
N.T.S.



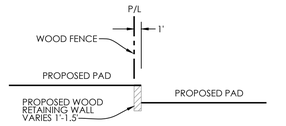
SECTION G-G
PROPERTY LINE
N.T.S.



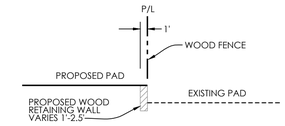
SECTION H-H
PROPERTY LINE
N.T.S.



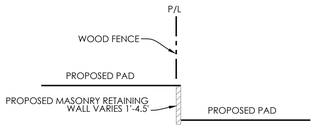
SECTION I-I
PROPERTY LINE
N.T.S.



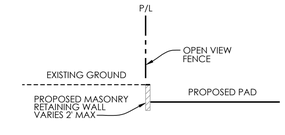
SECTION J-J
PROPERTY LINE
N.T.S.
NOTE: SIDEYARD SLOPES ARE PERMITTED IN LIEU OF RETAINING WALL



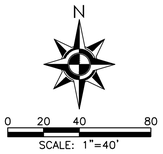
SECTION K-K
PROPERTY LINE
N.T.S.



SECTION L-L
PROPERTY LINE
N.T.S.



SECTION M-M
PROPERTY LINE
N.T.S.



ESTIMATED EARTHWORK SUMMARY

CUT:	23,000 c.y.
FILL:	65,000 c.y.
NET:	42,000 c.y.

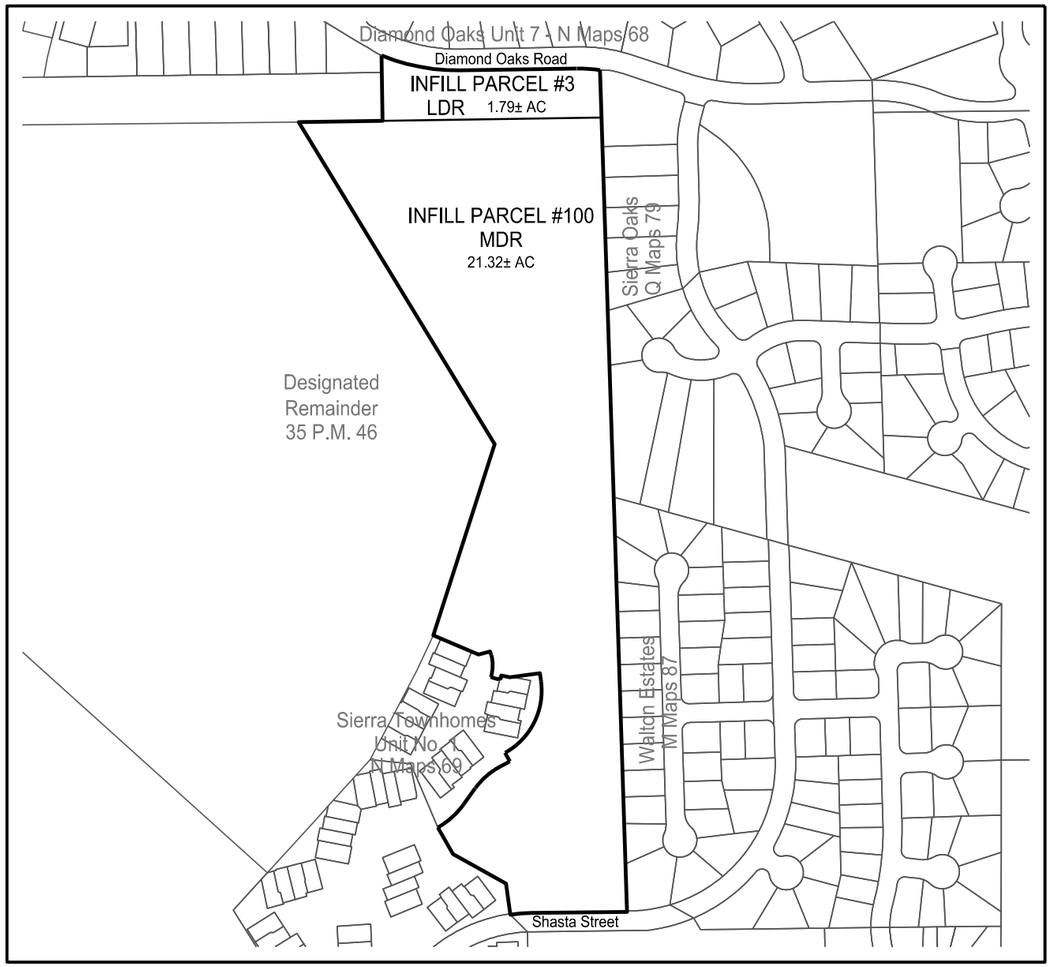
CONCEPTUAL GRADING, DRAINAGE AND UTILITIES TENTATIVE SUBDIVISION MAP

SIERRA VIEW

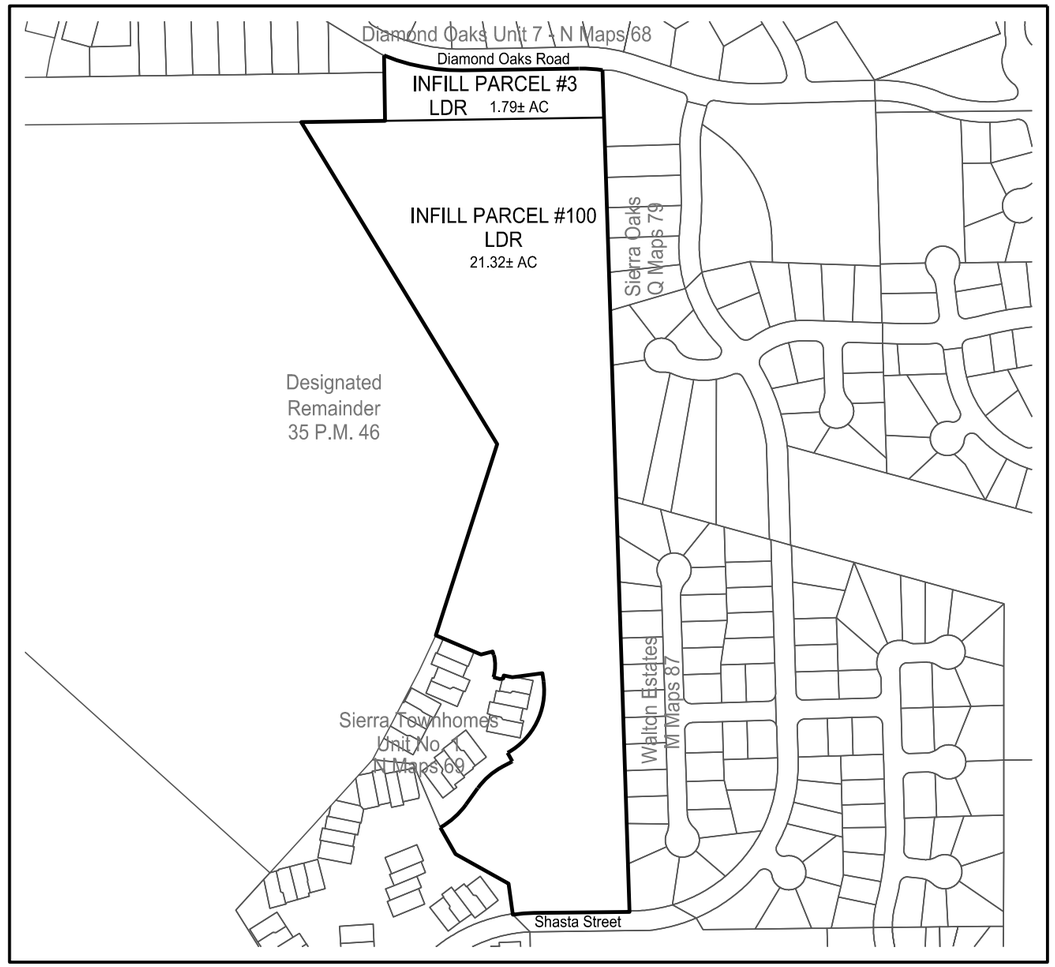
Roseville, CA

August 3, 2021

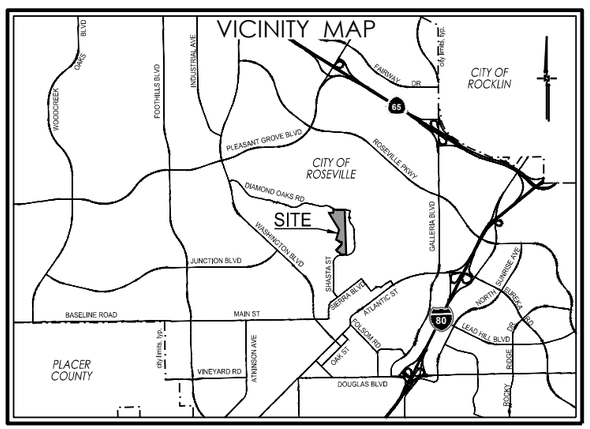
Sierra View | WESTPARK communities | MacKAY & SOMPS ENGINEERS PLANNERS SURVEYORS



EXISTING LAND USE



PROPOSED LAND USE



Existing Land Use		
Parcel	**Land Use**	**Acres**
Infill Parcel #3	LDR	1.79 ac.
Infill Parcel #100	MDR	21.31 ac.
TOTAL		**23.10 ac.**

Proposed Land Use		
Parcel	**Land Use**	**Acres**
Infill Parcel #3	LDR	1.79 ac.
Infill Parcel #100	LDR	21.31 ac.
TOTAL		**23.10 ac.**

WESTPARK communities

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

N

0 200 400 800

SCALE: 1"=400'

GENERAL PLAN AMENDMENT

SIERRA VIEW

Roseville, CA

August 3, 2021

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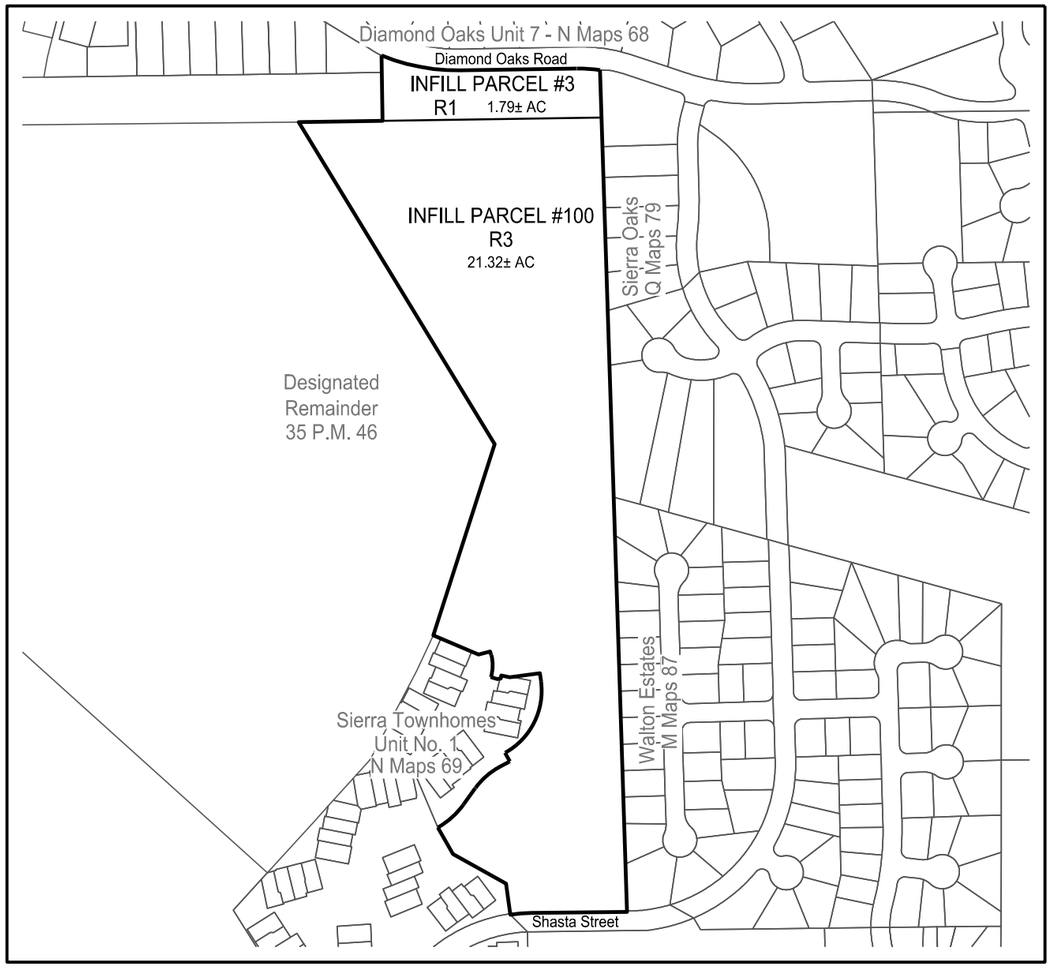

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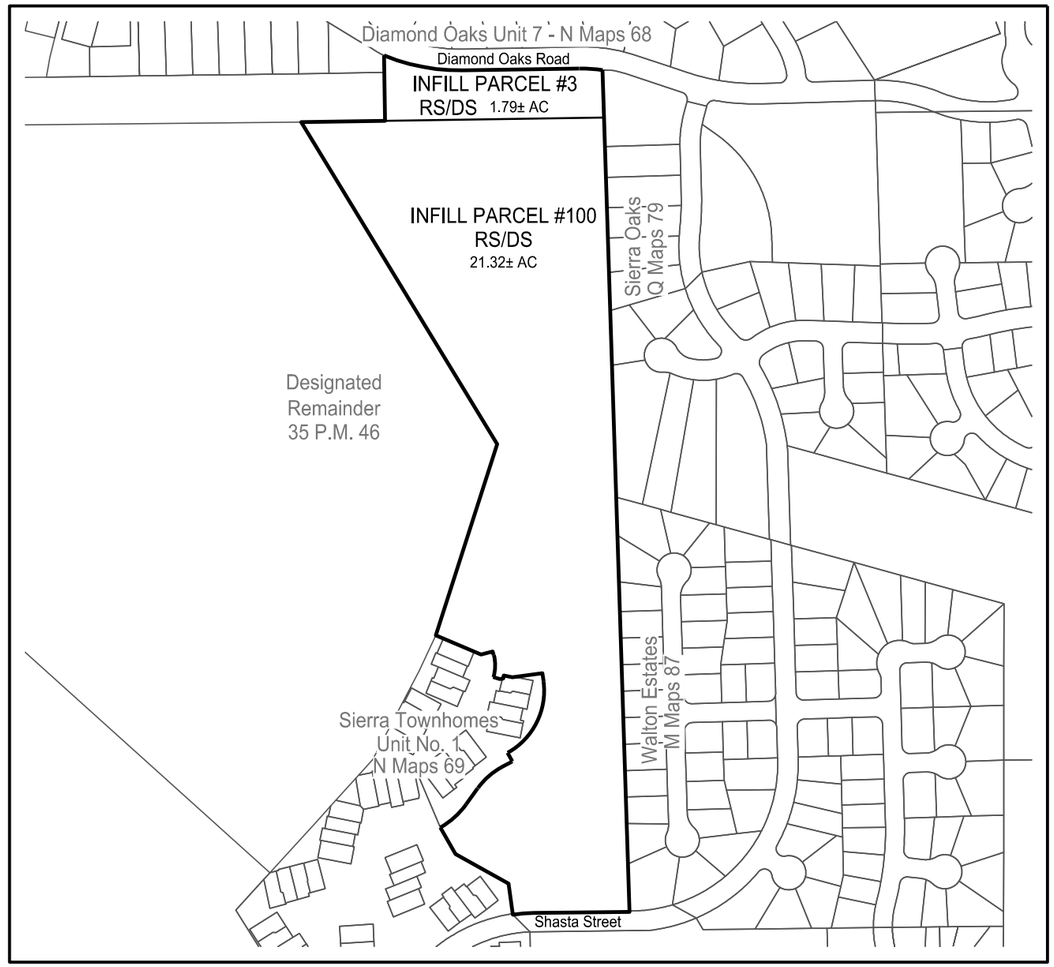
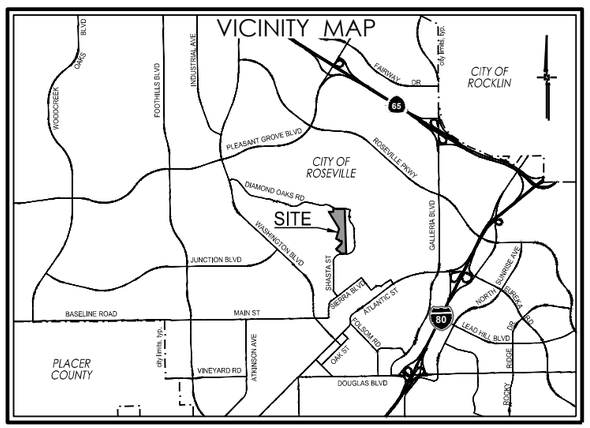


PROPOSED ZONING



Existing Zoning		
Parcel	**Zoning**	**Acres**
Infill Parcel #3	R1	1.79 ac.
Infill Parcel #100	R3	21.31 ac.
TOTAL		**23.10 ac.**

Proposed Zoning		
Parcel	**Zoning**	**Acres**
Infill Parcel #3	RS/DS	1.79 ac.
Infill Parcel #100	RS/DS	21.31 ac.
TOTAL		**23.10 ac.**

WESTPARK communities

MACKAY & SOMPS
ENGINEERS PLANNERS SURVEYORS

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SCALE: 1"=400'

REZONE EXHIBIT

SIERRA VIEW

Roseville, CA

August 3, 2021

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There are no xreferences in this drawing.

California Tree and Landscape Consulting, Inc.

June 18, 2020

Ryan O'Keefe
WP Sierra View, LLC
1420 Rocky Ridge Drive, Suite 265
Roseville, California 95661

Phone: (916) 774-3400
Via Email: ryan@wpcommunities.com

PROPERTY TRANSITION ARBORIST REPORT

RE: Arborist Report and Tree Inventory for Sierra View Country Club
360 Diamond Oaks Road, [APN 015-011-029], City of Roseville, California

Executive Summary:

WP Sierra View, LLC contacted California Tree and Landscape Consulting, Inc. to document the trees on the property for a better understanding of the existing resource and any potential improvement obstacles that may arise. WP Sierra View, LLC requested an arborist report and tree inventory suitable for submittal to the City of Roseville. This is a Preliminary Arborist Report and Tree Inventory for the initial filing of plans to develop the property.

Richard Cory Kinley, ISA Certified Arborist WE-9717A, collected field data at various times from June 8-12, 2020, to provide species identification, measurements of DBH and canopy, field condition notes, recommended actions, ratings, and approximate locations for the trees. A total of 324 trees were evaluated on this property, of which all are protected trees according to the City of Roseville's Municipal Code.

The City of Roseville's Municipal Code, Chapter 19.66, Tree Preservation, defines a "Protected Tree" as any native oak tree equal to or greater than 6 inches diameter at breast height (DBH) measured as a total of a single trunk or multiple trunks. The purpose of this field reconnaissance effort was to identify, inventory, and comment upon the current structure and vigor of the "protected trees" located within and/or overhanging the project site.

The vegetation on site includes those protected trees included in the inventory, an assortment of volunteer ornamental trees found in the drainage swale and wet areas of the site, blackberries, poison oak, and annual grasses.

TABLE 1

Tree Species	Trees on this Site	Protected Trees on the Site	Proposed for Removal	Total Proposed for Retention
Blue Oak	300	300	9	291
Coast Live Oak	10	10	1	9
Interior Live Oak	13	13	0	13

Tree Species	Trees on this Site	Protected Trees on the Site	Proposed for Removal	Total Proposed for Retention
Valley Oak	1	1	0	1
TOTAL	**324**	**324**	**10**	**314**

ASSIGNMENT

Perform an examination of the site to document the presence and condition of trees protected by the City of Roseville. The study area for this effort includes the property as outlined on the exhibit provided for the purpose of preparing this inventory (the Tree Information Collected--Appendix 2--was prepared using the exhibit provided). Essentially, the project area includes the undeveloped property between existing residential homes and the Sierra View Country Club. (All trees protected by the City are included in the inventory.) Prepare a report of findings.

METHODS

Appendix 2 and Tables 1 and 2 in this report are the detailed inventory and recommendations for the trees. The following terms and Table A – Ratings Descriptions will further explain our findings.

Species of trees is listed by our local common name and botanical name by genus and species.

DBH (diameter breast high) is normally measured at 4'6" (54" above the average ground, height but if that varies then the location where it is measured is noted here. A steel diameter tape was used to measure the trees.

Canopy radius is measured in feet. It is the farthest extent of the crown composed of leaves and small twigs measured by a Stanley digital distance meter. This measurement often defines the Critical Root Zone (CRZ) or Protection Zone (PZ), which is a circular area around a tree with a radius equal to this measurement.

Actions listed are recommendations to improve health or structure of the tree. Trees in public spaces require maintenance. If a tree is to remain and be preserved, then the tree may need some form of work to reduce the likelihood of failure and increase the longevity of the tree. Preservation requirements and actions based on a proposed development plan are not included here.

Arborist Rating is subjective to condition and is based on both the health and structure of the tree. All of the trees were rated for condition, per the recognized national standard as set up by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture (ISA) on a numeric scale of 5 (being the highest) to 0 (the worst condition, dead). The rating was done in the field at the time of the measuring and inspection.

Table A – Ratings Descriptions

No problem(s)	5	excellent
No apparent problem(s)	4	good
Minor problem(s)	3	fair
Major problem(s)	2	poor
Extreme problem(s)	1	hazardous, non-correctable
Dead	0	dead

Rating #0: This indicates a tree that has no significant sign of life.

Rating #1: The problems are extreme. This rating is assigned to a tree that has structural and/or health problems that no amount of work or effort can change. The issues may or may not be considered a dangerous situation.

Rating #2: The tree has major problems. If the option is taken to preserve the tree, its condition could be improved with correct arboricultural work including, but not limited to: pruning, cabling, bracing, bolting, guying, spraying, mistletoe removal, vertical mulching, fertilization, etc. If the recommended actions are completed correctly, hazard can be reduced and the rating can be elevated to a 3. If no action is taken the tree is considered a liability and should be removed.

Rating #3: The tree is in fair condition. There are some minor structural or health problems that pose no immediate danger. When the recommended actions in an arborist report are completed correctly the defect(s) can be minimized or eliminated.

Rating #4: The tree is in good condition and there are no apparent problems that a Certified Arborist can see from a visual ground inspection. If potential structural or health problems are tended to at this stage future hazard can be reduced and more serious health problems can be averted.

Rating #5: No problems found from a visual ground inspection. Structurally, these trees have properly spaced branches and near perfect characteristics for the species. Highly rated trees are not common in natural or developed landscapes. No tree is ever perfect especially with the unpredictability of nature, but with this highest rating, the condition should be considered excellent.

Notes indicate the health, structure and environment of the tree and explain why the tree should be removed or preserved. Additional notes may indicate if problems are minor, extreme or correctible.

Remove is the recommendation that the tree be removed. The recommendation will normally be based either on poor structure or poor health and is indicated as follows:

Yes H – Tree is unhealthy
Yes S – Tree is structurally unsound

OBSERVATIONS AND CONCLUSIONS

The site is an undeveloped parcel surrounded by Sierra View Country Club and residential homes. The surrounding properties have been developed for many years.

RECOMMENDED REMOVALS

At this time, 10 trees have been recommended for removal from the proposed project area due to the nature and extent of defects, compromised health, and/or structural instability noted at the time of field inventory efforts. If these trees were retained within the proposed project area, it is our opinion that they may be hazardous depending upon their proximity to planned development activities. For reference, the trees which have been recommended for removal due to the severity of noted defects, compromised health, and/or structural instability are highlighted in green within the accompanying Tree Inventory Summary and are briefly summarized as follows:

TABLE 2

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating
6531	231	Yes		Blue Oak	*Quercus douglasii*		16	48	24	1 Extreme Structure or Health Problems
6537	237	Yes		Blue Oak	*Quercus douglasii*		36	54	30	1 Extreme Structure or Health Problems

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating
6545	245	Yes		Blue Oak	*Quercus douglasii*		34	54	29	0 Dead
6605	442	Yes		Blue Oak	*Quercus douglasii*		29	54	18	1 Extreme Structure or Health Problems
6608	440	Yes		Blue Oak	*Quercus douglasii*		21	54	40	1 Extreme Structure or Health Problems
6620	393	Yes		Blue Oak	*Quercus douglasii*		11	54	10	1 Extreme Structure or Health Problems
6665	284	Yes		Blue Oak	*Quercus douglasii*	8,10,12,12	42	54	24	1 Extreme Structure or Health Problems
6670	296	Yes		Coast Live Oak	*Quercus agrifolia*		13	54	10	1 Extreme Structure or Health Problems
6757	368	Yes		Blue Oak	*Quercus douglasii*		10	48	21	1 Extreme Structure or Health Problems
6811	495	Yes		Blue Oak	*Quercus douglasii*		44	54	30	1 Extreme Structure or Health Problems

DISCUSSION

Trees need to be protected from normal construction practices if they are to remain healthy and viable on the site. Our recommendations are based on experience, and County ordinance requirements, so as to enhance tree longevity. This requires their root zones remain intact and viable, despite heavy equipment being on site, and the need to install foundations, driveways, underground utilities, and landscape irrigation systems. Simply walking and driving on soil has serious consequences for tree health.

Following is a summary of Impacts to trees during construction and Tree Protection measures that should be incorporated into the site plans in order to protect the trees. Once the plans are approved, they become the document that all contractors will follow. ***The plans become the contract between the owner and the contractor, so that only items spelled out in the plans can be expected to be followed. Hence, all protection measures, such as fence locations, mulch requirements and root pruning specifications must be shown on the plans.***

RECOMMENDATIONS: SUMMARY OF TREE PROTECTION MEASURES

Hire a Project Arborist to help ensure protection measures are incorporated into the site plans and followed. The Project Arborist should, in cooperation with the Engineers and/or Architects:

- Identify the Root Protection Zones on the final construction drawings, prior to bidding the project.
- Show the placement of tree protection fences, as well as areas to be irrigated, fertilized and mulched on the final construction drawings.
- Clearly show trees for removal on the plans and mark them clearly on site. A Contractor who is a Certified Arborist should perform tree and stump removal. All stumps within the root zone of trees to be preserved shall

be ground out using a stump router or left in place. **No trunk within the root zone of other trees shall be removed using a backhoe or other piece of grading equipment**.

- Prior to any grading, or other work on the site that will come within 50' of any tree to be preserved:
    1. Irrigate (if needed) and place a 3" layer of chip mulch over the protected root zone of all trees that will be impacted.
    2. Erect Tree Protection Fences. Place boards against trees located within 3' of construction zones, even if fenced off.
    3. Remove lower foliage that may interfere with equipment PRIOR to having grading or other equipment on site. The Project Arborist should approve the extent of foliage elevation, and oversee the pruning, performed by a contractor who is an ISA Certified Arborist.
- For grade cuts, expose roots by hand digging, potholing or using an air spade and then cut roots cleanly prior to further grading outside the tree protection zones.
- For fills, if a cut is required first, follow as for cuts.
- Where possible, specify geotextile fabric and/or thickened paving, re-enforced paving and structural soil in lieu of compacting, and avoid root cutting as much as possible, prior to placing fills on the soil surface. Any proposed retaining wall or fill soil shall be discussed with the engineer and arborist in order to reduce impacts to trees to be preserved.
- Clearly designate an area on the site outside the drip line of all trees where construction materials may be stored, and parking can take place. No materials or parking shall take place within the root zones of protected trees.
- Design utility and irrigation trenches to minimize disturbance to tree roots. Where possible, dig trenches with hydro-vac equipment or air spade, placing pipes underneath the roots, or bore the deeper trenches underneath the roots.
- Include on the plans an Arborist inspection schedule to monitor the site during (and after) construction to ensure protection measures are followed and make recommendations for care of the trees on site, as needed.

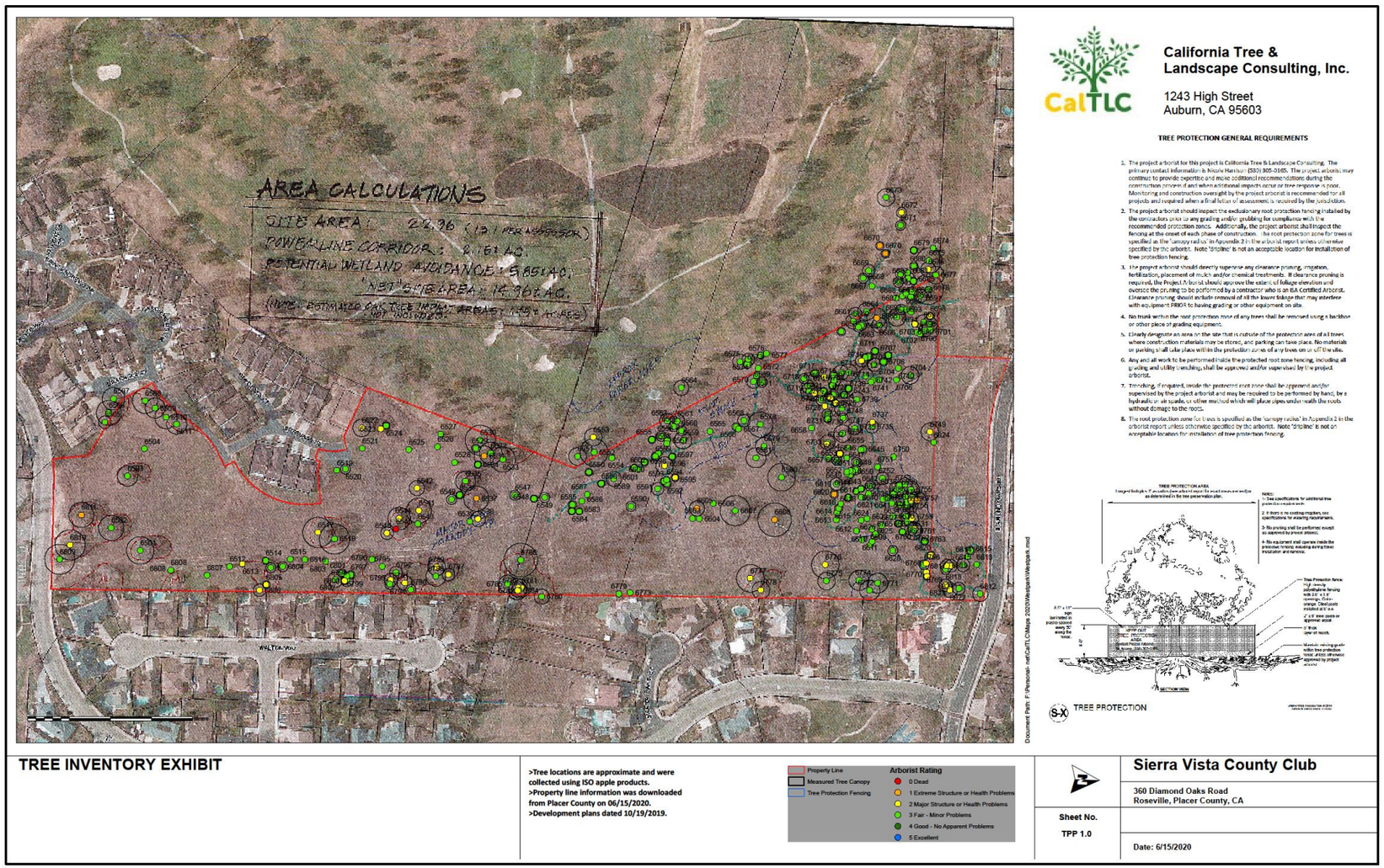
General Tree protection measures are included as Appendix 3. These measures need to be included on the Site, Grading, Utility and Landscape Plans. A final report of recommendations specific to the plan can be completed as part of, and in conjunction with, the actual plans. This will require the arborist working directly with the engineer and architect for the project. If the above recommendations are followed, the amount of time required by the arborist for the final report should be minimal.

Report Prepared by:

Edwin E. Stirtz, Consulting Arborist
International Society of Arboriculture
Certified Arborist WE-0510A
ISA Tree Risk Assessment Qualified
Member, American Society of Consulting Arborists

Enc.: Appendix 1 – Map of The Property Showing Tree Locations
Appendix 2 – Tree Information Collected
Appendix 3 – General Practices for Tree Protection

APPENDIX 1 – MAP OF THE PROPERTY SHOWING TREE LOCATIONS



APPENDIX 2 – TREE INFORMATION COLLECTED

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating	Notes	Recommendations
1		Yes		Coast Live Oak	*Quercus agrifolia*		17	54	12	3 Fair - Minor Problems	Growing in middle of drainage ditch. No tag. Blackberries surrounding trunk. Codominant at 8 feet. Vigor fair. Density fair.	None at this time.
424	424	Yes		Blue Oak	*Quercus douglasii*		11	54	10	3 Fair - Minor Problems	Could not tag/blackberries. Codominant at 10 feet. Growing into canopy south and north. Above average dead branches in lower canopy. Vigor fair. Density fair to poor.	None at this time.
6501	201	Yes		Blue Oak	*Quercus douglasii*		38	12	33	3 Fair - Minor Problems	Flare normal. Codominant at 36 inches. Canopy growing to ground 360°. Normal dead branches. Crown fair. Vigor fair.	None at this time.
6502	202	Yes		Blue Oak	*Quercus douglasii*		41	24	30	3 Fair - Minor Problems	Bark rot west side from base to 36 inches. Codominant at 5 feet with some inclusion. Canopy to ground east, south and west. Crown good. Vigor good.	None at this time.
6503	203	Yes		Blue Oak	*Quercus douglasii*		35	54	24	3 Fair - Minor Problems	Flare normal. Codominant at 7 feet. Canopy to ground 360° average dead branches. Vigor fair. Crown fair.	None at this time.
6504	204	Yes		Blue Oak	*Quercus douglasii*	3,4	7	54	4	3 Fair - Minor Problems	Buried flare. Codominant at base with some inclusion. Vigor fair. Crown fair.	None at this time.
6505	205	Yes		Blue Oak	*Quercus douglasii*		26	54	15	3 Fair - Minor Problems	Flare normal. 10-inch lateral at 4 feet. Canopy suppressed west. Vigor fair. Crown fair.	None at this time.
6506	206	Yes		Blue Oak	*Quercus douglasii*		36	54	30	3 Fair - Minor Problems	Flare normal. Codominant at base with some inclusion. 9-inch lateral at 5 feet south. Growing into canopies east and west. Vigor fair. Density fair.	None at this time.
6507	207	Yes		Blue Oak	*Quercus douglasii*		31	24	27	3 Fair - Minor Problems	Poor flare. Codominant at 36 inches with some inclusion. 4 stems with twisting growth and inclusion from 3-7 feet growing into canopy east. Vigor fair. Density fair.	None at this time.
6508	208	Yes		Blue Oak	*Quercus douglasii*		35	24	30	3 Fair - Minor Problems	Flare normal. Codominant at 6 feet. Canopy growing to the ground east. Growing into canopy north. Vigor fair. Density fair.	None at this time.

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating	Notes	Recommendations
6509	209	Yes		Blue Oak	*Quercus douglasii*		35	12	24	3 Fair - Minor Problems	Flare normal. Codominant at base. Growing into canopy south. Suppressed by tree to the north. Average dead branches. Vigor fair. Density fair.	None at this time.
6510	210	Yes		Blue Oak	*Quercus douglasii*		28	54	27	3 Fair - Minor Problems	15-inch lateral east 7 feet. Canopy to ground east. Growing into canopy north. Vigor fair. Density fair.	None at this time.
6511	211	Yes		Blue Oak	*Quercus douglasii*		34	54	24	3 Fair - Minor Problems	Codominant at 8 feet. Canopy to ground east and north. Growing into canopy south. Vigor fair. Density fair.	None at this time.
6512	212	Yes		Coast Live Oak	*Quercus agrifolia*		8	48	6	3 Fair - Minor Problems	Growing on west Bank of drainage ditch. Riparian vegetation in dripline. Vigor fair. Density fair.	None at this time.
6513	213	Yes		Coast Live Oak	*Quercus agrifolia*		15	36	7	2 Major Structure or Health Problems	Growing on west bank of drainage ditch. Riparian vegetation in dripline. Low laterals and sprouts from base south and west. Decay and compartmentalization on center stem at 4 feet. Vigor fair. Density fair.	None at this time.
6514	214	Yes		Coast Live Oak	*Quercus agrifolia*		15	24	8	3 Fair - Minor Problems	Growing on west bank of drainage ditch. Blackberry and riparian vegetation in dripline. Codominant at 4 feet some inclusion. Vigor fair. Density fair.	None at this time.
6515	215	Yes		Blue Oak	*Quercus douglasii*		8	36	5	3 Fair - Minor Problems	Growing on west bank of drainage ditch. Codominant at 36 inches. Vigor fair. Density fair.	None at this time.
6516	216	Yes		Blue Oak	*Quercus douglasii*		6	54	4	3 Fair - Minor Problems	Growing on west bank of drainage ditch. Codominant at 5 feet. Vigor fair. Density fair.	None at this time.
6517	217	Yes		Blue Oak	*Quercus douglasii*		50	54	36	2 Major Structure or Health Problems	Decay wound down to cambium south side from 36 inches to 10 feet. 2 branch break wounds at 20 feet with decay. Codominant at 20 feet. Above average dead branches in canopy. Vigor fair to poor. Density fair.	None at this time.
6518	218	Yes		Blue Oak	*Quercus douglasii*		24	54	36	3 Fair - Minor Problems	2 feet of adjacent to trunk to south. Suppression from south. One-sided leaning canopy northeast. Above average dead branches. Vigor fair. Density fair.	None at this time.

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating	Notes	Recommendations
6519	319	Yes		Blue Oak	*Quercus douglasii*		9	12	5	3 Fair - Minor Problems	Codominant at 24 inches. Adjacent to asphalt 10 feet north. Vigor fair. Density fair.	None at this time.
6520	220	Yes		Blue Oak	*Quercus douglasii*		11	6	12	3 Fair - Minor Problems	Growing adjacent to asphalt 5 feet west. Codominant at base. Growing into canopies south and north. Vigor fair. Density fair.	None at this time.
6521	221	Yes		Blue Oak	*Quercus douglasii*	2,3,3,3	11	54	4	3 Fair - Minor Problems	Codominant at base. Vigor fair. Density fair.	None at this time.
6522	222	Yes		Blue Oak	*Quercus douglasii*		44	24	21	2 Major Structure or Health Problems	No tag/lost tag. Large decay wound south side from 36 inches to 8 feet. Bark fungus damage north side from 3-8 feet. Vigor fair. Density fair.	None at this time.
6523	223	Yes		Blue Oak	*Quercus douglasii*	3,4	7	54	4	2 Major Structure or Health Problems	Poor location. Growing under canopy of 2 trees. Codominant at base. Vigor poor. Density poor.	None at this time.
6524	224	Yes		Blue Oak	*Quercus douglasii*		13	54	9	3 Fair - Minor Problems	No tag/lost tag. Codominant at 7 feet. Growing into canopy south. Vigor fair. Density fair.	None at this time.
6525	225	Yes		Blue Oak	*Quercus douglasii*		8	54	6	3 Fair - Minor Problems	Low laterals at 12 inches. Codominant at 4 feet. Vigor fair. Density fair.	None at this time.
6526	226	Yes		Blue Oak	*Quercus douglasii*		8	54	6	3 Fair - Minor Problems	Codominant at 36 inches. Vigor fair. Density fair.	None at this time.
6527	227	Yes		Blue Oak	*Quercus douglasii*		10	36	7	3 Fair - Minor Problems	Codominant at 4 feet. Vigor fair. Density fair.	None at this time.
6528	228	Yes		Blue Oak	*Quercus douglasii*		10	54	7	3 Fair - Minor Problems	Codominant at 6 feet. Vigor fair. Density fair.	None at this time.
6529	229	Yes		Blue Oak	*Quercus douglasii*		6	54	10	3 Fair - Minor Problems	No tag/lost tag. Suppressed north. One-sided leaning canopy south. Codominant at 4 feet. Vigor fair. Density fair to poor.	None at this time.
6530	230	Yes		Blue Oak	*Quercus douglasii*		49	54	36	3 Fair - Minor Problems	Covered in ivy up to 15 feet. Canopy suppressed north. Average dead branches. Decay branch wounds at 7 feet south and 10 feet south. Vigor fair.	None at this time.
6531	231	Yes		Blue Oak	*Quercus douglasii*		16	48	24	1 Extreme Structure or Health Problems	Suppressed. South leaning trunk broke off at 5 feet. Canopy resting on ground southeast.	***Recommend removal due to nature and extent of noted defects.***
6532	232	Yes		Blue Oak	*Quercus douglasii*		31	54	27	3 Fair - Minor Problems	Growing 5 feet adjacent to tree to northwest. One-sided leaning canopy southeast. Codominant at 18 feet. Vigor fair. Density fair.	None at this time.

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating	Notes	Recommendations
6533	243	Yes		Blue Oak	*Quercus douglasii*		39	54	30	3 Fair - Minor Problems	Growing 5 feet adjacent to tree southeast. Codominant at 22 feet. Average deadwood in canopy. Vigor fair. Density fair.	None at this time.
6534	234	Yes		Blue Oak	*Quercus douglasii*		12	54	9	3 Fair - Minor Problems	Buried flare. Codominant at 6 feet. Vigor fair. Density fair.	None at this time.
6535	235	Yes		Blue Oak	*Quercus douglasii*		34	54	24	3 Fair - Minor Problems	Canopy growing to ground 360°. Codominant at 16 feet. Average dead branches. Vigor fair. Density fair.	None at this time.
6536	236	Yes		Blue Oak	*Quercus douglasii*		10	24	9	3 Fair - Minor Problems	Codominant at 36 inches some inclusion. Vigor fair. Density fair.	None at this time.
6537	237	Yes		Blue Oak	*Quercus douglasii*		36	54	30	1 Extreme Structure or Health Problems	Trunk is 85-90% hollow. 1-inch decay seam east side running from base to 8 feet. Inside seam practically no wood. Trunk and canopy lean west. Average deadwood.	***Recommend removal due to nature and extent of noted defects.***
6538		Yes		Blue Oak	*Quercus douglasii*		30	54	18	2 Major Structure or Health Problems	Decay wound south side from base to 24 inches. Decay effects 70% of cambium and hardwood. Codominant at 15 feet. Several branch failures. Decay wounds at trunk. Vigor fair.	None at this time.
6539	239	Yes		Blue Oak	*Quercus douglasii*	5,5	10	54	6	3 Fair - Minor Problems	2 stems at base. Growing into canopy west. Vigor fair. Density fair.	None at this time.
6540	240	Yes		Blue Oak	*Quercus douglasii*		10	54	12	3 Fair - Minor Problems	Codominant at 6 feet. Birdhouse strapped to lateral at 6 feet east side. Vigor fair. Density fair.	None at this time.
6541	241	Yes		Blue Oak	*Quercus douglasii*		30	54	30	2 Major Structure or Health Problems	10° trunk lean west. One-sided leaning canopy west. Sunscald to cambium east side of trunk. 20-inch central leader breakoff at 18 feet. Vigor poor. Density poor.	None at this time.
6542		Yes		Blue Oak	*Quercus douglasii*		36	48	18	2 Major Structure or Health Problems	Trunk decay wound south side from base to 20 feet. 90% decay. Vigor poor. Density fair.	None at this time.
6543	243	Yes		Blue Oak	*Quercus douglasii*		7	54	6	3 Fair - Minor Problems	Codominant at 6 feet. Vigor fair. Density fair.	None at this time.
6544	244	Yes		Blue Oak	*Quercus douglasii*		29	54	27	2 Major Structure or Health Problems	One-sided canopy south by southwest. 18-inch stem broke in north side at 12 feet. Decay and wound. Codominant at 12 feet. Vigor fair. Density fair.	None at this time.

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating	Notes	Recommendations
6545	245	Yes		Blue Oak	*Quercus douglasii*		34	54	29	0 Dead	Dead tree top breakout. Laying east 5 feet adjacent to trunk.	***Recommend removal due to nature and extent of noted defects.***
6546	246	Yes		Blue Oak	*Quercus douglasii*		8	54	15	2 Major Structure or Health Problems	One-sided leaning canopy south. Shrunk bows severely at 6 feet. Suppressed by formerly standing tree west. Vigor fair to poor. Density fair to poor.	None at this time.
6547	247	Yes		Blue Oak	*Quercus douglasii*	7,8	15	24	12	3 Fair - Minor Problems	Codominant at 12 inches some inclusion. Vigor fair. Density fair.	None at this time.
6548	248	Yes		Blue Oak	*Quercus douglasii*		12	24	9	3 Fair - Minor Problems	Codominant at 4 feet. Growing into canopy north. Vigor fair. Density fair.	None at this time.
6549	249	Yes		Blue Oak	*Quercus douglasii*	10,11,11	32	48	12	3 Fair - Minor Problems	Codominant at base with significant inclusion Vigor fair. Density fair.	None at this time.
6550	250	Yes		Blue Oak	*Quercus douglasii*		7	54	9	3 Fair - Minor Problems	Codominant at 8 feet. Vigor fair. Density fair.	None at this time.
6551	251	Yes		Blue Oak	*Quercus douglasii*		34	54	21	3 Fair - Minor Problems	Codominant at 12 feet with significant inclusion. 3 limb failure with decay west at 16 feet. Located under transmission power line. Vigor fair. Density fair.	None at this time.
6552	252	Yes		Blue Oak	*Quercus douglasii*		27	54	33	3 Fair - Minor Problems	Codominant at 12 feet. Growing into canopy west. Vigor fair. Density fair.	None at this time.
6553	253	Yes		Blue Oak	*Quercus douglasii*		40	60	21	2 Major Structure or Health Problems	Canker east side from 1-6 feet. Large limb breakout scar with decay north side from 8-20 feet. Multiple limb breakout. Decay wound lower trunk. Growing into canopy east. Vigor fair to poor. Density fair to poor.	None at this time.
6554	264	Yes		Blue Oak	*Quercus douglasii*		7	54	5	3 Fair - Minor Problems	Codominant at 8 feet. Vigor fair. Density fair.	None at this time.
6555	255	Yes		Blue Oak	*Quercus douglasii*		10	36	9	3 Fair - Minor Problems	Codominant at 36 inches some inclusion. Vigor fair. Density fair.	None at this time.
6556		Yes		Blue Oak	*Quercus douglasii*		13	12	12	3 Fair - Minor Problems	Codominant at 24 inches. Growing into canopy south and north. Above average dead branches in lower canopy. Vigor poor. Density poor.	None at this time.
6557	257	Yes		Blue Oak	*Quercus douglasii*		6	54	8	3 Fair - Minor Problems	Growing into canopy east. Vigor fair. Density fair.	None at this time.

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6558	258	Yes		Blue Oak	*Quercus douglasii*		6	54	7	3 Fair - Minor Problems	Growing into canopy west. Codominant at 10 feet. Vigor fair. Density fair.	None at this time.
6559	259	Yes		Interior Live Oak	*Quercus wislizeni*		17	12	21	3 Fair - Minor Problems	Codominant at 24 inches. Above average branches in lower canopy. Volunteers growing into canopy west. Vigor fair to poor. Density fair.	None at this time.
6560	260	Yes		Blue Oak	*Quercus douglasii*		15	24	12	3 Fair - Minor Problems	Codominant at 24 inches. 2 of the main stems south side are sharing included bark at 4 connections from 4-8 feet. Vigor fair. Density fair.	None at this time.
6561	261	Yes		Blue Oak	*Quercus douglasii*		14	36	18	3 Fair - Minor Problems	Codominant at 4 feet. Growing into canopy. Above average deadwood in lower canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6562	262	Yes		Blue Oak	*Quercus douglasii*	5,6	11	54	12	3 Fair - Minor Problems	Codominant at 12 inches. Suppressed south. One-sided leaning canopy northwest. Vigor fair. Density fair.	None at this time.
6563	263	Yes		Blue Oak	*Quercus douglasii*	4,7,8,11	30	54	18	3 Fair - Minor Problems	Codominant at 12 inches with some inclusion. Growing into canopies south and north. Vigor fair. Density fair.	None at this time.
6564	264	Yes		Valley Oak	*Quercus lobata*		18	54	18	3 Fair - Minor Problems	Good structure. Codominant at 25 feet. Above average dead branches lower 1/3 canopy. Vigor fair. Density fair.	None at this time.
6565	265	Yes		Blue Oak	*Quercus douglasii*		8	54	6	3 Fair - Minor Problems	Codominant at 7 feet. Vigor fair. Density fair.	None at this time.
6566	266	Yes		Blue Oak	*Quercus douglasii*		10	54	10	3 Fair - Minor Problems	Growing into canopy north. Codominant at 5 feet. Vigor fair. Density fair.	None at this time.
6567	267	Yes		Blue Oak	*Quercus douglasii*		7	54	5	3 Fair - Minor Problems	Growing into canopies north and south. Codominant at 7 feet. Vigor fair. Density fair.	None at this time.
6568	268	Yes		Interior Live Oak	*Quercus wislizeni*		20	36	15	3 Fair - Minor Problems	Suppressed east. 5° trunk lean west. Codominant at 36 inches with some inclusion. Growing into canopy east. Vigor fair. Density fair.	None at this time.
6569	269	Yes		Blue Oak	*Quercus douglasii*	7,12	19	54	12	3 Fair - Minor Problems	Codominant at base and growing into canopy west. Vigor fair. Density fair.	None at this time.

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6570	270	Yes		Blue Oak	*Quercus douglasii*		12	54	16	3 Fair - Minor Problems	Growing into canopy east and north. Above average dead branches lower 1/3 canopy. Vigor fair. Density fair.	None at this time.
6571	271	Yes		Blue Oak	*Quercus douglasii*		9	54	6	3 Fair - Minor Problems	Lower 2/3 canopy suppressed all sides. Codominant at 4 feet. Above average dead branches lower 1/3 canopy. Vigor fair. Density fair to poor.	None at this time.
6572	272	Yes		Blue Oak	*Quercus douglasii*		9	54	6	3 Fair - Minor Problems	Suppressed west. Vines growing lower 2/3 canopy. Above average dead branches lower 1/3 canopy. Vigor fair. Density fair to poor.	None at this time.
6573	273	Yes		Blue Oak	*Quercus douglasii*		13	54	10	3 Fair - Minor Problems	Growing into canopies east, west and north. Codominant at 6 feet. Vigor fair. Density fair.	None at this time.
6574	274	Yes		Blue Oak	*Quercus douglasii*		8	54	15	3 Fair - Minor Problems	Suppressed east. One-sided leaning canopy west. Growing into canopy south. Codominant at 15 feet. Vigor fair. Density fair.	None at this time.
6575	275	Yes		Coast Live Oak	*Quercus agrifolia*		11	36	18	3 Fair - Minor Problems	Good structure. 82-inch sprouts from base west side. Vigor fair. Density fair.	None at this time.
6576	276	Yes		Blue Oak	*Quercus douglasii*		10	54	8	3 Fair - Minor Problems	Covered in vines 2/3 trunk. Codominant at 4 feet. Growing into canopy north. Vigor fair. Density fair to poor.	None at this time.
6577	277	Yes		Blue Oak	*Quercus douglasii*		7	54	5	3 Fair - Minor Problems	2/3 trunk covered in vines. Growing into canopy south. Vigor fair to poor. Density fair to poor.	None at this time.
6578		Yes		Blue Oak	*Quercus douglasii*		30	54	30	3 Fair - Minor Problems	Codominant at 6 feet. Branch breakout southeast. Decay in wound at 6 feet. Growing into canopy east. Vigor fair. Density fair.	None at this time.
6579		Yes		Blue Oak	*Quercus douglasii*		21	54	21	3 Fair - Minor Problems	Codominant at 7 feet. Growing into canopy southeast and northwest. Vigor fair. Density fair.	None at this time.
6580	377	Yes		Blue Oak	*Quercus douglasii*		41	54	33	3 Fair - Minor Problems	Canker at base east side. Average dead branches in lower canopy. Vigor fair. Density fair.	None at this time.
6581	376	Yes		Blue Oak	*Quercus douglasii*		36	54	24	3 Fair - Minor Problems	Codominant at 36 inches. Minor dead branches in lower canopy. Growing into canopy northwest. Vigor fair. Density fair.	None at this time.
6582	**Tag # Not Used**											

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6583	460	Yes		Blue Oak	*Quercus douglasii*	5,7	12	54	8	3 Fair - Minor Problems	Codominant at 24 inches. Growing into canopy southwest. Vigor fair. Density fair.	None at this time.
6584	462	Yes		Coast Live Oak	*Quercus agrifolia*	7,7,8	22	54	9	3 Fair - Minor Problems	Codominant at base with inclusion. Growing into canopy west. Vigor fair. Density fair.	None at this time.
6585	461	Yes		Blue Oak	*Quercus douglasii*		7	54	10	3 Fair - Minor Problems	Growing into canopy east. Good structure. One-sided leaning canopy west.	None at this time.
6586	459	Yes		Blue Oak	*Quercus douglasii*		8	54	6	3 Fair - Minor Problems	Codominant at 7 feet. Vigor fair. Density fair.	None at this time.
6587		Yes		Blue Oak	*Quercus douglasii*		6	54	6	3 Fair - Minor Problems	Codominant at 6 feet. Vigor fair. Density fair.	None at this time.
6588	458	Yes		Coast Live Oak	*Quercus agrifolia*		10	54	9	3 Fair - Minor Problems	Codominant at 6 feet. Low laterals sprout at base west side. Vigor fair. Density fair.	None at this time.
6589	457	Yes		Blue Oak	*Quercus douglasii*		21	54	18	3 Fair - Minor Problems	Codominant at 4 feet. Vigor fair. Density fair.	None at this time.
6590	453	Yes		Blue Oak	*Quercus douglasii*		22	12	12	3 Fair - Minor Problems	Codominant at 24 inches. Vigor fair. Density fair.	None at this time.
6591	452	Yes		Blue Oak	*Quercus douglasii*		14	54	15	3 Fair - Minor Problems	Codominant at 7 feet. Growing into canopy north. Vigor fair. Density fair.	None at this time.
6592	451	Yes		Blue Oak	*Quercus douglasii*		7	54	10	3 Fair - Minor Problems	Trunk wound seam west side from 12-54 inches. Suppressed north. One-sided canopy south. Vigor fair. Density fair.	None at this time.
6593	450	Yes		Blue Oak	*Quercus douglasii*		6	54	9	3 Fair - Minor Problems	Suppressed east. One-sided canopy west. Good structure, vigor, and density.	None at this time.
6594		Yes		Blue Oak	*Quercus douglasii*		7	54	8	3 Fair - Minor Problems	Suppression west. One-sided canopy east. Codominant at 4 feet. Vigor fair. Density fair.	None at this time.
6595	449	Yes		Blue Oak	*Quercus douglasii*		10	24	9	2 Major Structure or Health Problems	Bark wound east side from base to 36 inches. Exposed cambium.	None at this time.
6596	448	Yes		Blue Oak	*Quercus douglasii*		41	54	21	2 Major Structure or Health Problems	2 large branch breakout scars on trunk south side at 10 feet. Decay in wound. Vigor fair to poor. Density fair to poor.	None at this time.
6597	447	Yes		Blue Oak	*Quercus douglasii*		11	54	9	3 Fair - Minor Problems	Codominant at 4 feet. Vigor fair. Density fair.	None at this time.
6598	455	Yes		Blue Oak	*Quercus douglasii*	4,4,6	14	54	8	3 Fair - Minor Problems	Growing into canopy.	None at this time.
6599	454	Yes		Blue Oak	*Quercus douglasii*	7,8	15	54	10	3 Fair - Minor Problems	Codominant at base. Growing into canopy north.	None at this time.

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6600		Yes		Blue Oak	*Quercus douglasii*	4,4,5	13	54	9	3 Fair - Minor Problems	3 stems growing into canopy south and north. Vigor fair. Density fair.	None at this time.
6601	453	Yes		Blue Oak	*Quercus douglasii*		9	54	6	3 Fair - Minor Problems	Codominant at 4 feet. Growing into canopy west. Vigor fair. Density fair.	None at this time.
6602		Yes		Blue Oak	*Quercus douglasii*	5,5	10	54	9	3 Fair - Minor Problems	Codominant at base with minor inclusion. Growing into canopy east. Vigor fair. Density fair.	None at this time.
6603	444	Yes		Blue Oak	*Quercus douglasii*	10,11	21	54	7	3 Fair - Minor Problems		None at this time.
6604	443	Yes		Blue Oak	*Quercus douglasii*		6	54	5	3 Fair - Minor Problems	Good structure. Suppressed west. One-sided canopy east. Above average dead branches in lower canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6605	442	Yes		Blue Oak	*Quercus douglasii*		29	54	18	1 Extreme Structure or Health Problems	Codominant at 9 feet. One of two main leaders dead and broken off north side. One-sided canopy southeast. Vigor fair. Density fair to poor. Top of broken leader resting on trunk and ground.	***Recommend removal due to nature and extent of noted defects.***
6606	445	Yes		Blue Oak	*Quercus douglasii*		11	24	5	3 Fair - Minor Problems	Codominant at 24 inches. Vigor fair. Density fair.	None at this time.
6607	441	Yes		Blue Oak	*Quercus douglasii*		45	54	36	3 Fair - Minor Problems	Over-mature. Above average dead branches in canopy. Vigor fair. Density fair to poor.	None at this time.
6608	440	Yes		Blue Oak	*Quercus douglasii*		21	54	40	1 Extreme Structure or Health Problems	Tree failed at base and laying on ground west. Canopy to ground 360°. Vigor fair. Density fair to poor.	***Recommend removal due to nature and extent of noted defects.***
6609		Yes		Blue Oak	*Quercus douglasii*	4,4	8	54	3	3 Fair - Minor Problems	Codominant at base. Suppressed east, west and south. Vigor fair. Density fair.	None at this time.
6610		Yes		Blue Oak	*Quercus douglasii*		8	54	7	3 Fair - Minor Problems	Lower canopy suppressed. Minor dead branches lower 1/2 canopy. Vigor fair. Density fair.	None at this time.
6611	429	Yes		Blue Oak	*Quercus douglasii*		6	54	5	3 Fair - Minor Problems	Good structure. Vigor fair. Density fair.	None at this time.
6612	429	Yes		Blue Oak	*Quercus douglasii*		7	54	7	3 Fair - Minor Problems	Codominant at 8 feet. Vigor fair. Density fair.	None at this time.

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6613	431	Yes		Blue Oak	*Quercus douglasii*		7	54	5	3 Fair - Minor Problems	Codominant at 5 feet. Vigor fair. Density fair.	None at this time.
6614		Yes		Blue Oak	*Quercus douglasii*		12	12	5	3 Fair - Minor Problems	Bark decay at base west side. Codominant at 12 inches east. Leader trunk wound at 36 inches. Vigor fair. Density fair.	None at this time.
6615	432	Yes		Blue Oak	*Quercus douglasii*		7	54	10	3 Fair - Minor Problems	Minor trunk lean southwest. Codominant at 6 feet. Vigor fair. Density fair.	None at this time.
6616		Yes		Blue Oak	*Quercus douglasii*	4,5	9	54	4	3 Fair - Minor Problems	Codominant at base growing into canopies north and east. One-sided canopy west. Vigor fair. Density fair.	None at this time.
6617		Yes		Blue Oak	*Quercus douglasii*	3,4,4,4	15	54	9	3 Fair - Minor Problems	Codominant at 12 inches. Growing into canopies north and south. Vigor fair. Density fair.	None at this time.
6618	391	Yes		Blue Oak	*Quercus douglasii*		13	12	8	3 Fair - Minor Problems	Codominant at 24 inches. Vigor fair. Density fair.	None at this time.
6619	392	Yes		Blue Oak	*Quercus douglasii*		21	24	15	3 Fair - Minor Problems	Codominant at 36 inches. Above average dead branches lower canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6620	393	Yes		Blue Oak	*Quercus douglasii*		11	54	10	1 Extreme Structure or Health Problems	Bark decay southside from base to 7 feet exposed with cambium in Heartwood. Poor branching structure. Vigor poor. Density poor.	***Recommend removal due to nature and extent of noted defects.***
6621	390	Yes		Blue Oak	*Quercus douglasii*		7	54	5	3 Fair - Minor Problems	Codominant at 7 feet. Vigor fair. Density fair.	None at this time.
6622	389	Yes		Blue Oak	*Quercus douglasii*	6,8	14	54	6	3 Fair - Minor Problems	Codominant at 12 inches. Above average deadwood in the lower canopy. Vigor fair. Density fair to poor.	None at this time.
6623	395	Yes		Blue Oak	*Quercus douglasii*		7	54	6	3 Fair - Minor Problems	Codominant at 7 feet. Growing into canopy west Vigor fair. Density fair.	None at this time.
6624		Yes		Blue Oak	*Quercus douglasii*		6	54	5	3 Fair - Minor Problems	Codominant at 8 feet. Vigor fair. Density fair.	None at this time.
6625	396	Yes		Blue Oak	*Quercus douglasii*		9	54	6	3 Fair - Minor Problems	Trunk lean 10° south. Above average dead branches lower canopy. Vigor fair. Density fair to poor.	None at this time.
6626	397	Yes		Blue Oak	*Quercus douglasii*		9	54	7	3 Fair - Minor Problems	Good structure. Vigor fair. Density fair.	None at this time.

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6627		Yes		Blue Oak	*Quercus douglasii*		6	54	5	3 Fair - Minor Problems	Trunk wound west side from base to 12 inches. Growing into canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6628	419	Yes		Blue Oak	*Quercus douglasii*		17	12	12	3 Fair - Minor Problems	Codominant at 24 inches. Average dead branches lower canopy. Vigor fair. Density fair.	None at this time.
6629		Yes		Blue Oak	*Quercus douglasii*		8	36	8	3 Fair - Minor Problems	Codominant at 15 feet. Suppressed/one-sided canopy east. Vigor fair. Density fair.	None at this time.
6630	420	Yes		Blue Oak	*Quercus douglasii*		8	48	9	3 Fair - Minor Problems	Codominant at 4 feet. Growing into canopy north and west. Above average dead branches in lower canopy. Nest top of crown. Vigor fair. Density fair to poor.	None at this time.
6631	400	Yes		Blue Oak	*Quercus douglasii*		8	54	6	3 Fair - Minor Problems	Codominant at 8 feet. Growing into canopies east and north. Above average dead branches lower canopy. Vigor fair. Density fair to poor.	None at this time.
6632		Yes		Blue Oak	*Quercus douglasii*		10	54	12	3 Fair - Minor Problems	Bark decay seam south side from 36 inches to 6 feet. Codominant at 6 feet. Growing in the canopies south and north. Average dead branches lower canopy. Vigor fair. Density fair.	None at this time.
6633		Yes		Blue Oak	*Quercus douglasii*		7	54	4	3 Fair - Minor Problems	Dead vertical stem at 24 inches north. Good structure. Vigor fair. Density fair to poor.	None at this time.
6634	399	Yes		Blue Oak	*Quercus douglasii*		7	54	6	3 Fair - Minor Problems	Suppressed west. One-sided canopy east. Good structure. Vigor fair. Density fair.	None at this time.
6635	398	Yes		Blue Oak	*Quercus douglasii*		16	48	10	3 Fair - Minor Problems	Bark canker at base west side. Codominant at 48 inches. Vigor fair. Density fair.	None at this time.
6636	422	Yes		Blue Oak	*Quercus douglasii*		9	54	7	3 Fair - Minor Problems		None at this time.
6637		Yes		Interior Live Oak	*Quercus wislizeni*		6	54	5	3 Fair - Minor Problems	Suppressed north, south and east. Above average dead branches in lower canopy. Codominant at 7 feet. Vigor fair to poor. Density fair to poor.	None at this time.
6638	425	Yes		Blue Oak	*Quercus douglasii*		10	54	18	3 Fair - Minor Problems	Suppressed north. One-sided leaning canopy south. Codominant at 7 feet. Above average dead branches. Vigor fair. Density fair to poor.	None at this time.
6639	426	Yes		Blue Oak	*Quercus douglasii*		10	54	15	3 Fair - Minor Problems	Codominant at 6 feet. Vines to 22 feet. Vigor fair. Density fair to poor.	None at this time.

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6640		Yes		Blue Oak	*Quercus douglasii*		6	24	4	3 Fair - Minor Problems	10° trunk lean north to 24 inches with correction. Average dead branches lower canopy. Vigor fair. Density fair.	None at this time.
6641	427	Yes		Blue Oak	*Quercus douglasii*	5,7	12	54	8	3 Fair - Minor Problems	Above Average deadwood in lower canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6642	388	Yes		Blue Oak	*Quercus douglasii*		21	24	12	3 Fair - Minor Problems	Codominant at 24 inches. Above average dead branches in canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6643	391	Yes		Blue Oak	*Quercus douglasii*		15	24	9	3 Fair - Minor Problems	Codominant at 36 inches. Vigor fair. Density fair.	None at this time.
6644		Yes		Blue Oak	*Quercus douglasii*		9	24	8	3 Fair - Minor Problems	Codominant at 36 inches. Growing into canopy west. Vigor fair. Density fair.	None at this time.
6645	380	Yes		Blue Oak	*Quercus douglasii*		8	54	10	3 Fair - Minor Problems	Codominant at 8 feet. Vigor fair. Density fair.	None at this time.
6646	381	Yes		Blue Oak	*Quercus douglasii*		9	54	6	3 Fair - Minor Problems	Bark wound west at base to 12 inches with exposed cambium. Vigor fair. Density fair.	None at this time.
6647	382	Yes		Blue Oak	*Quercus douglasii*	8,10	18	54	12	3 Fair - Minor Problems	Vigor fair. Density fair.	None at this time.
6648	383	Yes		Blue Oak	*Quercus douglasii*		10	54	12	3 Fair - Minor Problems		None at this time.
6649	385	Yes		Blue Oak	*Quercus douglasii*		7	54	5	3 Fair - Minor Problems	Suppression east and west. Above average dead branches in canopy. Epicormic growth on trunk up to 20 feet. Vigor poor. Density poor.	None at this time.
6650	384	Yes		Blue Oak	*Quercus douglasii*		10	54	9	3 Fair - Minor Problems	Growing into canopies east and west. Above average dead branches and canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6651	387	Yes		Blue Oak	*Quercus douglasii*		10	54	7	3 Fair - Minor Problems	Codominant at 7 feet. Suppression northeast. One-sided canopy west. Above average dead branches. Vigor fair. Density fair.	None at this time.
6652		Yes		Blue Oak	*Quercus douglasii*		6	54	4	3 Fair - Minor Problems	Codominant at 7 feet. Vigor fair. Density fair.	None at this time.
6653	379	Yes		Blue Oak	*Quercus douglasii*		15	36	12	3 Fair - Minor Problems	Codominant at 36 inches. Vigor fair. Density fair.	None at this time.
6654	378	Yes		Blue Oak	*Quercus douglasii*		10	54	9	2 Major Structure or Health Problems	Bark fungus west side from base to 6 feet. Codominant at 8 feet. Vigor poor. Density poor.	None at this time.

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6655		Yes		Blue Oak	*Quercus douglasii*		6	54	4	3 Fair - Minor Problems	Codominant at 6 feet. Vigor fair. Density fair.	None at this time.
6656		Yes		Blue Oak	*Quercus douglasii*		8	24	5	3 Fair - Minor Problems	Codominant at 24 inches. Vigor fair. Density fair.	None at this time.
6657		Yes		Blue Oak	*Quercus douglasii*	4,5	9	54	4	3 Fair - Minor Problems	Codominant at base. Vigor fair. Density fair.	None at this time.
6658		Yes		Blue Oak	*Quercus douglasii*	4,4	8	54	4	3 Fair - Minor Problems	Codominant at base. Vigor fair. Density fair.	None at this time.
6659		Yes		Coast Live Oak	*Quercus agrifolia*	3,6,7	16	54	10	3 Fair - Minor Problems	Codominant at base with inclusion canopy to the ground 360°. Growing into canopy south.	None at this time.
6660	278	Yes		Blue Oak	*Quercus douglasii*		14	54	18	3 Fair - Minor Problems	Growing in the canopies north, south and west. Codominant at 12 feet. Above average dead branches in lower canopy. Vigor fair. Density fair.	None at this time.
6661	279	Yes		Blue Oak	*Quercus douglasii*		13	54	15	3 Fair - Minor Problems	Codominant at 5 feet. Suppressed east. One-sided canopy west. Growing into canopy north. Above average dead branches in canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6662	280	Yes		Blue Oak	*Quercus douglasii*		11	54	12	3 Fair - Minor Problems	Blackberries to 36 inches. Suppression east. Above average dead branches in lower canopy. Codominant at 4 feet. Vigor fair. Density fair to poor.	None at this time.
6663	281	Yes		Blue Oak	*Quercus douglasii*		13	24	12	3 Fair - Minor Problems	Codominant at 24 inches. Growing into canopies east and west. Suppressed south. Above average deadwood in lower canopy. Coast Live Oak growing up through 2 stems. Vigor fair. Density fair to poor.	None at this time.
6664	282	Yes		Blue Oak	*Quercus douglasii*		25	12	21	3 Fair - Minor Problems	Codominant at 12 inches. Above average dead branches. Vigor fair. Density fair to poor.	None at this time.
6665	284	Yes		Blue Oak	*Quercus douglasii*	8,10,12,12	42	54	24	1 Extreme Structure or Health Problems	Codominant at 12 inches. Peeling bark and epicormic growth. Severe dead branches in canopy. Vigor very poor. Density very poor.	***Recommend removal due to nature and extent of noted defects.***
6666	283	Yes		Blue Oak	*Quercus douglasii*	8,11	19	54	18	3 Fair - Minor Problems	Codominant at base. Suppressed east. One-sided canopy west. Above average dead branches in canopy. Vigor fair. Density fair to poor.	None at this time.

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6667	293	Yes		Blue Oak	*Quercus douglasii*		9	36	7	3 Fair - Minor Problems	Codominant at 36 inches. Vigor fair. Density fair.	None at this time.
6668	294	Yes		Blue Oak	*Quercus douglasii*		12	24	12	3 Fair - Minor Problems	Growing on west bank of drainage ditch. Codominant at 36 inches. Above average dead branches. Vigor fair. Density fair to poor.	None at this time.
6669	295	Yes		Blue Oak	*Quercus douglasii*		17	12	15	3 Fair - Minor Problems	Growing at the top of the west bank of drainage ditch. Codominant at 12 inches with 9 inches of inclusion. Vigor fair. Density fair.	None at this time.
6670	296	Yes		Coast Live Oak	*Quercus agrifolia*		13	54	10	1 Extreme Structure or Health Problems	Bark dead west from base to 5 feet. Codominant at 6 feet. Tip dieback central leader. Vigor poor. Density poor.	***Recommend removal due to nature and extent of noted defects.***
6671	297	Yes		Blue Oak	*Quercus douglasii*		13	36	12	3 Fair - Minor Problems	Codominant at 4 feet. Vigor fair. Density fair.	None at this time.
6672		Yes		Blue Oak	*Quercus douglasii*		15	12	12	2 Major Structure or Health Problems	Bark fungus from base to 36 inches. Peeling bark in canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6673	215	Yes		Blue Oak	*Quercus douglasii*		33	54	21	3 Fair - Minor Problems	Codominant at 12 feet. Broken out central leader. Vigor fair to poor. Density fair to poor.	None at this time.
6674	314	Yes		Blue Oak	*Quercus douglasii*	4,5	9	54	7	3 Fair - Minor Problems	Codominant at base. Suppression east. One-sided leaning canopy west. Vigor fair. Density fair to poor.	None at this time.
6675	311	Yes		Blue Oak	*Quercus douglasii*	20,30	50	54	30	3 Fair - Minor Problems	Codominant at 18 feet. There is a suppressed stem at the base of the main trunk that is arching to the south to the ground. Vigor fair. Density fair.	None at this time.
6676	310	Yes		Blue Oak	*Quercus douglasii*		14	54	18	2 Major Structure or Health Problems	Suppressed east. Twisting canopy to the north. One-sided. Vigor poor. Density poor.	None at this time.
6677	309	Yes		Blue Oak	*Quercus douglasii*		20	36	21	3 Fair - Minor Problems	Codominant at 4 feet. One-sided canopy south. Vigor fair. Density fair.	None at this time.
6678	308	Yes		Blue Oak	*Quercus douglasii*		28	54	36	3 Fair - Minor Problems	Growing on bank of drainage ditch full of riparian vegetation and blackberries. Codominant at 8 feet. Average deadwood in canopy. Vigor fair. Density fair.	None at this time.

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6679	313	Yes		Blue Oak	*Quercus douglasii*	9,11	20	54	9	3 Fair - Minor Problems	Codominant at base. Above average dead branches in lower canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6680	307	Yes		Blue Oak	*Quercus douglasii*	9,10	19	54	10	3 Fair - Minor Problems	Codominant at 12 inches. Above average dead branches in lower canopy. Epicormic growth at top of canopy. Vigor fair. Density fair to poor.	None at this time.
6681	306	Yes		Blue Oak	*Quercus douglasii*	4,4,4,5	17	54	7	3 Fair - Minor Problems	Codominant at base. Suppressed south. Above average dead branches in lower canopy. Vigor fair. Density fair to poor.	None at this time.
6682	305	Yes		Blue Oak	*Quercus douglasii*		11	54	15	3 Fair - Minor Problems	Codominant at 6 feet. Above average dead branches in lower canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6683	304	Yes		Blue Oak	*Quercus douglasii*		11	54	12	3 Fair - Minor Problems	Good structure. Lower canopy suppressed north. Epicormic growth on branches and trunks. Vigor fair. Density fair to poor.	None at this time.
6684	303	Yes		Blue Oak	*Quercus douglasii*		15	54	12	3 Fair - Minor Problems	Codominant at 5 feet. 16 inches of inclusion. Vigor fair. Density fair.	None at this time.
6685	197	Yes		Blue Oak	*Quercus douglasii*		11	12	9	3 Fair - Minor Problems	Suppression north. One-sided canopy south. Codominant at 24 inches. Vigor fair to poor. Density fair to poor.	None at this time.
6686		Yes		Blue Oak	*Quercus douglasii*		7	54	12	3 Fair - Minor Problems	Suppressed east. One-sided canopy west. Above average dead branches. Vigor fair. Density fair to poor.	None at this time.
6687	291	Yes		Blue Oak	*Quercus douglasii*	7,9	16	54	7	3 Fair - Minor Problems	Codominant at 12 inches. Growing into canopy west. Vigor fair. Density fair.	None at this time.
6688	292	Yes		Blue Oak	*Quercus douglasii*		9	54	7	3 Fair - Minor Problems		None at this time.
6689	290	Yes		Blue Oak	*Quercus douglasii*		14	24	10	3 Fair - Minor Problems	Growing in the canopies east and west. Above average dead branches at the corner of growth on trunk and branches. Codominant at 24 inches. Vigor fair. Density fair to poor.	None at this time.
6690	289	Yes		Blue Oak	*Quercus douglasii*		8	54	6	3 Fair - Minor Problems		None at this time.
6691	288	Yes		Blue Oak	*Quercus douglasii*		12	54	16	3 Fair - Minor Problems	Suppressed north. Leaning west. One-sided canopy. Vigor fair. Density fair.	None at this time.

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6692	287	Yes		Blue Oak	*Quercus douglasii*		12	54	7	3 Fair - Minor Problems		None at this time.
6693	286	Yes		Blue Oak	*Quercus douglasii*		14	54	12	3 Fair - Minor Problems	Codominant at 4 feet. Above average dead branches in lower canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6694	286	Yes		Blue Oak	*Quercus douglasii*		19	12	21	3 Fair - Minor Problems	Codominant at 12 inches for stems. Vigor fair. Density fair.	None at this time.
6695		Yes		Blue Oak	*Quercus douglasii*		6	54	5	3 Fair - Minor Problems	Suppressed north. One-sided canopy south. Above average dead branches. Epicormic growth. Density fair. Vigor fair.	None at this time.
6696	321	Yes		Blue Oak	*Quercus douglasii*		10	54	8	2 Major Structure or Health Problems	Codominant at 4 feet. Dead 4-inch leader west. Above average dead branches upcoming growth. Vigor poor. Density poor.	None at this time.
6697	318	Yes		Blue Oak	*Quercus douglasii*		17	12	18	3 Fair - Minor Problems	Codominant at 12 inches. Two stems. Growing into canopy north. Above average dead branches in lower canopy. Vigor fair. Density fair to poor.	None at this time.
6698	316	Yes		Blue Oak	*Quercus douglasii*		8	54	9	2 Major Structure or Health Problems	Tree was topped. Epicormic sprouts make up top canopy. Vigor fair. Density fair to poor.	None at this time.
6699	317	Yes		Blue Oak	*Quercus douglasii*		14	54	18	3 Fair - Minor Problems	Tree canopy was directionally pruned south for powerlines. Vigor fair. Density fair.	None at this time.
6700	419	Yes		Blue Oak	*Quercus douglasii*		12	54	15	3 Fair - Minor Problems	Suppressed north. Growing into canopy south. Codominant at 10 feet. Vigor fair. Density fair.	None at this time.
6701	320	Yes		Blue Oak	*Quercus douglasii*		15	48	21	3 Fair - Minor Problems	Growing in the canopy west. One-sided canopy east. Codominant at 4 feet. Vigor fair. Density fair.	None at this time.
6702	322	Yes		Blue Oak	*Quercus douglasii*		7	54	6	3 Fair - Minor Problems	Growing into canopy north and south. Good structure. Vigor fair. Density fair.	None at this time.
6703		Yes		Blue Oak	*Quercus douglasii*	3,4	7	54	7	3 Fair - Minor Problems	Codominant at base to stems. Suppressed south. One-sided canopy north.	None at this time.
6704	323	Yes		Blue Oak	*Quercus douglasii*	16,17	33	54	21	3 Fair - Minor Problems	Codominant at 12 inches with 6 inches of inclusion. Live Oak volunteers in the dripline. Above average dead branches in lower canopy. Vigor fair. Density fair.	None at this time.
6705		Yes		Blue Oak	*Quercus douglasii*	3,4	7	54	5	3 Fair - Minor Problems	Codominant at 12 inches. Vigor fair. Density fair.	None at this time.

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6706	427	Yes		Blue Oak	*Quercus douglasii*	4,4	8	54	6	3 Fair - Minor Problems	Codominant at 12 inches. Vigor fair. Density fair.	None at this time.
6707	325	Yes		Blue Oak	*Quercus douglasii*		12	12	9	3 Fair - Minor Problems	Codominant at 12 inches for stems. Vigor fair. Density fair.	None at this time.
6708	326	Yes		Blue Oak	*Quercus douglasii*		13	12	10	3 Fair - Minor Problems	Codominant at 12 inches. Three stems.	None at this time.
6709	328	Yes		Blue Oak	*Quercus douglasii*		14	54	16	3 Fair - Minor Problems	Codominant at 7 feet. Vigor fair. Density fair.	None at this time.
6710	330	Yes		Blue Oak	*Quercus douglasii*		10	54	10	3 Fair - Minor Problems	Good structure. Lower canopy suppressed north and south. Above average dead branches. Vigor fair. Density fair to poor.	None at this time.
6711	329	Yes		Blue Oak	*Quercus douglasii*	6,9	15	54	9	3 Fair - Minor Problems	Suppressed southeast. One-sided leaning canopy northwest.	None at this time.
6712	331	Yes		Blue Oak	*Quercus douglasii*		13	54	10	3 Fair - Minor Problems	Growing into canopies east and west. Average dead branches in canopy. Codominant at 4 feet. Vigor fair. Density fair.	None at this time.
6713	342	Yes		Blue Oak	*Quercus douglasii*		15	54	15	2 Major Structure or Health Problems	Codominant at 12 feet. Above average dead branches. Tip dieback out of crown with epicormic growth in upper crown. Vigor fair. Density fair.	None at this time.
6714	338	Yes		Blue Oak	*Quercus douglasii*		17	12	21	3 Fair - Minor Problems	Codominant at 24 inches. Two stems. Tip dieback out of crown. Epicormic growth on leaders. Vigor poor. Density poor.	None at this time.
6715	339	Yes		Blue Oak	*Quercus douglasii*		17	54	18	3 Fair - Minor Problems	Codominant at 14 feet. Above average deadwood. Growing into canopy west. Epicormic growth.	None at this time.
6716		Yes		Blue Oak	*Quercus douglasii*		11	12	10	3 Fair - Minor Problems	Codominant at 24 inches. Three stems. Above average dead branches. Epicormic growth all stems. Vigor fair. Density fair.	None at this time.
6717	349	Yes		Blue Oak	*Quercus douglasii*		11	54	10	3 Fair - Minor Problems	Good structure. Vigor fair. Density fair.	None at this time.
6718		Yes		Blue Oak	*Quercus douglasii*		6	54	12	3 Fair - Minor Problems	Suppressed east. One-sided leaning canopy west. Vigor fair. Density fair.	None at this time.

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6719	347	Yes		Blue Oak	*Quercus douglasii*		10	54	15	3 Fair - Minor Problems	Codominant at 10 feet. Suppression south. One-sided leaning canopy northeast. Above average dead branches lower canopy/ Vigor fair. Density fair to poor.	None at this time.
6720	346	Yes		Blue Oak	*Quercus douglasii*		10	54	20	3 Fair - Minor Problems	One-sided leaning canopy south. Vigor fair. Density fair to poor.	None at this time.
6721	346	Yes		Blue Oak	*Quercus douglasii*		11	54	18	2 Major Structure or Health Problems	One-sided leaning canopy southeast. Above average dead branches. Epicormic growth on branches. Vigor poor. Density poor.	None at this time.
6722	150	Yes		Blue Oak	*Quercus douglasii*		7	54	12	2 Major Structure or Health Problems	One-sided leaning canopy west. Above average dead branches. Epicormic growth on stems. Vigor poor. Density poor.	None at this time.
6723	344	Yes		Blue Oak	*Quercus douglasii*		10	54	9	3 Fair - Minor Problems	Codominant at 12 feet. Lower canopy suppressed all sides. Vigor fair. Density fair to poor.	None at this time.
6724	343	Yes		Interior Live Oak	*Quercus wislizeni*	12,14	26	54	12	3 Fair - Minor Problems	Codominant at base with inclusion to stems with weak attachment. Lower canopy suppressed all sides. Above average dead branches lower canopy. Vigor fair. Density fair.	None at this time.
6725	342	Yes		Blue Oak	*Quercus douglasii*		7	54	10	2 Major Structure or Health Problems	Suppressed south. One-sided leaning canopy northwest. Above average dead branches. Vigor poor. Density poor.	None at this time.
6726	341	Yes		Blue Oak	*Quercus douglasii*		11	12	9	2 Major Structure or Health Problems	Codominant at 12 inches to stems. Lower canopy suppressed south and west. One-sided leaning canopy north. Above average dead branches.	None at this time.
6727	340	Yes		Blue Oak	*Quercus douglasii*	5,5	10	54	9	3 Fair - Minor Problems	Codominant at base to stems. Density fair. Vigor fair.	None at this time.
6728	156	Yes		Blue Oak	*Quercus douglasii*		9	54	12	3 Fair - Minor Problems	Codominant at 5 feet. One-sided canopy south. Vigor fair to poor. Density fair to poor.	None at this time.
6729	353	Yes		Blue Oak	*Quercus douglasii*		7	54	6	2 Major Structure or Health Problems		None at this time.
6730	352	Yes		Blue Oak	*Quercus douglasii*	5,10	15	54	12	3 Fair - Minor Problems	Codominant at base 6 inches of inclusion. Vigor fair. Density fair.	None at this time.
6731	354	Yes		Blue Oak	*Quercus douglasii*		11	54	9	3 Fair - Minor Problems	Codominant at 36 inches. Vigor fair. Density fair.	None at this time.

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6732	373	Yes		Blue Oak	*Quercus douglasii*		10	54	18	3 Fair - Minor Problems	Codominant at 6 feet. Vigor fair. Density fair.	None at this time.
6733		Yes		Interior Live Oak	*Quercus wislizeni*	2,3,5	10	54	7	2 Major Structure or Health Problems	Codominant at base with weak attachments. Suppressed north. Leaning canopy south. Vigor fair. Density fair.	None at this time.
6734	356	Yes		Blue Oak	*Quercus douglasii*		14	54	21	3 Fair - Minor Problems		None at this time.
6735	357	Yes		Blue Oak	*Quercus douglasii*		12	54	15	3 Fair - Minor Problems	Codominant at 12 feet. Vigor fair. Density fair.	None at this time.
6736	358	Yes		Blue Oak	*Quercus douglasii*		15	12	15	3 Fair - Minor Problems	Codominant at 12 inches to stems. Vigor fair. Density fair.	None at this time.
6737	359	Yes		Blue Oak	*Quercus douglasii*		6	54	6	2 Major Structure or Health Problems	Suppressed south. One side leaning canopy north. Codominant at 10 feet.	None at this time.
6738	335	Yes		Blue Oak	*Quercus douglasii*		18	12	18	3 Fair - Minor Problems	Codominant at 24 inches. Two stems. Vigor fair. Density fair.	None at this time.
6739	350	Yes		Blue Oak	*Quercus douglasii*		20	12	18	3 Fair - Minor Problems	Codominant at 36 inches. Three stems. Vigor fair. Density fair.	None at this time.
6740	324	Yes		Interior Live Oak	*Quercus wislizeni*		12	24	7	3 Fair - Minor Problems	Codominant at 36 inches. Three stems. Canopy to ground all sides. Vigor fair. Density fair.	None at this time.
6741	333	Yes		Blue Oak	*Quercus douglasii*		7	54	5	3 Fair - Minor Problems	Growing into canopy south. Codominant at 6 feet. Vigor fair. Density fair.	None at this time.
6742	334	Yes		Blue Oak	*Quercus douglasii*		7	54	7	3 Fair - Minor Problems	Growing into canopy north. Codominant at 4 feet. Vigor fair. Density fair.	None at this time.
6743	135	Yes		Blue Oak	*Quercus douglasii*		12	12	9	3 Fair - Minor Problems	Codominant at 24 inches. Two stems. Above average dead branches in lower canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6744		Yes		Blue Oak	*Quercus douglasii*		8	54	9	3 Fair - Minor Problems	Codominant at 5 feet. Growing into canopies east and west. Above average dead branches in lower canopy. Vigor fair. Density fair to poor.	None at this time.
6745	337	Yes		Blue Oak	*Quercus douglasii*		11	54	15	3 Fair - Minor Problems	Codominant at 10 feet. Above average dead branches in lower canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6746		Yes		Blue Oak	*Quercus douglasii*		6	54	4	2 Major Structure or Health Problems	Suppressed east, north and west. Good structure. Epicormic growth on trunk. Above average dead branches. Vigor poor. Density poor.	None at this time.

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6747	355	Yes		Blue Oak	*Quercus douglasii*	7,10	17	54	12	3 Fair - Minor Problems	Codominant at base to stems growing into canopy west. Above average dead branches in lower canopy. Vigor fair. Density fair to poor.	None at this time.
6748	351	Yes		Blue Oak	*Quercus douglasii*		17	12	18	3 Fair - Minor Problems	Codominant at 24 inches. Two stems. Above average dead branches in canopy. Vigor fair. Density fair to poor.	None at this time.
6749	360	Yes		Blue Oak	*Quercus douglasii*		36	36	21	2 Major Structure or Health Problems	Codominant at 12 feet. Topped north side for powerlines. 18-inch limb failure at 12 feet east side with decay and wound. Vigor fair to poor. Density fair to poor.	None at this time.
6750	361	Yes		Blue Oak	*Quercus douglasii*		13	12	5	3 Fair - Minor Problems	Codominant at 12 inches. Five stems.	None at this time.
6751		Yes		Blue Oak	*Quercus douglasii*		6	54	3	3 Fair - Minor Problems	Good structure. Vigor fair. Density fair.	None at this time.
6752	362	Yes		Blue Oak	*Quercus douglasii*		16	54	15	3 Fair - Minor Problems	Vines throughout canopy up to 30 feet. Low vertical lateral at 12 inches west. Vigor fair. Density fair.	None at this time.
6753	364	Yes		Blue Oak	*Quercus douglasii*		12	54	10	3 Fair - Minor Problems	Codominant at 7 feet. Growing into canopy south and east. Above average dead branches lower canopy. Vigor fair. Density fair to poor.	None at this time.
6754		Yes		Blue Oak	*Quercus douglasii*		13	12	16	3 Fair - Minor Problems	Codominant at 24 inches to stems. Growing in the canopy south and east average dead branches. Vigor fair. Density fair.	None at this time.
6755	365	Yes		Blue Oak	*Quercus douglasii*		18	12	20	3 Fair - Minor Problems	Codominant at 24 inches. Growing into canopy east and west. Average dead branches in lower canopy. Vigor fair. Density fair.	None at this time.
6756	366	Yes		Blue Oak	*Quercus douglasii*		18	24	15	3 Fair - Minor Problems	Codominant at 6 feet. Vigor fair. Density fair.	None at this time.
6757	368	Yes		Blue Oak	*Quercus douglasii*		10	48	21	1 Extreme Structure or Health Problems	Suppressed above. Trunk growing 6 inches adjacent to trunk south. Bow in trunk at 4 feet 90° to the north. One-sided severe reaching canopy north. Vigor fair. Density fair to poor.	***Recommend removal due to nature and extent of noted defects.***
6758		Yes		Interior Live Oak	*Quercus wislizeni*		7	54	18	2 Major Structure or Health Problems	Suppressed above. Trunk growing 18 inches adjacent to trunk north. Severe leaning one-sided canopy south. Vigor fair to poor. Density fair to poor.	None at this time.

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating	Notes	Recommendations
6759	367	Yes		Blue Oak	*Quercus douglasii*		12	12	16	2 Major Structure or Health Problems	Suppressed northwest. One-sided reaching canopy southeast. Riparian vegetation under canopy. Codominant at 24 inches. Two stems. Vigor fair. Density fair.	None at this time.
6760	369	Yes		Blue Oak	*Quercus douglasii*		13	54	15	3 Fair - Minor Problems	Blackberries up to 4 feet. Codominant at 9 feet. Vigor fair. Density fair.	None at this time.
6761	370	Yes		Blue Oak	*Quercus douglasii*		12	24	17	2 Major Structure or Health Problems	Suppressed above. Growing 12 inches adjacent to trunk. One-sided reaching canopy north. Vigor fair. Density fair.	None at this time.
6762	371	Yes		Blue Oak	*Quercus douglasii*		17	54	21	3 Fair - Minor Problems	Tag tied to low branch west side due to blackberries. Codominant at 12 feet.	None at this time.
6763	372	Yes		Blue Oak	*Quercus douglasii*		13	12	9	3 Fair - Minor Problems	Codominant at base with some inclusion. Two stems. Riparian vegetation and blackberries under canopy. Vigor fair. Density fair.	None at this time.
6764	423	Yes		Blue Oak	*Quercus douglasii*		7	54	6	3 Fair - Minor Problems	Codominant at 4 feet. Suppression northeast. Leaning canopy southwest. Vigor fair. Density fair.	None at this time.
6765		Yes		Blue Oak	*Quercus douglasii*		8	48	5	3 Fair - Minor Problems	Codominant at 4 feet. Above average dead branches lower canopy. Vigor fair. Density fair to poor.	None at this time.
6766		Yes		Blue Oak	*Quercus douglasii*		10	54	12	3 Fair - Minor Problems	Codominant at 12 feet. Vigor fair. Density fair.	None at this time.
6767	**Tag # Not Used**											
6768	416	Yes		Blue Oak	*Quercus douglasii*		7	54	7	2 Major Structure or Health Problems	Tag tied to fence south. Codominant at 7 feet. Topped for powerlines. Vigor fair. Density fair to poor.	None at this time.
6769	414	Yes		Blue Oak	*Quercus douglasii*		7	54	6	2 Major Structure or Health Problems	Codominant at 6 feet. Topped for powerlines. Vigor fair. Density fair.	None at this time.
6770	413	Yes		Blue Oak	*Quercus douglasii*		7	54	9	2 Major Structure or Health Problems	Codominant at 10 feet. Topped for powerlines. Vigor fair. Density fair.	None at this time.
6771	433	Yes		Blue Oak	*Quercus douglasii*		27	54	24	3 Fair - Minor Problems	Codominant at 7 feet. Growing into canopy east and south. Canopy to ground west. Vigor fair. Density fair.	None at this time.
6772	434	Yes		Blue Oak	*Quercus douglasii*		26	54	24	3 Fair - Minor Problems	Codominant at 15 feet. Growing into canopies south and northwest. East side can be pruned for powerlines. Vigor fair. Density fair.	None at this time.

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating	Notes	Recommendations
6773		Yes		Blue Oak	*Quercus douglasii*		6	54	5	3 Fair - Minor Problems	Codominant at 5 feet. Vigor fair. Density fair.	None at this time.
6774	435	Yes		Blue Oak	*Quercus douglasii*		27	54	24	3 Fair - Minor Problems	Codominant at 15 feet. Growing into canopy northeast. One-sided leaning canopy southwest. Canopy to ground west. Vigor fair. Density fair.	None at this time.
6775	436	Yes		Blue Oak	*Quercus douglasii*		27	54	21	3 Fair - Minor Problems	Codominant at 10 feet. Growing into canopy west. Canopy to ground south and northwest. Vigor fair. Density fair.	None at this time.
6776	337	Yes		Blue Oak	*Quercus douglasii*		36	54	33	2 Major Structure or Health Problems	Codominant at 12 feet. 18-inch limb failure south at 8 feet with decay and wound. Average deadwood in canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6777	439	Yes		Blue Oak	*Quercus douglasii*		36	54	33	2 Major Structure or Health Problems	Codominant at 15 feet. Broken branch at 7 feet southwest with decay and wound. 15-inch lateral at 5 feet south broken and growing on ground.	None at this time.
6778	438	Yes		Blue Oak	*Quercus douglasii*		28	54	21	2 Major Structure or Health Problems	Codominant at 5 feet. 16-inch central leader broken off with decay and wound. Powerlines east side. Vigor poor. Density poor.	None at this time.
6779		Yes		Blue Oak	*Quercus douglasii*		7	54	6	3 Fair - Minor Problems	Growing adjacent to chain-link fence on east side. In contact with barbed-wire at 6 feet. Codominant at 6 feet. Vigor fair. Density fair.	None at this time.
6780		Yes	Yes	Blue Oak	*Quercus douglasii*		25	54	18	3 Fair - Minor Problems	Off-site tree. Tag on post of chain-link fence 36 inches above the ground. Topped for powerlines. Codominant at 9 feet. Canopy 12 feet into site. Vigor fair to poor. Density fair to poor.	None at this time.
6781	464	Yes		Blue Oak	*Quercus douglasii*		24	54	21	2 Major Structure or Health Problems	Tree pruned for powerlines. One-sided leaning canopy east. Epicormic growth east side.	None at this time.
6782	465	Yes		Blue Oak	*Quercus douglasii*		15	54	22	2 Major Structure or Health Problems	Suppressed above east. Severe leaning one-sided canopy west. Average dead branches. Vigor fair. Density fair to poor.	None at this time.
6783	466	Yes		Blue Oak	*Quercus douglasii*		15	54	18	3 Fair - Minor Problems	Tree pruned east for powerlines. Epicormic growth along trunk east side to 25 feet. One-sided leaning canopy west.	None at this time.

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating	Notes	Recommendations
6784	467	Yes		Blue Oak	*Quercus douglasii*		23	54	22	2 Major Structure or Health Problems	Suppressed north. One-sided leaning canopy south. Codominant at 8 feet.	None at this time.
6785	469	Yes		Blue Oak	*Quercus douglasii*		34	54	21	3 Fair - Minor Problems	Codominant at 6 feet. Growing into canopy north and west. Vigor fair. Density fair. Canopy growing to ground south and west.	None at this time.
6786	470	Yes		Blue Oak	*Quercus douglasii*		32	48	40	3 Fair - Minor Problems	Codominant at 6 feet. Low 10-inch lateral at 6 feet growing to ground south. Average dead branches. Vigor fair. Density fair.	None at this time.
6787	471	Yes		Blue Oak	*Quercus douglasii*		7	54	15	2 Major Structure or Health Problems	Codominant at 14 feet. Suppressed east. One-sided leaning canopy northwest.	None at this time.
6788	472	Yes		Blue Oak	*Quercus douglasii*		32	54	24	3 Fair - Minor Problems	Codominant at 18 feet. Canopy to ground southwest and northeast. Vigor fair. Density fair.	None at this time.
6789	473	Yes		Blue Oak	*Quercus douglasii*		23	54	21	2 Major Structure or Health Problems	Suppressed east. One-sided leaning canopy west. Codominant at 12 feet. Vigor fair. Density fair.	None at this time.
6790	474	Yes		Blue Oak	*Quercus douglasii*		8	54	12	3 Fair - Minor Problems	Suppressed south. One-sided leaning canopy north.	None at this time.
6791		Yes		Blue Oak	*Quercus douglasii*		7	54	18	2 Major Structure or Health Problems	Suppressed east. One-sided leaning canopy west.	None at this time.
6792	476	Yes		Blue Oak	*Quercus douglasii*		11	54	15	3 Fair - Minor Problems	Codominant at 7 feet. Vigor fair. Density fair.	None at this time.
6793	477	Yes		Blue Oak	*Quercus douglasii*		13	54	16	2 Major Structure or Health Problems	Suppressed east. One-sided leaning canopy west. Above average dead branches. Large Mulberry growing in understory. Vigor fair to poor. Density fair to poor.	None at this time.
6794	478	Yes		Blue Oak	*Quercus douglasii*		11	54	12	3 Fair - Minor Problems	Codominant at 10 feet. Large sprawling Mulberry growing in understory. Vigor fair. Density fair.	None at this time.
6795	479	Yes		Blue Oak	*Quercus douglasii*	4,6	10	54	5	3 Fair - Minor Problems	Codominant at base to stems. Vigor fair. Density fair.	None at this time.
6796	480	Yes		Blue Oak	*Quercus douglasii*	6,7	13	54	7	3 Fair - Minor Problems	Good structure Vigor fair. Density fair.	None at this time.
6797	481	Yes		Blue Oak	*Quercus douglasii*		8	54	10	3 Fair - Minor Problems	Good structure. Suppressed south. One-sided leaning canopy north.	None at this time.

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating	Notes	Recommendations
6798	482	Yes		Blue Oak	*Quercus douglasii*		12	36	15	3 Fair - Minor Problems	Codominant at 36 inches. Vigor fair. Density fair.	None at this time.
6799	483	Yes		Blue Oak	*Quercus douglasii*		7	54	9	3 Fair - Minor Problems	Codominant at 15 feet. Above average dead branches in lower canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6800	494	Yes		Blue Oak	*Quercus douglasii*		11	12	9	2 Major Structure or Health Problems	Codominant at 12 inches. Suppression north. One-sided leaning canopy south. Vigor fair. Density fair to poor.	None at this time.
6801	486	Yes		Blue Oak	*Quercus douglasii*		13	54	10	3 Fair - Minor Problems	Codominant at 6 feet. Growing into canopy east. Vigor fair. Density fair.	None at this time.
6802	485	Yes		Blue Oak	*Quercus douglasii*		14	12	18	3 Fair - Minor Problems	Codominant at 36 inches. Canopy to ground all sides. Vigor fair. Density fair.	None at this time.
6803		Yes		Blue Oak	*Quercus douglasii*		7	24	5	3 Fair - Minor Problems	Codominant at 24 inches. Vigor fair. Density fair.	None at this time.
6804	487	Yes		Coast Live Oak	*Quercus agrifolia*		13	54	12	3 Fair - Minor Problems	Growing in drainage ditch and surrounded by blackberries. Tag on branch at east bank of ditch. Codominant at 8 feet. Vigor fair. Density fair.	None at this time.
6805		Yes		Blue Oak	*Quercus douglasii*		7	54	9	2 Major Structure or Health Problems	Suppressed east. Growing on east bank of drainage ditch. Codominant at 4 feet. One-sided leaning canopy west.	None at this time.
6806		Yes		Interior Live Oak	*Quercus wislizeni*		7	54	15	2 Major Structure or Health Problems	Suppressed east. Growing at base of chain-link fence. One-sided leaning canopy west. Codominant at 7 feet.	None at this time.
6807		Yes		Blue Oak	*Quercus douglasii*	2,4	6	54	4	3 Fair - Minor Problems	Codominant at base. Growing on east bank of drainage ditch and surrounded by blackberries. Vigor fair. Density fair.	None at this time.
6808		Yes		Blue Oak	*Quercus douglasii*	2,2,3	7	54	4	3 Fair - Minor Problems	Codominant at base. Vigor fair. Density fair.	None at this time.
6809	493	Yes		Blue Oak	*Quercus douglasii*		34	54	36	3 Fair - Minor Problems	Codominant at 8 feet. Average dead branches in lower canopy. Canopy overhangs Shasta Street 20 feet south. Vigor fair. Density fair.	None at this time.
6810	494	Yes		Blue Oak	*Quercus douglasii*		37	54	36	2 Major Structure or Health Problems	Large wound cavity north side from base to 4 feet. Decay and wound. 40% of hardwood decayed. Driving path in dripline all sides. Vigor fair to poor. Density fair to poor.	None at this time.

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating	Notes	Recommendations
6811	495	Yes		Blue Oak	*Quercus douglasii*		44	54	30	1 Extreme Structure or Health Problems	Codominant at 36 inches. Old main leader failure breakoff south side decay in wound. Remaining two stems with included bark and severe separation. Vigor fair. Density fair to poor. Driving path under canopy south side. Tree should be removed.	***Recommend removal due to nature and extent of noted defects.***
6812	407	Yes		Blue Oak	*Quercus douglasii*	14,15	29	54	18	3 Fair - Minor Problems	Codominant at 6 feet. Topped for powerlines. Canopy on Diamond Oaks Road 5 feet. Growing into canopy west.	None at this time.
6813	401	Yes		Blue Oak	*Quercus douglasii*		7	54	6	3 Fair - Minor Problems	Suppressed east. One-sided leaning canopy west.	None at this time.
6814	403	Yes		Blue Oak	*Quercus douglasii*		8	54	5	3 Fair - Minor Problems	Growing into canopy west. Codominant at 5 feet. Vigor fair. Density fair.	None at this time.
6815	402	Yes		Blue Oak	*Quercus douglasii*	9,11	20	24	10	3 Fair - Minor Problems	Suppressed south. One-sided leaning canopy north. Codominant at base to stems. Vigor fair. Density fair.	None at this time.
6816	404	Yes		Blue Oak	*Quercus douglasii*		10	54	16	3 Fair - Minor Problems	Suppressed south. Growing into canopy south and east. Good structure. One-sided leaning canopy north. Vigor fair. Density fair.	None at this time.
6817	405	Yes		Interior Live Oak	*Quercus wislizeni*	5,10	15	54	15	2 Major Structure or Health Problems	Codominant at base. Suppressed above. One-sided leaning canopy northwest. Vigor fair. Density fair.	None at this time.
6818	411	Yes		Interior Live Oak	*Quercus wislizeni*		17	54	12	3 Fair - Minor Problems	Codominant at 8 feet. Canopy to ground all sides. Vigor fair. Density fair.	None at this time.
6819	412	Yes		Interior Live Oak	*Quercus wislizeni*		10	54	15	2 Major Structure or Health Problems	Suppressed east. Codominant at 7 feet. One-sided leaning canopy west. Above average dead branches lower canopy. Vigor fair to poor. Density fair to poor.	None at this time.
6820	418	Yes		Blue Oak	*Quercus douglasii*		10	54	10	2 Major Structure or Health Problems	Topped for powerlines. Codominant at 8 feet. Vigor fair. Density fair to poor.	None at this time.
6821		Yes		Blue Oak	*Quercus douglasii*		7	54	15	3 Fair - Minor Problems	Suppressed west. One-sided leaning canopy east. Codominant at 20 feet. Vigor fair. Density fair.	None at this time.
6822	408	Yes		Interior Live Oak	*Quercus wislizeni*		11	54	18	2 Major Structure or Health Problems	Codominant at 6 feet. Severe one-sided leaning canopy east. Vigor fair. Density fair.	None at this time.

Tag #	Old Tag #	Protected By Code	Offsite	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured At	Measured Canopy Radius	Arborist Rating	Notes	Recommendations
6823	409	Yes		Interior Live Oak	*Quercus wislizeni*		10	54	15	2 Major Structure or Health Problems	Severe leaning canopy east. Vigor fair. Density fair.	None at this time.
6824		Yes		Blue Oak	*Quercus douglasii*		8	48	4	3 Fair - Minor Problems	Adjacent to fence growing on north side in contact with barbed-wire. Codominant at 6 feet. Vigor fair. Density fair.	None at this time.

TOTAL INVENTORIED TREES = 324 trees (4,955 aggregate diameter inches)
TOTAL RECOMMENDED REMOVALS = 10 trees (256 aggregate diameter inches)
TOTAL PROTECTED TREES = 324 Trees (4,955 aggregate diameter inches)

APPENDIX 3 – GENERAL PRACTICES FOR TREE PROTECTION

Definitions:

Root zone: The roots of trees grow fairly close to the surface of the soil, and spread out in a radial direction from the trunk of tree. A general rule of thumb is that they spread 2 to 3 times the radius of the canopy, or 1 to 1 ½ times the height of the tree. It is generally accepted that disturbance to root zones should be kept as far as possible from the trunk of a tree.

Inner Bark: The bark on large valley oaks and coast live oaks is quite thick, usually 1" to 2". If the bark is knocked off a tree, the inner bark, or cambial region, is exposed or removed. The cambial zone is the area of tissue responsible for adding new layers to the tree each year, so by removing it, the tree can only grow new tissue from the edges of the wound. In addition, the wood of the tree is exposed to decay fungi, so the trunk present at the time of the injury becomes susceptible to decay. Tree protection measures require that no activities occur which can knock the bark off the trees.

Methods Used in Tree Protection:

No matter how detailed Tree Protection Measures are in the initial Arborist Report, they will not accomplish their stated purpose unless they are applied to individual trees and a Project Arborist is hired to oversee the construction. The Project Arborist should have the ability to enforce the Protection Measures. The Project Arborist should be hired as soon as possible to assist in design and to become familiar with the project. He must be able to read and understand the project drawings and interpret the specifications. He should also have the ability to cooperate with the contractor, incorporating the contractor's ideas on how to accomplish the protection measures, wherever possible. It is advisable for the Project Arborist to be present at the Pre-Bid tour of the site, to answer questions the contractors may have about Tree Protection Measures. This also lets the contractors know how important tree preservation is to the developer.

Root Protection Zone (RPZ): Since in most construction projects it is not possible to protect the entire root zone of a tree, a Root Protection Zone is established for each tree to be preserved. The minimum Root Protection Zone is the area underneath the tree's canopy (out to the dripline, or edge of the canopy), plus 10'. The Project Arborist must approve work within the RPZ.

Irrigate, Fertilize, Mulch: Prior to grading on the site near any tree, the area within the Tree Protection fence should be fertilized with 4 pounds of nitrogen per 1000 square feet, and the fertilizer irrigated in. The irrigation should percolate at least 24 inches into the soil. This should be done no less than 2 weeks prior to grading or other root disturbing activities. After irrigating, cover the RPZ with at least 12" of leaf and twig mulch. Such mulch can be obtained from chipping or grinding the limbs of any trees removed on the site. Acceptable mulches can be obtained from nurseries or other commercial sources. Fibrous or shredded redwood or cedar bark mulch shall not be used anywhere on site.

Fence: Fence around the Root Protection Zone and restrict activity therein to prevent soil compaction by vehicles, foot traffic or material storage. The fenced area shall be off limits to all construction equipment, unless there is express written notification provided by the Project Arborist, and impacts are discussed and mitigated prior to work commencing.

> No storage or cleaning of equipment or materials, or parking of any equipment can take place within the fenced off area, known as the RPZ.

The fence should be highly visible, and stout enough to keep vehicles and other equipment out. I recommend the fence be made of orange plastic protective fencing, kept in place by t-posts set no farther apart than 6'.

In areas of intense impact, a 6' chain link fence is preferred.

In areas with many trees, the RPZ can be fenced as one unit, rather than separately for each tree.

Where tree trunks are within 3' of the construction area, place 2" by 4" boards vertically against the tree trunks, even if fenced off. Hold the boards in place with wire. Do not nail them directly to the tree. The purpose of the boards is to protect the trunk, should any equipment stray into the RPZ.

Elevate Foliage: Where indicated, remove lower foliage from a tree to prevent limb breakage by equipment. Low foliage can usually be removed without harming the tree, unless more than 25% of the foliage is removed. Branches need to be removed at the anatomically correct location in order to prevent decay organisms from entering the trunk. For this reason, a contractor who is an ISA Certified Arborist should perform all pruning on protected trees.[1]

Expose and Cut Roots: Breaking roots with a backhoe, or crushing them with a grader, causes significant injury, which may subject the roots to decay. Ripping roots may cause them to splinter toward the base of the tree, creating much more injury than a clean cut would make. At any location where the root zone of a tree will be impacted by a trench or a cut (including a cut required for a fill and compaction), the roots shall be exposed with either a backhoe digging radially to the trunk, by hand digging, or by a hydraulic air spade, and then cut cleanly with a sharp instrument, such as chainsaw with a carbide chain. Once the roots are severed, the area behind the cut should be moistened and mulched. A root protection fence should also be erected to protect the remaining roots, if it is not already in place. Further grading or backhoe work required outside the established RPZ can then continue without further protection measures.

Protect Roots in Deeper Trenches: The location of utilities on the site can be very detrimental to trees. Design the project to use as few trenches as possible, and to keep them away from the major trees to be protected. Wherever possible, in areas where trenches will be very deep, consider boring under the roots of the trees, rather than digging the trench through the roots. This technique can be quite useful for utility trenches and pipelines.

Protect Roots in Small Trenches: After all construction is complete on a site, it is not unusual for the landscape contractor to come in and sever a large number of "preserved" roots during the installation of irrigation systems. The Project Arborist must therefore approve the landscape and irrigation plans. The irrigation system needs to be designed so the main lines are located outside the root zone of major trees, and the secondary lines are either laid on the surface (drip systems), or carefully dug with a hydraulic or air spade, and the flexible pipe fed underneath the major roots.

Design the irrigation system so it can slowly apply water (no more than ¼" to ½" of water per hour) over a longer period of time. This allows deep soaking of root zones. The system also needs to accommodate infrequent irrigation settings of once or twice a month, rather than several times a week.

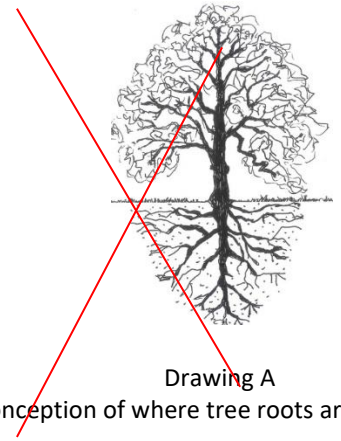
Monitoring Tree Health During and After Construction: The Project Arborist should visit the site at least twice a month during construction to be certain the tree protection measures are being followed, to monitor the health of impacted trees, and make recommendations as to irrigation or other needs. After construction is

[1] International Society of Arboriculture (ISA), maintains a program of Certifying individuals. Each Certified Arborist has a number and must maintain continuing education credits to remain Certified.

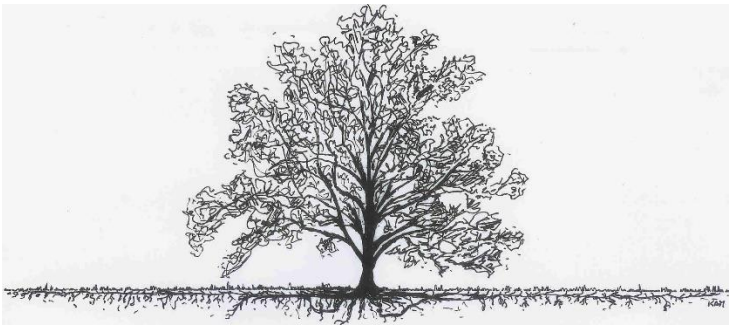
complete, the arborist should monitor the site monthly for one year and make recommendations for care where needed. If longer term monitoring is required, the arborist should report this to the developer and the planning agency overseeing the project.

Root Structure

The majority of a tree's roots are contained in a radius from the main trunk outward approximately two to three times the canopy of the tree. These roots are located in the top 6" to 3' of soil. It is a common misconception that a tree underground resembles the canopy (see Drawing A below). The correct root structure of a tree is in Drawing B. All plants' roots need both water and air for survival. Surface roots are a common phenomenon with trees grown in compacted soil. Poor canopy development or canopy decline in mature trees is often the result of inadequate root space and/or soil compaction.



Drawing A
Common misconception of where tree roots are assumed to be located



Drawing B
The reality of where roots are generally located

Structural Issues

Limited space for canopy development produces poor structure in trees. The largest tree in a given area, which is 'shading' the other trees is considered Dominant. The 'shaded' trees are considered Suppressed. The following picture illustrates this point. Suppressed trees are more likely to become a potential hazard due to their poor structure.

Dominant Tree

Growth is upright

Canopy is balanced by limbs and foliage equally

Suppressed Tree

Canopy weight all to one side

Limbs and foliage grow away from dominant tree

Co-dominant leaders are another common structural problem in trees.

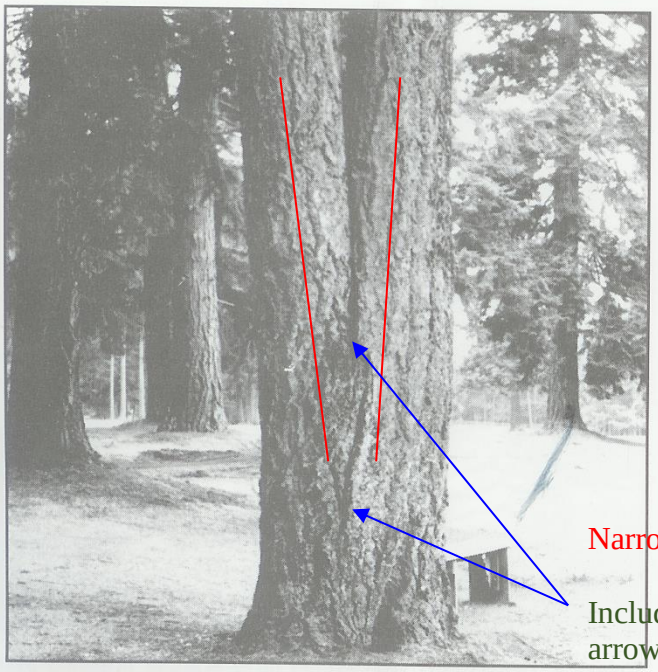


Figure 6. Codominant stems are inherently weak because the stems are of similar diameter.

The tree in this picture has a co-dominant leader at about 3' and included bark up to 7 or 8'. Included bark occurs when two or more limbs have a narrow angle of attachment resulting in bark between the stems – instead of cell to cell structure. This is considered a critical defect in trees and is the cause of many failures.

Narrow Angle

Included Bark between the arrows

Photo from Evaluation of Hazard Trees in Urban Areas by Nelda P. Matheny and James R. Clark, 1994 International Society of Arboriculture

Pruning Mature Trees for Risk Reduction

There are few good reasons to prune mature trees. Removal of deadwood, directional pruning, removal of decayed or damaged wood, and end-weight reduction as a method of mitigation for structural faults are the only reasons a mature tree should be pruned. Live wood over 3" should not be pruned unless absolutely necessary. Pruning cuts should be clean and correctly placed. Pruning should be done in accordance with the American National Standards Institute (ANSI) A300 standards. It is far better to use more small cuts than a few large cuts as small pruning wounds reduce risk while large wounds increase risk.

Pruning causes an open wound in the tree. Trees do not "heal" they compartmentalize. Any wound made today will always remain, but a healthy tree, in the absence of decay in the wound, will 'cover it' with callus tissue. Large, old pruning wounds with advanced decay are a likely failure point. Mature trees with large wounds are a high failure risk.

Overweight limbs are a common structural fault in suppressed trees. There are two remedial actions for overweight limbs (1) prune the limb to reduce the extension of the canopy, or (2) cable the limb to reduce movement. Cables do not hold weight they only stabilize the limb and require annual inspection.

Photo of another tree – not at this site.

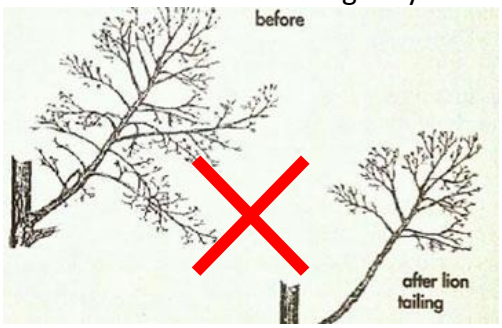
Normal limb structure

Over weight, reaching limb with main stem diameter small compared with amount of foliage present

Photo of another tree – not at this site

Lion's – Tailing is the pruning practice of removal of "an excessive number of inner and/or lower lateral branches from parent branches. Lion's tailing is not an acceptable pruning practice" ANSI A300 (part 1) 4.23. It increases the risk of failure.

Pruning – Cutting back trees changes their natural structure, while leaving trees in their natural form enhances longevity.



Arborist Classifications

There are different types of Arborists:

Tree Removal and/or Pruning Companies. These companies may be licensed by the State of California to do business, but they do not necessarily know anything about trees;

Arborists. Arborist is a broad term. It is intended to mean someone with specialized knowledge of trees but is often used to imply knowledge that is not there.

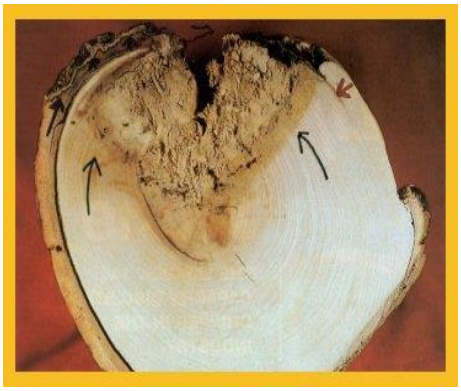
ISA Certified Arborist: An International Society of Arboriculture Certified Arborist is someone who has been trained and tested to have specialized knowledge of trees. You can look up certified arborists at the International Society of Arboriculture website: isa-arbor.org.

Consulting Arborist: An American Society of Consulting Arborists Registered Consulting Arborist is someone who has been trained and tested to have specialized knowledge of trees and trained and tested to provide high quality reports and documentation. You can look up registered consulting arborists at the American Society of Consulting Arborists website: https://www.asca-consultants.org/

Decay in Trees

Decay (in General): Fungi cause all decay of living trees. Decay is considered a disease because cell walls are altered, wood strength is affected, and living sapwood cells may be killed. Fungi decay wood by secreting enzymes. Different types of fungi cause different types of decay through the secretion of different chemical enzymes. Some decays, such as white rot, cause less wood strength loss than others because they first attack the lignin (causes cell walls to thicken and reduces susceptibility to decay and pest damage) secondarily the cellulose (another structural component in a cell walls). Others, such as soft rot, attack the cellulose chain and cause substantial losses in wood strength even in the initial stages of decay. Brown rot causes wood to become brittle and fractures easily with tension. Identification of internal decay in a tree is difficult because visible evidence may not be present.

According to Evaluation of Hazard Trees in Urban Areas (Matheny, 1994) decay is a critical factor in the stability of the tree. As decay progresses in the trunk, the stem becomes a hollow tube or cylinder rather than a solid rod. This change is not readily apparent to the casual observer. Trees require only a small amount of bark and wood to transport water, minerals and sugars. Interior heartwood can be eliminated (or degraded) to a great degree without compromising the transport process. Therefore, trees can contain significant amounts of decay without showing decline symptoms in the crown.



Compartmentalization of decay in trees is a biological process in which the cellular tissue around wounds is changed to inhibit fungal growth and provide a barrier against the spread of decay agents into the barrier zones is the formation of while a tree may be able to limit pruning cuts, in the event that there located vertically along the main additional cells. The weakest of the vertical wall. Accordingly, decay progression inward at large are more than one pruning cut trunk of the tree, the likelihood of decay progression and the associated structural loss of integrity of the internal wood is high.

Oak Tree Impacts

Our native oak trees are easily damaged or killed by having the soil within the Critical Root Zone (CRZ) disturbed or compacted. All of the work initially performed around protected trees that will be saved should be done by people rather than by wheeled or track type tractors. Oaks are fragile giants that can take little change in soil grade, compaction, or warm season watering. Don't be fooled into believing that warm season watering has no adverse effects on native oaks. Decline and eventual death can take as long as 5-20 years with poor care and inappropriate watering. Oaks can live hundreds of years if treated properly during construction, as well as later with proper pruning, and the appropriate landscape/irrigation design.

California Tree and Landscape Consulting, Inc.

April 27, 2021

Ryan O'Keefe
WP Sierra View, LLC
1420 Rocky Ridge Drive, Suite 265
Roseville, CA 95661

Via Email: ryan@wpcommunities.com

RE: Sierra View Golf Club Verification of Tree Failure #6517

Ryan,

I am writing to provide confirmation of a recent tree failure at the Sierra View Golf Club surplus property. The tree is located within the proposed development area of the property located at 360 Diamond Oaks Road, Roseville, California.

Unfortunately, the tree suffered a catastrophic failure of the lower trunk approximately 10' above grade and is a total loss. The remaining debris should be cleaned up and the lower trunk and stump removed.

The attached pictures depict the failure. The tree should be removed from any mitigation calculations associated with the development of the property.

Please feel free to contact me with any questions.

Edwin E. Stirtz, Consulting Arborist
International Society of Arboriculture
Certified Arborist WE-0510A
ISA Tree Risk Assessment Qualified
Member, American Society of Consulting Arborists

Enc: Photographs

Photographs

TREE REMOVAL INFORMATION

TREE # EXISTING OAK TREE - TO REMAIN

TREE # PROPOSED FOR REMOVAL

TREE # ARBORIST RECOMMENDED REMOVAL

TREE # EXISTING OAK TREE TO REMAIN (IMPACTED)

Tag #	Common Name	Species	Multi-Trunks (in.)	DBH (in.)	Measured Canopy Radius	Disposition
1	Coast Live Oak	*Quercus agrifolia*		17	12	To remain.
424	Blue Oak	*Quercus douglasii*		11	10	Proposed Removal.
6501	Blue Oak	*Quercus douglasii*		38	33	Proposed Removal.
6502	Blue Oak	*Quercus douglasii*		41	30	To remain.
6503	Blue Oak	*Quercus douglasii*		35	24	Proposed Removal.
6504	Blue Oak	*Quercus douglasii*	3,4	7	4	Proposed Removal.
6505	Blue Oak	*Quercus douglasii*		26	15	To remain.
6506	Blue Oak	*Quercus douglasii*		36	30	To remain. (impacted)
6507	Blue Oak	*Quercus douglasii*		31	27	To remain. (impacted)
6508	Blue Oak	*Quercus douglasii*		35	30	Proposed Removal.
6509	Blue Oak	*Quercus douglasii*		35	24	Proposed Removal.
6510	Blue Oak	*Quercus douglasii*		28	27	Proposed Removal.
6511	Blue Oak	*Quercus douglasii*		34	24	Proposed Removal.
6512	Coast Live Oak	*Quercus agrifolia*		8	6	Proposed Removal.
6513	Coast Live Oak	*Quercus agrifolia*		15	7	Proposed Removal.
6514	Coast Live Oak	*Quercus agrifolia*		15	8	Proposed Removal.
6515	Blue Oak	*Quercus douglasii*		8	5	Proposed Removal.
6516	Blue Oak	*Quercus douglasii*		6	4	Proposed Removal.
6517	Blue Oak	*Quercus douglasii*		0	0	***Dead***
6518	Blue Oak	*Quercus douglasii*		24	36	Proposed Removal.
6519	Blue Oak	*Quercus douglasii*		9	5	Proposed Removal.
6520	Blue Oak	*Quercus douglasii*		11	12	Proposed Removal.
6521	Blue Oak	*Quercus douglasii*	2,3,3,3	11	4	Proposed Removal.
6522	Blue Oak	*Quercus douglasii*		44	21	Proposed Removal.
6523	Blue Oak	*Quercus douglasii*	3,4	7	4	Proposed Removal.
6524	Blue Oak	*Quercus douglasii*		13	9	Proposed Removal.
6525	Blue Oak	*Quercus douglasii*		8	6	Proposed Removal.
6526	Blue Oak	*Quercus douglasii*		8	6	Proposed Removal.
6527	Blue Oak	*Quercus douglasii*		10	7	Proposed Removal.
6528	Blue Oak	*Quercus douglasii*		10	7	Proposed Removal.
6529	Blue Oak	*Quercus douglasii*		6	10	Proposed Removal.
6530	Blue Oak	*Quercus douglasii*		49	36	Proposed Removal.
6531	Blue Oak	*Quercus douglasii*		16	24	***Recommend removal.***
6532	Blue Oak	*Quercus douglasii*		31	27	Proposed Removal.
6533	Blue Oak	*Quercus douglasii*		39	30	Proposed Removal.
6534	Blue Oak	*Quercus douglasii*		12	9	Proposed Removal.
6535	Blue Oak	*Quercus douglasii*		34	24	Proposed Removal.
6536	Blue Oak	*Quercus douglasii*		10	9	Proposed Removal.
6537	Blue Oak	*Quercus douglasii*		36	30	***Recommend removal.***
6538	Blue Oak	*Quercus douglasii*		30	18	Proposed Removal.
6539	Blue Oak	*Quercus douglasii*	5,5	10	6	Proposed Removal.
6540	Blue Oak	*Quercus douglasii*		10	12	Proposed Removal.
6541	Blue Oak	*Quercus douglasii*		30	30	Proposed Removal.
6542	Blue Oak	*Quercus douglasii*		36	18	Proposed Removal.
6543	Blue Oak	*Quercus douglasii*		7	6	Proposed Removal.
6544	Blue Oak	*Quercus douglasii*		29	27	Proposed Removal.
6545	Blue Oak	*Quercus douglasii*		34	29	***Recommend removal.***
6546	Blue Oak	*Quercus douglasii*		8	15	Proposed Removal.
6547	Blue Oak	*Quercus douglasii*	7,8	15	12	Proposed Removal.
6548	Blue Oak	*Quercus douglasii*		12	9	Proposed Removal.
6549	Blue Oak	*Quercus douglasii*	10,11,11	32	12	Proposed Removal.
6550	Blue Oak	*Quercus douglasii*		7	9	To remain. (impacted)
6551	Blue Oak	*Quercus douglasii*		34	21	To remain.
6552	Blue Oak	*Quercus douglasii*		27	33	To remain.
6553	Blue Oak	*Quercus douglasii*		40	21	To remain.
6554	Blue Oak	*Quercus douglasii*		7	5	To remain. (impacted)
6555	Blue Oak	*Quercus douglasii*		10	9	Proposed Removal.
6556	Blue Oak	*Quercus douglasii*		13	12	Proposed Removal.
6557	Blue Oak	*Quercus douglasii*		6	8	Proposed Removal.
6558	Blue Oak	*Quercus douglasii*		6	7	Proposed Removal.
6559	Interior Live Oak	*Quercus wislizeni*		17	21	Proposed Removal.
6560	Blue Oak	*Quercus douglasii*		15	12	Proposed Removal.
6561	Blue Oak	*Quercus douglasii*		14	18	Proposed Removal.
6562	Blue Oak	*Quercus douglasii*	5,6	11	12	Proposed Removal.
6563	Blue Oak	*Quercus douglasii*	4,7,8,11	30	18	Proposed Removal.
6564	Valley Oak	*Quercus lobata*		18	18	Proposed Removal.
6565	Blue Oak	*Quercus douglasii*		8	6	Proposed Removal.
6566	Blue Oak	*Quercus douglasii*		10	10	Proposed Removal.
6567	Blue Oak	*Quercus douglasii*		7	5	Proposed Removal.
6568	Interior Live Oak	*Quercus wislizeni*		20	15	Proposed Removal.
6569	Blue Oak	*Quercus douglasii*	7,12	19	12	To remain.
6570	Blue Oak	*Quercus douglasii*		12	16	To remain.
6571	Blue Oak	*Quercus douglasii*		9	6	To remain.
6572	Blue Oak	*Quercus douglasii*		9	6	To remain. (impacted)
6573	Blue Oak	*Quercus douglasii*		13	10	Proposed Removal.
6574	Blue Oak	*Quercus douglasii*		8	15	Proposed Removal.
6575	Coast Live Oak	*Quercus agrifolia*		11	18	Proposed Removal.
6576	Blue Oak	*Quercus douglasii*		10	8	To remain.
6577	Blue Oak	*Quercus douglasii*		7	5	To remain.
6578	Blue Oak	*Quercus douglasii*		30	30	Proposed Removal.
6579	Blue Oak	*Quercus douglasii*		21	21	Proposed Removal.
6580	Blue Oak	*Quercus douglasii*		41	33	Proposed Removal.
6581	Blue Oak	*Quercus douglasii*		36	24	Proposed Removal.
6583	Blue Oak	*Quercus douglasii*	5,7	12	8	To remain. (impacted)
6584	Coast Live Oak	*Quercus agrifolia*	7,7,8	22	9	Proposed Removal.
6585	Blue Oak	*Quercus douglasii*		7	10	To remain. (impacted)
6586	Blue Oak	*Quercus douglasii*		8	6	To remain.
6587	Blue Oak	*Quercus douglasii*		6	6	To remain.
6588	Coast Live Oak	*Quercus agrifolia*		10	9	To remain. (impacted)
6589	Blue Oak	*Quercus douglasii*		21	18	To remain. (impacted)
6590	Blue Oak	*Quercus douglasii*		22	12	To remain.
6591	Blue Oak	*Quercus douglasii*		14	15	Proposed Removal.
6592	Blue Oak	*Quercus douglasii*		7	10	Proposed Removal.
6593	Blue Oak	*Quercus douglasii*		6	9	Proposed Removal.
6594	Blue Oak	*Quercus douglasii*		7	8	Proposed Removal.
6595	Blue Oak	*Quercus douglasii*		10	9	Proposed Removal.
6596	Blue Oak	*Quercus douglasii*		41	21	Proposed Removal.
6597	Blue Oak	*Quercus douglasii*		11	9	Proposed Removal.
6598	Blue Oak	*Quercus douglasii*	4,4,6	14	8	Proposed Removal.
6599	Blue Oak	*Quercus douglasii*	7,8	15	10	To remain. (impacted)
6600	Blue Oak	*Quercus douglasii*	4,4,5	13	9	To remain. (impacted)
6601	Blue Oak	*Quercus douglasii*		9	6	To remain.
6602	Blue Oak	*Quercus douglasii*	5,5	10	9	To remain. (impacted)
6603	Blue Oak	*Quercus douglasii*	10,11	21	7	Proposed Removal.
6604	Blue Oak	*Quercus douglasii*		6	5	Proposed Removal.
6605	Blue Oak	*Quercus douglasii*		29	18	***Recommend removal.***
6606	Blue Oak	*Quercus douglasii*		11	5	Proposed Removal.
6607	Blue Oak	*Quercus douglasii*		45	36	Proposed Removal.
6608	Blue Oak	*Quercus douglasii*		21	40	***Recommend removal.***
6609	Blue Oak	*Quercus douglasii*	4,4	8	3	Proposed Removal.
6610	Blue Oak	*Quercus douglasii*		8	7	Proposed Removal.
6611	Blue Oak	*Quercus douglasii*		6	5	Proposed Removal.
6612	Blue Oak	*Quercus douglasii*		7	7	Proposed Removal.
6613	Blue Oak	*Quercus douglasii*		7	5	Proposed Removal.
6614	Blue Oak	*Quercus douglasii*		12	5	Proposed Removal.
6615	Blue Oak	*Quercus douglasii*		7	10	Proposed Removal.
6616	Blue Oak	*Quercus douglasii*	4,5	9	4	Proposed Removal.
6617	Blue Oak	*Quercus douglasii*	3,4,4,4	15	9	Proposed Removal.
6618	Blue Oak	*Quercus douglasii*		13	8	To remain. (impacted)
6619	Blue Oak	*Quercus douglasii*		21	15	Proposed Removal.
6620	Blue Oak	*Quercus douglasii*		11	10	***Recommend removal.***
6621	Blue Oak	*Quercus douglasii*		7	5	To remain. (impacted)
6622	Blue Oak	*Quercus douglasii*	6,8	14	6	To remain.
6623	Blue Oak	*Quercus douglasii*		7	6	To remain. (impacted)
6624	Blue Oak	*Quercus douglasii*		6	5	Proposed Removal.
6625	Blue Oak	*Quercus douglasii*		9	6	Proposed Removal.
6626	Blue Oak	*Quercus douglasii*		9	7	Proposed Removal.
6627	Blue Oak	*Quercus douglasii*		6	5	Proposed Removal.
6628	Blue Oak	*Quercus douglasii*		17	12	Proposed Removal.
6629	Blue Oak	*Quercus douglasii*		8	8	Proposed Removal.
6630	Blue Oak	*Quercus douglasii*		8	9	Proposed Removal.
6631	Blue Oak	*Quercus douglasii*		8	6	Proposed Removal.
6632	Blue Oak	*Quercus douglasii*		10	12	Proposed Removal.
6633	Blue Oak	*Quercus douglasii*		7	4	Proposed Removal.
6634	Blue Oak	*Quercus douglasii*		7	6	Proposed Removal.
6635	Blue Oak	*Quercus douglasii*		16	10	Proposed Removal.
6636	Blue Oak	*Quercus douglasii*		9	7	Proposed Removal.
6637	Interior Live Oak	*Quercus wislizeni*		6	5	Proposed Removal.
6638	Blue Oak	*Quercus douglasii*		10	18	Proposed Removal.
6639	Blue Oak	*Quercus douglasii*		10	15	Proposed Removal.
6640	Blue Oak	*Quercus douglasii*		6	4	To remain.
6641	Blue Oak	*Quercus douglasii*	5,7	12	8	To remain.
6642	Blue Oak	*Quercus douglasii*		21	12	To remain.
6643	Blue Oak	*Quercus douglasii*		15	9	To remain.
6644	Blue Oak	*Quercus douglasii*		9	8	To remain.
6645	Blue Oak	*Quercus douglasii*		8	10	To remain.
6646	Blue Oak	*Quercus douglasii*		9	6	To remain.
6647	Blue Oak	*Quercus douglasii*	8,10	18	12	To remain.
6648	Blue Oak	*Quercus douglasii*		10	12	To remain.
6649	Blue Oak	*Quercus douglasii*		7	5	To remain.
6650	Blue Oak	*Quercus douglasii*		10	9	To remain.
6651	Blue Oak	*Quercus douglasii*		10	7	To remain.
6652	Blue Oak	*Quercus douglasii*		6	4	To remain. (impacted)
6653	Blue Oak	*Quercus douglasii*		15	12	To remain.
6654	Blue Oak	*Quercus douglasii*		10	9	To remain.
6655	Blue Oak	*Quercus douglasii*		6	4	To remain.
6656	Blue Oak	*Quercus douglasii*		8	5	To remain.
6657	Blue Oak	*Quercus douglasii*	4,5	9	4	To remain.
6658	Blue Oak	*Quercus douglasii*	4,4	8	4	To remain.
6659	Coast Live Oak	*Quercus agrifolia*	3,6,7	16	10	Proposed Removal.
6660	Blue Oak	*Quercus douglasii*		14	18	To remain.
6661	Blue Oak	*Quercus douglasii*		13	15	To remain.
6662	Blue Oak	*Quercus douglasii*		11	12	To remain.
6663	Blue Oak	*Quercus douglasii*		13	12	To remain.
6664	Blue Oak	*Quercus douglasii*		25	21	To remain.
6665	Blue Oak	*Quercus douglasii*	8,10,12,12	42	24	***Recommend removal.***
6666	Blue Oak	*Quercus douglasii*	8,11	19	18	To remain.
6667	Blue Oak	*Quercus douglasii*		9	7	To remain.
6668	Blue Oak	*Quercus douglasii*		12	12	To remain.
6669	Blue Oak	*Quercus douglasii*		17	15	To remain.
6670	Coast Live Oak	*Quercus agrifolia*		13	10	***Recommend removal.***
6671	Blue Oak	*Quercus douglasii*		13	12	To remain.
6672	Blue Oak	*Quercus douglasii*		15	12	To remain.
6673	Blue Oak	*Quercus douglasii*		33	21	To remain.
6674	Blue Oak	*Quercus douglasii*	4,5	9	7	To remain.
6675	Blue Oak	*Quercus douglasii*	20,30	50	30	To remain.
6676	Blue Oak	*Quercus douglasii*		14	18	To remain.
6677	Blue Oak	*Quercus douglasii*		20	21	To remain.
6678	Blue Oak	*Quercus douglasii*		28	36	To remain.
6679	Blue Oak	*Quercus douglasii*	9,11	20	9	To remain.
6680	Blue Oak	*Quercus douglasii*	9,10	19	10	To remain.
6681	Blue Oak	*Quercus douglasii*	4,4,4,5	17	7	To remain.
6682	Blue Oak	*Quercus douglasii*		11	15	To remain.
6683	Blue Oak	*Quercus douglasii*		11	12	To remain.
6684	Blue Oak	*Quercus douglasii*		15	12	To remain.
6685	Blue Oak	*Quercus douglasii*		11	9	To remain.
6686	Blue Oak	*Quercus douglasii*		7	12	To remain.
6687	Blue Oak	*Quercus douglasii*	7,9	16	7	To remain.
6688	Blue Oak	*Quercus douglasii*		9	7	To remain.
6689	Blue Oak	*Quercus douglasii*		14	10	To remain.
6690	Blue Oak	*Quercus douglasii*		8	6	To remain.
6691	Blue Oak	*Quercus douglasii*		12	16	To remain.
6692	Blue Oak	*Quercus douglasii*		12	7	To remain.
6693	Blue Oak	*Quercus douglasii*		14	12	To remain.
6694	Blue Oak	*Quercus douglasii*		19	21	To remain.
6695	Blue Oak	*Quercus douglasii*		6	5	To remain.
6696	Blue Oak	*Quercus douglasii*		10	8	To remain.
6697	Blue Oak	*Quercus douglasii*		17	18	To remain.
6698	Blue Oak	*Quercus douglasii*		8	9	To remain.
6699	Blue Oak	*Quercus douglasii*		14	18	To remain.
6700	Blue Oak	*Quercus douglasii*		12	15	To remain.
6701	Blue Oak	*Quercus douglasii*		15	21	To remain. (impacted)
6702	Blue Oak	*Quercus douglasii*		7	6	Proposed Removal.
6703	Blue Oak	*Quercus douglasii*	3,4	7	7	Proposed Removal.
6704	Blue Oak	*Quercus douglasii*	16,17	33	21	Proposed Removal.
6705	Blue Oak	*Quercus douglasii*	3,4	7	5	Proposed Removal.
6706	Blue Oak	*Quercus douglasii*	4,4	8	6	Proposed Removal.
6707	Blue Oak	*Quercus douglasii*		12	9	Proposed Removal.
6708	Blue Oak	*Quercus douglasii*		13	10	Proposed Removal.
6709	Blue Oak	*Quercus douglasii*		14	16	Proposed Removal.
6710	Blue Oak	*Quercus douglasii*		10	10	Proposed Removal.
6711	Blue Oak	*Quercus douglasii*	6,9	15	9	To remain. (impacted)
6712	Blue Oak	*Quercus douglasii*		13	10	To remain. (impacted)
6713	Blue Oak	*Quercus douglasii*		15	15	To remain. (impacted)
6714	Blue Oak	*Quercus douglasii*		17	21	To remain. (impacted)
6715	Blue Oak	*Quercus douglasii*		17	18	To remain. (impacted)
6716	Blue Oak	*Quercus douglasii*		11	10	To remain.
6717	Blue Oak	*Quercus douglasii*		11	10	To remain.
6718	Blue Oak	*Quercus douglasii*		6	12	To remain.
6719	Blue Oak	*Quercus douglasii*		10	15	To remain.
6720	Blue Oak	*Quercus douglasii*		10	20	To remain.
6721	Blue Oak	*Quercus douglasii*		11	18	To remain.
6722	Blue Oak	*Quercus douglasii*		7	12	To remain.
6723	Blue Oak	*Quercus douglasii*		10	9	To remain.
6724	Interior Live Oak	*Quercus wislizeni*	12,14	26	12	To remain.
6725	Blue Oak	*Quercus douglasii*		7	10	To remain.
6726	Blue Oak	*Quercus douglasii*		11	9	To remain.
6727	Blue Oak	*Quercus douglasii*	5,5	10	9	To remain.
6728	Blue Oak	*Quercus douglasii*		9	12	To remain.
6729	Blue Oak	*Quercus douglasii*		7	6	To remain.
6730	Blue Oak	*Quercus douglasii*	5,10	15	12	To remain.
6731	Blue Oak	*Quercus douglasii*		11	9	To remain.
6732	Blue Oak	*Quercus douglasii*		10	18	To remain.
6733	Interior Live Oak	*Quercus wislizeni*	2,3,5	10	7	To remain.
6734	Blue Oak	*Quercus douglasii*		14	21	To remain.
6735	Blue Oak	*Quercus douglasii*		12	15	To remain.
6736	Blue Oak	*Quercus douglasii*		15	15	Proposed Removal.
6737	Blue Oak	*Quercus douglasii*		6	6	Proposed Removal.
6738	Blue Oak	*Quercus douglasii*		18	18	Proposed Removal.
6739	Blue Oak	*Quercus douglasii*		20	18	Proposed Removal.
6740	Interior Live Oak	*Quercus wislizeni*		12	7	Proposed Removal.
6741	Blue Oak	*Quercus douglasii*		7	5	Proposed Removal.
6742	Blue Oak	*Quercus douglasii*		7	7	Proposed Removal.
6743	Blue Oak	*Quercus douglasii*		12	9	To remain. (impacted)
6744	Blue Oak	*Quercus douglasii*		8	9	To remain.
6745	Blue Oak	*Quercus douglasii*		11	15	To remain.
6746	Blue Oak	*Quercus douglasii*		6	4	To remain.
6747	Blue Oak	*Quercus douglasii*	7,10	17	12	To remain.
6748	Blue Oak	*Quercus douglasii*		17	18	To remain. (impacted)
6749	Blue Oak	*Quercus douglasii*		36	21	Proposed Removal.
6750	Blue Oak	*Quercus douglasii*		13	5	Proposed Removal.
6751	Blue Oak	*Quercus douglasii*		6	3	To remain.
6752	Blue Oak	*Quercus douglasii*		16	15	To remain.
6753	Blue Oak	*Quercus douglasii*		12	10	Proposed Removal.
6754	Blue Oak	*Quercus douglasii*		13	16	Proposed Removal.
6755	Blue Oak	*Quercus douglasii*		18	20	Proposed Removal.
6756	Blue Oak	*Quercus douglasii*		18	15	Proposed Removal.
6757	Blue Oak	*Quercus douglasii*		10	21	***Recommend removal.***
6758	Interior Live Oak	*Quercus wislizeni*		7	18	To remain.
6759	Blue Oak	*Quercus douglasii*		12	16	To remain.
6760	Blue Oak	*Quercus douglasii*		13	15	Proposed Removal.
6761	Blue Oak	*Quercus douglasii*		12	17	Proposed Removal.
6762	Blue Oak	*Quercus douglasii*		17	21	Proposed Removal.
6763	Blue Oak	*Quercus douglasii*		13	9	To remain.
6764	Blue Oak	*Quercus douglasii*		7	6	Proposed Removal.
6765	Blue Oak	*Quercus douglasii*		8	5	Proposed Removal.
6766	Blue Oak	*Quercus douglasii*		10	12	To remain.
6768	Blue Oak	*Quercus douglasii*		7	7	To remain.
6769	Blue Oak	*Quercus douglasii*		7	6	To remain.
6770	Blue Oak	*Quercus douglasii*		7	9	To remain.
6771	Blue Oak	*Quercus douglasii*		27	24	Proposed Removal.
6772	Blue Oak	*Quercus douglasii*		26	24	To remain. (impacted)
6773	Blue Oak	*Quercus douglasii*		6	5	Proposed Removal.
6774	Blue Oak	*Quercus douglasii*		27	24	To remain. (impacted)
6775	Blue Oak	*Quercus douglasii*		27	21	Proposed Removal.
6776	Blue Oak	*Quercus douglasii*		36	33	Proposed Removal.
6777	Blue Oak	*Quercus douglasii*		36	33	Proposed Removal.
6778	Blue Oak	*Quercus douglasii*		28	21	To remain. (impacted)
6779	Blue Oak	*Quercus douglasii*		7	6	Proposed Removal.
6780	Blue Oak	*Quercus douglasii*		25	18	To remain.
6781	Blue Oak	*Quercus douglasii*		24	21	To remain. (impacted)
6782	Blue Oak	*Quercus douglasii*		15	22	To remain. (impacted)
6783	Blue Oak	*Quercus douglasii*		15	18	To remain. (impacted)
6784	Blue Oak	*Quercus douglasii*		23	22	To remain. (impacted)
6785	Blue Oak	*Quercus douglasii*		34	21	To remain.
6786	Blue Oak	*Quercus douglasii*		32	40	To remain. (impacted)
6787	Blue Oak	*Quercus douglasii*		7	15	Proposed Removal.
6788	Blue Oak	*Quercus douglasii*		32	24	Proposed Removal.
6789	Blue Oak	*Quercus douglasii*		23	21	Proposed Removal.
6790	Blue Oak	*Quercus douglasii*		8	12	Proposed Removal.
6791	Blue Oak	*Quercus douglasii*		7	18	Proposed Removal.
6792	Blue Oak	*Quercus douglasii*		11	15	Proposed Removal.
6793	Blue Oak	*Quercus douglasii*		13	16	Proposed Removal.
6794	Blue Oak	*Quercus douglasii*		11	12	Proposed Removal.
6795	Blue Oak	*Quercus douglasii*	4,6	10	5	Proposed Removal.
6796	Blue Oak	*Quercus douglasii*	6,7	13	7	Proposed Removal.
6797	Blue Oak	*Quercus douglasii*		8	10	Proposed Removal.
6798	Blue Oak	*Quercus douglasii*		12	15	Proposed Removal.
6799	Blue Oak	*Quercus douglasii*		7	9	Proposed Removal.
6800	Blue Oak	*Quercus douglasii*		11	9	Proposed Removal.
6801	Blue Oak	*Quercus douglasii*		13	10	Proposed Removal.
6802	Blue Oak	*Quercus douglasii*		14	18	Proposed Removal.
6803	Blue Oak	*Quercus douglasii*		7	5	Proposed Removal.
6804	Coast Live Oak	*Quercus agrifolia*		13	12	Proposed Removal.
6805	Blue Oak	*Quercus douglasii*		7	9	Proposed Removal.
6806	Interior Live Oak	*Quercus wislizeni*		7	15	To remain. (impacted)
6807	Blue Oak	*Quercus douglasii*	2,4	6	4	Proposed Removal.
6808	Blue Oak	*Quercus douglasii*	2,2,3	7	4	Proposed Removal.
6809	Blue Oak	*Quercus douglasii*		34	36	To remain. (impacted)
6810	Blue Oak	*Quercus douglasii*		37	36	Proposed Removal.
6811	Blue Oak	*Quercus douglasii*		44	30	***Recommend removal.***
6812	Blue Oak	*Quercus douglasii*	14,15	29	18	To remain.
6813	Blue Oak	*Quercus douglasii*		7	6	To remain.
6814	Blue Oak	*Quercus douglasii*		8	5	To remain.
6815	Blue Oak	*Quercus douglasii*	9,11	20	10	To remain.
6816	Blue Oak	*Quercus douglasii*		10	16	To remain.
6817	Interior Live Oak	*Quercus wislizeni*	5,10	15	15	To remain.
6818	Interior Live Oak	*Quercus wislizeni*		17	12	To remain.
6819	Interior Live Oak	*Quercus wislizeni*		10	15	To remain.
6820	Blue Oak	*Quercus douglasii*		10	10	To remain.
6821	Blue Oak	*Quercus douglasii*		7	15	To remain.
6822	Interior Live Oak	*Quercus wislizeni*		11	18	To remain.
6823	Interior Live Oak	*Quercus wislizeni*		10	15	To remain.
6824	Blue Oak	*Quercus douglasii*		8	4	Proposed Removal.

Tree Disposition Summary	Number of Trees	Aggregate(inches)
Total Inventoried Trees	323	4905
Trees to remain	125	1723
Arborist recommended tree removals	10	256
Proposed Impacted Trees (To Remain)	30	503
Proposed Tree Removals	158	2423
Total Tree Impacts (Partial and Total Impact)	**188**	**2926**

N

0 40 80 160

SCALE: 1"=80'

ATTACHMENT A
TREE PERMIT

SIERRA VIEW

Roseville, CA

August 3, 2021

Sheet 1 of 1

Special-Status Plant Survey Report

SVLC 23 Property

Placer County, California

August 2020

MADRONE ECOLOGICAL CONSULTING

Prepared for:
SVLC 23, LLC
c/o Sierra View Land Company
105 Alta Vista Drive
Roseville, CA 95678

Recommended Citation:
Madrone Ecological Consulting, LLC (Madrone). 2020. *Draft Special-Status Plant Survey Report for SVLC 23 Property*. Prepared for SVLC 23, LLC. Published on 18 August 2020.

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Special-Status Plant Survey Report
SLVC 23 Property

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1.0 INTRODUCTION

This report presents the results of a special-status plant survey conducted for the approximately 23-acre SVLC 23 Property (Study Area). The Study Area is located north of Shasta Street and south of Diamond Oaks Road, just east of the Sierra View Country Club in the City of Roseville, Placer County, California. The Study Area falls within Section 26, 34, and 35, Township 11 North, Range 6 East (MDB&M) of the "Roseville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2018) (**Figure 1**).

2.0 METHODOLOGY

Madrone Ecological Consulting, LLC (Madrone) Senior Biologist Bonnie Peterson conducted special-status plant surveys of the Study Area on 15 and 16 April and 15 and 20 May 2020 in accordance with the U.S. Fish and Wildlife Service's *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* (USFWS 1996), California Department of Fish and Wildlife's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009), and the *CNPS Botanical Survey Guidelines* (CNPS 2001).

A list of special-status plant species with potential to occur within the Study Area was developed by reviewing the following literature, and then refining the list based on habitats present within the Study Area:

- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2020) query of CRPR Lists 1A, 1B, 2A, and 2B within the "Roseville, California" USGS topo quadrangle, and the eight surrounding quadrangles; and
- the California Natural Diversity Database occurrences of special-status plant species within 5 miles of the Study Area (CNDDB 2020) (**Figure 2**).

The target species for this survey were:

- Big-scale balsamroot (*Balsamorhiza macrolepis*)
- Dwarf downingia (*Downingia pusilla*)
- Boggs Lake hedge-hyssop (*Gratiola heterosepala*)
- Ahart's dwarf rush (*Juncus leiospermus var. ahartii*)
- Red Bluff dwarf rush (*Juncus leiospermus var. leiospermus*)
- Legenere (*Legenere limosa*)
- pincushion navarretia (*Navarretia myersii ssp. myersii*)
- Sacramento Orcutt grass (*Orcuttia viscida*)
- Sanford's arrowhead (*Sagittaria sanfordii*)

The Study Area does not contain suitable habitat for Hispid bird's-beak (*Chloropyron molle ssp. hispidum*).

Meandering pedestrian surveys were conducted throughout all portions of the Study Area, and focused surveys were conducted in suitable habitats for each species. The surveys were floristic in nature, which

means that all plant species observed on-site were identified to the taxonomic level necessary to determine rarity. Thus, if a special-status plant was present but not on the target list, it would have been detected and documented. Plant taxonomy was based on the nomenclature in the *Jepson eFlora* (Jepson Flora Project 2020). Vegetation communities were classified according to the *Manual of California Vegetation, Second Edition* (Sawyer et al. 2009). Qualifications for the botanist that conducted the surveys are included in **Attachment A**, a list of reference populations of target plants visited is included in **Attachment B**, and a comprehensive list of all plant species observed during surveys of the Study Area is included in **Attachment C**.

3.0 GENERAL SITE CONDITIONS AND HABITAT

The Study Area is primarily non-native annual grassland interspersed with oak woodlands, drainages, riparian and seasonal wetlands. The Study Area is bounded on the north by Diamond Oak Road and to the south by Shasta Street. The abutting area east of the Study Area is a residential development, and to the west is a community of townhomes and the Sierra View Country Club and Golf Course.

The Study Area ranges from approximately 160-175 feet above mean seal level (AMSL), with rolling terrain sloping towards the north and south. A transmission line corridor is located within the northern portion of the Study Area, and another bisects the center of the Study Area. An unnamed intermittent tributary to South Branch Pleasant Grove Creek flows to the northwest through the Study Area (SFEI 2020), and a drainage ditch from south to north towards the intermittent tributary.

The Study Area includes a central drainage ditch that flows from south to north through the site into an intermittent tributary to South Branch Pleasant Grove Creek in the northern portion of the site. The intermittent tributary flows from east to west through the Study Area. In addition, there are a number of seasonal wetland and vernal pool features scattered throughout. The Study Area is located in the Upper Coon-Upper Auburn Watershed (HUC 18020161) (USGS 2020). Mean annual precipitation for the Study Area is approximately 20.27 inches per year, and the site received approximately 55% of average rainfall in the 2019-2020 water year (NOAA 2020)

The principal vegetation community within the Study Area is non-native annual grassland. This vegetation community is fairly sparse in the southern portion of the site, with a mix of non-native annual grasses including soft brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), perennial ryegrass (*Festuca perennis*), medusahead grass (*Elymus caput-medusa*), and wild oats (*Avena fatua*), and forbs such as Spanish lotus (*Acmispon americanus var. americanus*), Fitch's spikeweed (*Centromadia fitchii*), blue dicks (*Dichelostemma capitatum*), filaree (*Erodium botrys*), miniature lupine (*Lupines bicolor*), hairy hawkbit (*Leontodon saxatilis*), vetch (*Vicia* spp.), and English plantain (*Plantago lanceolata*). In the northern portion of the site, the annual grasslands are much denser in vegetation with a higher percentage of grass species and fewer forbs. Interspersed throughout the grassland are a number of mature oaks, primarily blue oaks (*Quercus douglasii*), with scattered Valley oak (*Quercus lobata*) and live oak (*Quercus wislizeni*). A number of native and non-native trees are located along a drainage ditch and intermittent tributary including Chinese tallowtree

(*Triadica sebifera*), southern catalpa (*Catalpa bignonioides*), honey locust (*Gleditsia triacanthos*), and willows (*Salix spp.*).

3.1 Terrestrial Plant Communities

3.1.1 Non-Native Annual Grasslands

The principal vegetation community within the Study Area is non-native annual grassland. This vegetation community is fairly sparse in the southern portion of the site, with a mix of non-native annual grasses including soft brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), perennial ryegrass (*Festuca perennis*), medusahead grass (*Elymus caput-medusa*), and wild oats (*Avena fatua*), and forbs such as Spanish lotus (*Acmispon americanus var. americanus*), Fitch's spikeweed (*Centromadia fitchii*), blue dicks (*Dichelostemma capitatum*), filaree (*Erodium botrys*), miniature lupine (*Lupines bicolor*), hairy hawkbit (*Leontodon saxatilis*), vetch (*Vicia* spp.), and English plantain (*Plantago lanceolata*). In the northern portion of the site, the annual grasslands are much denser in vegetation with a higher percentage of grass species and fewer forbs.

3.1.2 Oak Woodland

Interspersed throughout the grassland are a number of mature oaks, primarily blue oaks (*Quercus douglasii*), with scattered Valley oak (*Quercus lobata*) and live oak (*Quercus wislizeni*). These oak woodlands are dominated by interior live oak (*Quercus wislizenii*), blue oak (*Q. douglasii*), and Valley oak (*Q. lobata*). Common shrubs in the riparian understory of the intermittent tributary include Himalayan blackberry (*Rubus armeniacus*), wild rose (*Rosa californica*), and narrow-leaf willow (*Salix exigua*).). Where present, the herbaceous understory is largely similar to the non-native annual grassland described above.

3.2 Aquatic Resources

The following aquatic resources are present on site as shown on **Figure 3**.

3.2.1 Seasonal Wetlands

The Study Area contains 11 seasonal wetlands concentrated along the southern and northern boundaries. Seasonal wetlands are shallow ephemeral wetlands area characterized by seasonal ponding, Seasonal wetlands within the Study Area are typically dominated by opportunistic facultative wet to facultative grasses and forbs such as Mediterranean barley (*Hordeum marinum*), Italian ryegrass, rabbitfoot grass (*Polypogon monspellensis*), Bermuda grass (*Cynodon dactylon*), hyssop loosestrife (*Lythrum hyssopifolium*), and curly dock (*Rumex crispus*).

3.2.2 Seasonal Wetland Swale

The seasonal wetland swale (SWS-1) within the study area flows from south the north and is dominated entirely by Italian ryegrass. This feature lacks evidence of flow or an ordinary highwater mark and did not

contain water during the 2019-2020 rainy season, but was saturated at the surface during the April survey. The seasonal wetland swale is connected to the intermittent tributary.

3.2.3 Vernal Pools

The Study Area contains three vernal pools towards the center of the property. Vernal pools are shallow ephemeral wetlands characterized by seasonal ponding, and hydrologically similar to seasonal wetlands; however, vernal pools are typically underlain by an imperious substrate resulting in unique flora. The vernal pools in the Study Area were given this designation based on a dominance of vernal pool plant species, including slender pool popcorn flower (*Plagiobothrys stipitatus var. micranthus*), dwarf woolyheads (*Psilocarphus brevissimus var. brevissimus*), great valley coyote-thistle (*Eryngium castrense*), creeping spikerush (*Eleocharis macrostachya*) and annual hairgrass (*Deschampsia danthonioides*) and a lower overall vegetative cover.

3.2.4 Drainage Ditch

An earthen drainage ditch conveys irrigation run-off from developments south and east of the Study Area, north to the intermittent drainage. This feature is characterized by steep slopes, and is well vegetated with dense wetland obligates including water plantain (*Alisma lanceolatum*), broad-leaved cattail (*Triadica sebifera*), dotted smartweed (*Persicaria punctata*) and tall nutsedge (*Cyperus eragrostis*) with scattered native and non-native trees including Chinese catalpa, chinese tallow, willows, and Callery pear (*Pyrus calleryan*).

3.2.5 Intermittent Drainage

An intermittent drainage and adjacent riparian wetland are located in the northern portion of the Study Area. This drainage flows from east to west through the Study Area and the two segments connected via a culvert under a dirt maintenance road. The City of Roseville storm drainage system outfalls into the northern portion of IDR-2 in the northeast corner of the Study Area south of Diamond Oaks Road. Portions of this intermittent drainage lack an ordinary high water mark, or clear drainage patterns, and is characterized as riparian wetland with a mix of Santa Barbara sedge (*Carex Barbara*), dallisgrass (*Paspalum dilitatum*), dotted smartweed, tall nutsedge, Italian rygrass, dense Himalayan blackberry thickets, wild rose, and willows.

3.3 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2020), two soil mapping units occurs within the Study Area (**Figure 4**): (141) Cometa-Fiddyment complex, 1 to 5% slopes and (142) Cometa-Ramona sandy loams, 1 to 5% slopes. While neither of these soil types are considered hydric, they contain minor hydric components in Alamo depressions and xerofluvent drainageways. Neither of these soil map units have been identified as containing special soils, such as serpentine or saline-alkali inclusions.

4.0 SURVEY RESULTS

4.1 Big-Scale Balsamroot

Big-scale balsamroot is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It is a perennial herbaceous species that occurs in chaparral, cismontane woodland and valley and foothill grasslands between 295 and 4,600 feet (CNPS 2020). Big-scale balsamroot blooms from March through June and may be found on serpentine soils, though it is known to grow on other soil types as well (CNPS 2020).

The non-native annual grasslands and oak woodlands throughout the Study Area provide suitable habitat for this species. This species was not observed during the 2020 special-status plant survey of the Study Area.

4.2 Dwarf Downingia

Dwarf downingia (*Downingia pusilla*) is not federally or state listed, but it is classified as a CRPR List 2B.2 plant. Dwarf downingia grows in mesic valley and foothill grassland and in vernal pools between sea level and approximately 1,460 feet (CNPS 2020). This annual herb blooms from March to May (CNPS 2020).

Seasonal wetlands and vernal pools in the southwestern portion of the Study Area represent marginal habitat for this species. This species was not observed during the 2020 special-status plant survey of the Study Area.

4.3 Bogg's Lake Hedge-Hyssop

Bogg's Lake hedge-hyssop (*Gratiola heterosepala*) is not federally listed, but it is a California endangered species and a CRPR List 1B.2 plant. Bogg's Lake hedge-hyssop grows in vernal pools and around the perimeter of lakes and ponds between 30 and 7,800 feet (CNPS 2020). This small annual herb favors clay soils, and blooms from April to August (CNPS 2020).

Seasonal wetlands and vernal pools in the southwestern portion of the Study Area represents marginal habitat for this species. This species was not observed during the 2020 special-status plant survey of the Study Area.

4.4 Ahart's Dwarf Rush

Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. Ahart's dwarf rush grows along the edges of seasonal wet habitats such as vernal pools and swales within valley and foothill grasslands between elevations of approximately 100 feet and 750 feet (CNPS 2020). This annual herb blooms from March to May (CNPS 2020).

Seasonal wetlands and vernal pools within the Study Area represents marginally suitable habitat for this species. This species was not observed during the 2020 special-status plant survey of the Study Area.

4.5 Red Bluff Dwarf Rush

Red Bluff dwarf rush (*Juncus leiospermus var. leiospermus*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. Red Bluff dwarf rush occurs in vernally mesic areas in chaparral, cismontane woodland, meadows, seeps, valley and foothill grasslands, and vernal pools (CNPS 2002). This is an herbaceous annual that blooms from March through June and is known to occur at elevations ranging from 114 to 4001 feet above MSL (CNPS 2020).

Red Bluff dwarf rush is endemic to California; the current range of this species includes Butte, Placer, Shasta, and Tehama counties (CNPS 2020). However, one documented occurrence is located within the City of Roseville The population was mapped approximately 0.5 miles north of Scow Road Industrial Boulevard, Roseville and is presumed to be extant; however, according the notes on this occurrence "Witham considers this site to be erroneous" (CDFW 2020).

Seasonal wetlands and vernal pools within the Study Area represents marginally suitable habitat for this species. This species was not observed during the 2020 special-status plant survey of the Study Area.

4.6 Legenere

Legenere (*Legenere limosa*) is not federally or state listed, but it is classified as a CRPR List 1B.1 species. This annual herb is primarily associated with seasonal wetlands with a long hydroperiod, such as vernal pools and marsh and pond edges (CNPS 2020). Legenere occurs at elevations between sea level and 2,600 feet, and blooms from April to June (CNPS 2020).

Seasonal wetlands and vernal pools within the Study Area represents marginally suitable habitat for this species. This species was not observed during the 2020 special-status plant survey of the Study Area.

4.7 Pincushion Navarretia

Pincushion navarretia (*Navarretia myersii* ssp. *myersii*) is not federally or state listed, but it is classified as a CRPR List 1B.1 plant. This species is found in vernal pools and other mesic areas in annual grasslands on clay soils (CNPS 2020). Pincushion navarretia is found between approximately 65 and 1,100 feet and blooms in April and May (CNPS 2020).

Seasonal wetlands and vernal pools within the Study Area represent marginally suitable habitat for this species. This species was not observed during the 2020 special-status plant survey of the Study Area.

4.8 Sacramento Orcutt Grass

Sacramento Orcutt grass (*Orcuttia viscida*) is listed as endangered pursuant to both the federal and California Endangered Species Acts, and is classified as a CRPR List 1B.1 plant. Sacramento Orcutt grass is endemic to the southeastern Sacramento Valley (USFWS 2003), with all known occurrences restricted to Sacramento County. Sacramento Orcutt grass is an annual herb that occurs in vernal pools at elevations ranging from 100 to 330ft above sea level, and blooms from April through July (CNPS 2020).

Seasonal wetlands and vernal pools within the Study Area represents marginally suitable habitat for this species. This species was not observed during the 2020 special-status plant survey of the Study Area.

4.9 Sanford's Arrowhead

Sanford's arrowhead is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It generally occurs in shallow freshwater habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow moving water into early summer. This perennial rhizomatous species blooms from May to October, and occurs from sea level to approximately 2,000 feet (CNPS 2020).

The intermittent drainage and drainage ditch within the Study Area provide suitable habitat for this species. This species was not observed during the 2020 special-status plant survey of the Study Area.

5.0 CONCLUSION

No special-status plant species were observed during the 2020 protocol-level special-status plant survey of the SCLV 23 Property.

6.0 REFERENCES

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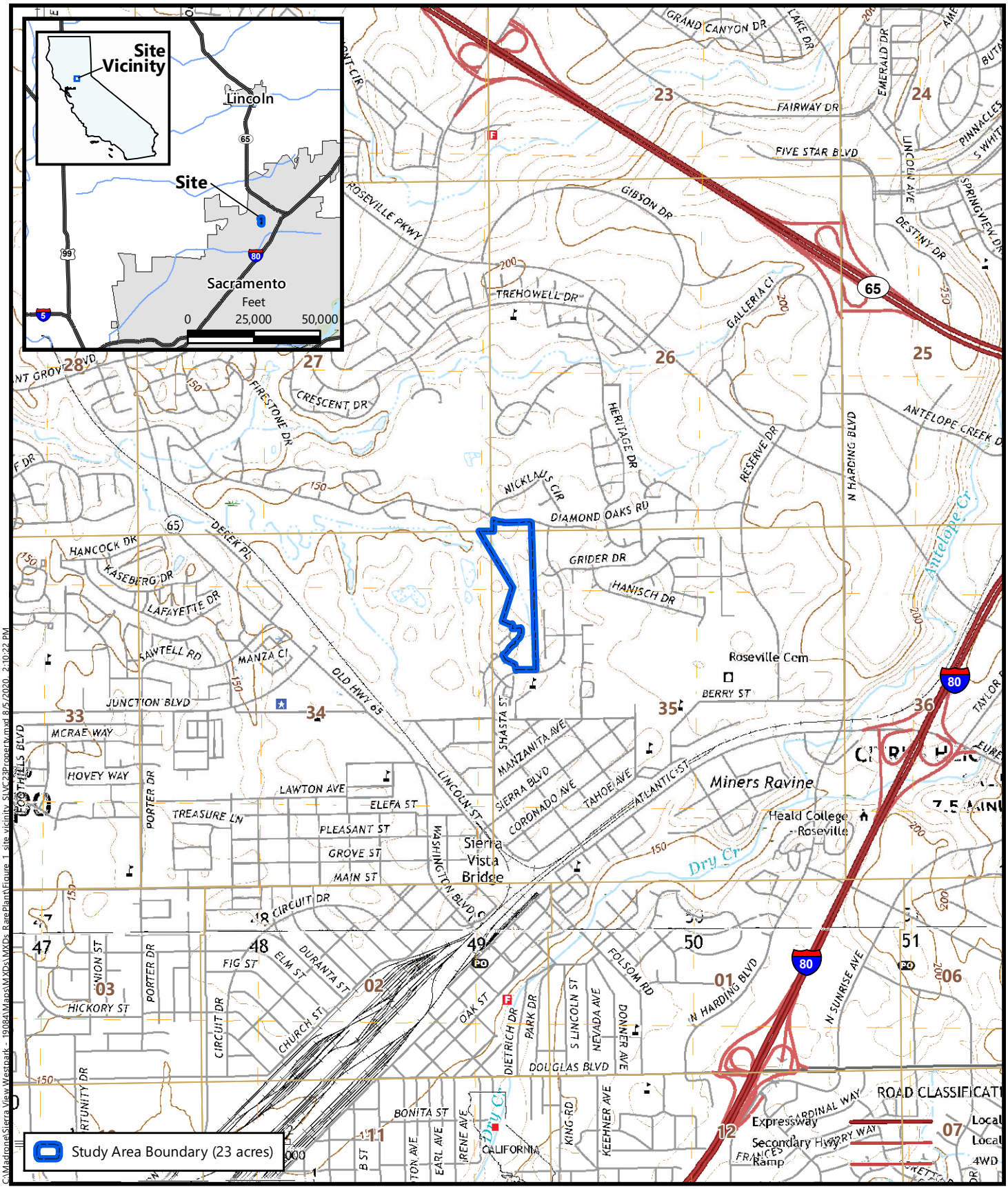
Figures

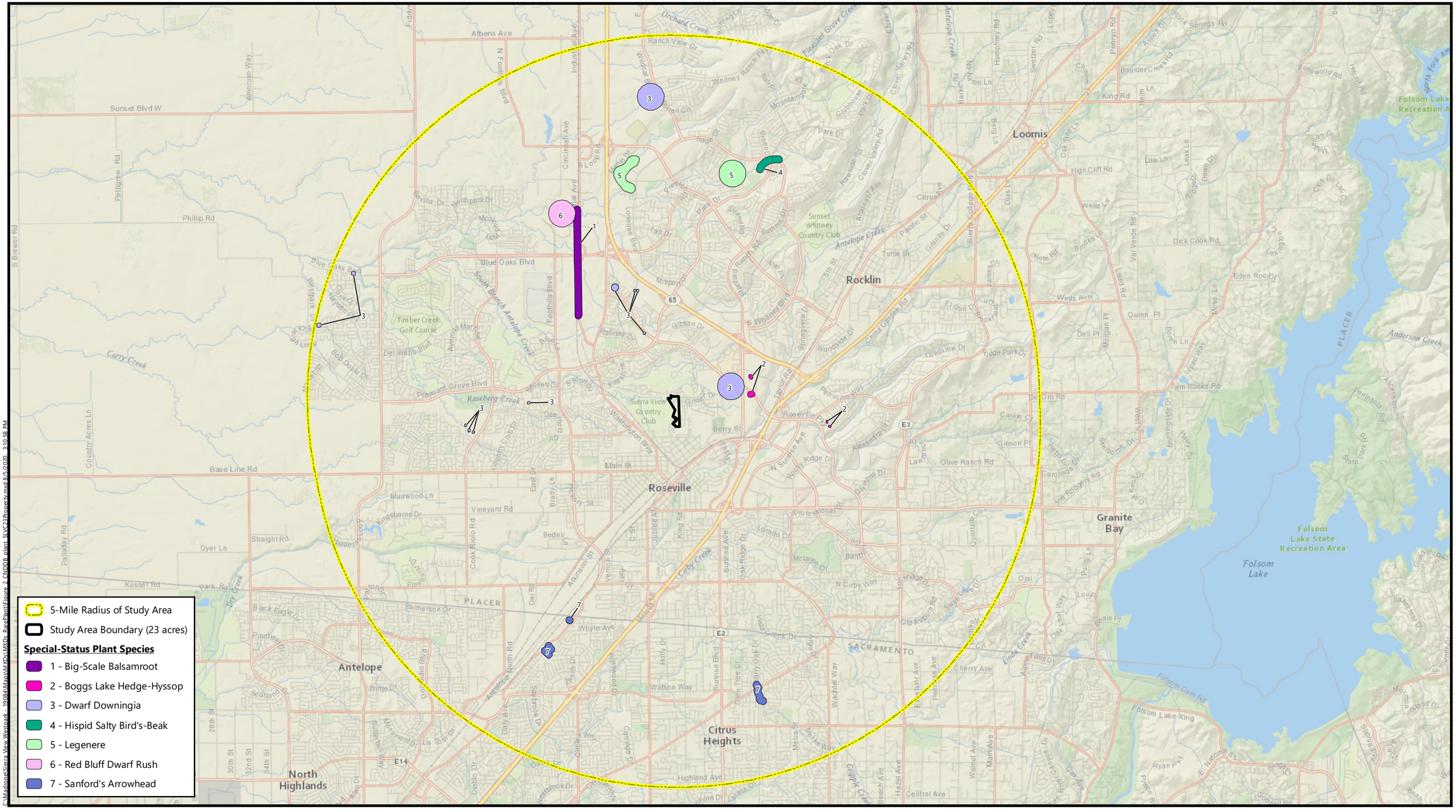


Source: United States Geologic Survey, 2018
"Roseville, California" 7.5-Minute Topographic Quadrangle
Sections 26, 34, and 35, Township 11 North, Range 6 East
Longitude -121.283085, Latitude 38.764232

Figure 1
Site and Vicinity

SLVC 23 Property
Roseville, Placer County, California

MADRONE ECOLOGICAL CONSULTING



Source: *California Department of Fish and Wildlife*, August 2020.
Basemap Source: *National Geographic* and *ESRI*

Figure 2
California Natural Diversity Database Occurrences of Special-Status Plant Species
SLVC 23 Property
Placer County, California

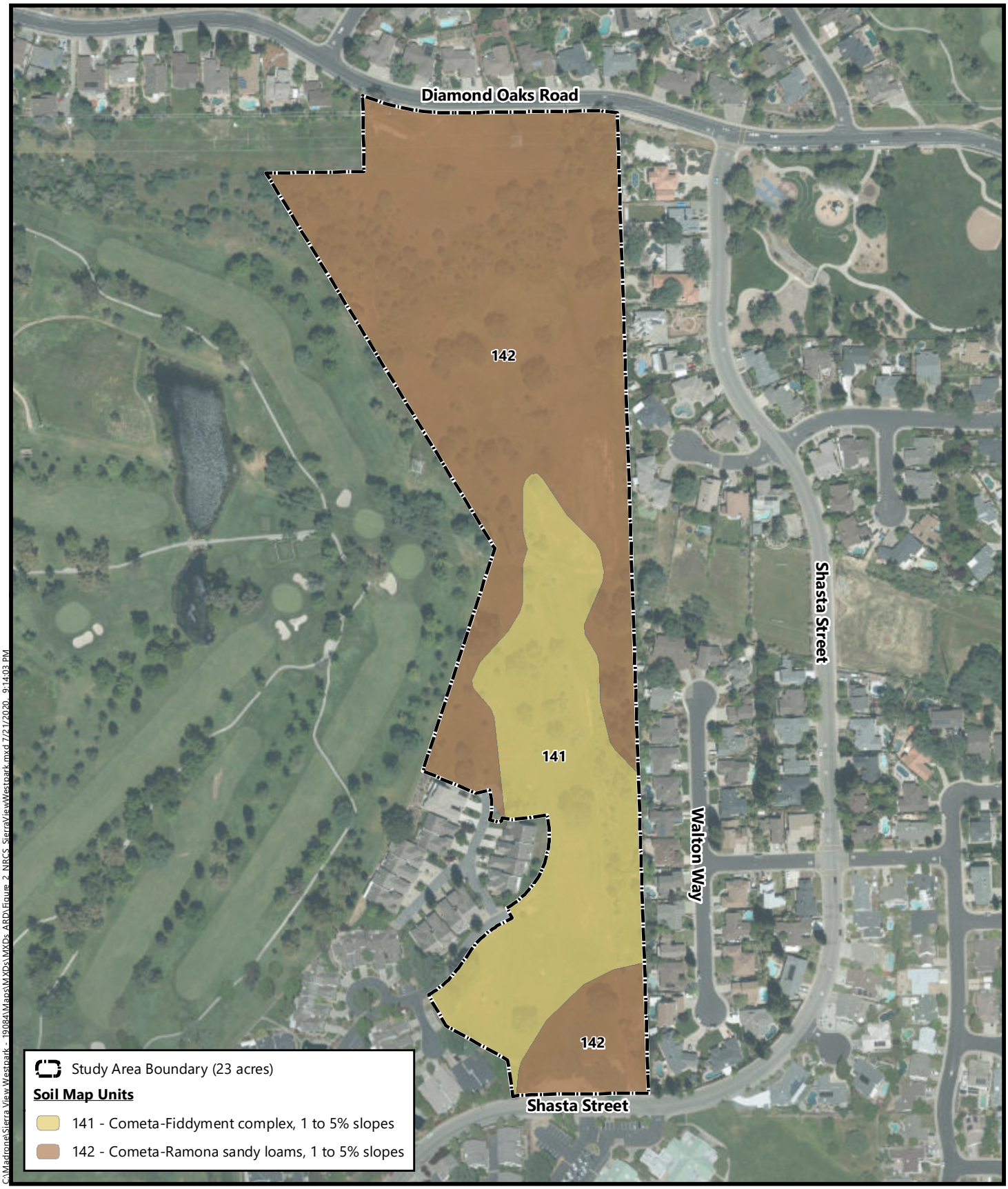
MADRONE ECOLOGICAL CONSULTING

Figure 3
Aquatic Resources

Sierra View Westpark
Roseville, Placer County, California

Aerial Base: City of Roseville, 22 April 2019

MADRONE ECOLOGICAL CONSULTING



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Soil Survey Source: *USDA, Soil Conservation Service. Soil Survey Geographic (SSURGO) database for Placer County, California, Western Part*
Aerial Base: City of Roseville, 22 April 2019

Figure 4
Natural Resources Conservation Service Soils

Sierra View Westpark
Roseville, Placer County, California

MADRONE ECOLOGICAL CONSULTING

Attachments

Attachment A: Botanist Qualifications

Attachment B: Target Plant Species Reference Population Information

Attachment C: Plant Species Observed within the SVLC23 Study Area

Attachment A

Botanist Qualifications

BONNIE PETERSON

Ms. Peterson is a biologist and wetland/water quality regulatory specialist with experience obtaining required permits for a broad range of projects throughout California. She has managed regulatory compliance and implemented permitting strategies for compliance with the federal Clean Water Act Sections 401, 402 and 404; the Porter-Cologne Water Quality Control Act; the Dickey Water Pollution Act; Title 23 of the California Code of Regulations; California Fish and Game Code §1602; and state and federal Endangered Species Acts.

She conducts a range of activities to aid in planning and assure regulatory compliance in the field, including wetland delineations, environmental awareness training, and surveys and habitat assessments for valley elderberry longhorn beetle, burrowing owl, Swainson's hawk, giant garter snake, listed vernal pool branchiopods, and other special-status species; riparian and oak tree monitoring; vernal pool floristic monitoring, and rare plant surveys. She has monitored constructed and reference wetlands, monitored conservation areas and mitigation banks, prepared annual reports; prepared Mitigation Monitoring Plans and Open Space Monitoring Plans; and conducted biological assessments.

Ms. Peterson is a Certified Professional in Erosion and Sediment Control meeting requirements of a QSP/QSD. She directs staff in the preparation of Storm Water Pollution Prevention Plans and acts as a liaison between developers, contractors, city and county representatives, and various regional water quality control boards.

POSITION

Senior Biologist

AREAS OF EXPERTISE

- 404 Permitting
- 401 Certifications
- 1602 Agreements

EDUCATION

- B.S., Conservation Biology, California State University, Sacramento, 2003

RELEVANT TRAINING

- Current Treasure, Sac-Shasta Chapter of the Wildlife Society
- CDFW Scientific Collecting Permit with authorizations 1, 2, 3, 4, 5, 6, 7, & 9 (Permit SC-9589)
- CDFW Threatened & Rare Plant

SELECTED PROJECT EXPERIENCE

Electra-Pine Grove SCADA Switches
Regulatory Specialist, Amador and Calaveras County, California
Conducted site assessment and developed avoidance strategies for sensitive resources to allow work to occur without triggering a need for regulatory permits. Prepared BLM encroachment permit application. Conducted rare plant surveys and provided monitoring and environmental awareness training to construction crews.

Chuckwalla Valley State Prison, California Department of Corrections and Rehabilitation Biologist, Riverside County, California
Acted as a Project Biologist, Ms. Peterson conducted rare plant surveys, habitat assessments, and ordinary high water mark assessments for the Chuckawalla Valley State Prison facility repairs and produced biological survey reports to support the CEQA Notice of Exemption.

- Collection Permit
- CPESC, CPESC Inc, Envirocert International (Cert# 6193)
- QSP/QSD ,CASQA & California Construction General Permit Training Team (Cert# 00294)
- USFWS Threatened & Endangered Species Permit for federally listed Branchiopods
- Vernal Pool Taxonomy, CNPS Plant Sciences Training Program
- Basic Wetland Delineation Course, Wetland Training Institute
- California Rapid Assessment Method (CRAM)

Level II Infill Correctional Facilities Projects at the Mule Creek State Prison Infill Site Biologist, Amador County, California

Ms. Peterson conducted wetland habitat assessments and prepared technical reports to support project planning and construction. She assisted with implementation of an environmental awareness program, and oversight of the Mitigation Monitoring Plan Implementation.

Los Cerros

Project Manager, City of Rocklin, California

As a regulatory specialist and project manager, Ms. Peterson prepared and/or coordinated the preparation of the wetland delineation, cultural resources study, arborist survey, and rare plant survey for the 144-acre residential development. She prepared the state and federal permitting strategy and assisted with the development of a project description for submittal to the City of Rocklin.

Markleeville Creek Restoration

Wetland and Revegetation Specialist, Alpine County, California

Ms. Peterson was the lead wetland scientist and a re-vegetation designer for the Markleeville Creek floodplain restoration project, located at a former USDA Forest Service Guard Station in Alpine County, California. Relocation of the USFS facilities to another nearby upland location has provided an opportunity for ecological restoration, environmental education/interpretation, and public recreation and access improvements. Ms. Peterson conducted a wetland delineation, noxious weeds survey, supported visual renderings to depict future vegetation conditions, prepared revegetation plans, and is evaluating the potential environmental impacts for CEQA compliance and preparing permit applications.

Lakeview Farms 320-acre Mitigation Basin

Biologist, City of Lincoln, Placer County, California

Ms. Peterson prepared the Mitigation Monitoring Plan and Operations and Management Plan. The project included the development and entitlement of a dual-use basin; regional flood mitigation and restoration of 154 acres of wetland and pond habitat. She assisted within obtaining required environmental permits and provided preconstruction biological surveys and post-construction long term resource monitoring assistance. She conducted mitigation success monitoring in compliance with U.S. Army Corps approved Mitigation Monitoring Plan.

Bickford Ranch

Regulatory Specialist/Biologist, Placer County, California

Ms. Peterson conducted riparian, vegetation, and hydrology monitoring for the onsite mitigation areas, conducted monitoring for VELB, conducted preserve monitoring, and provided management recommendations. She prepared annual monitoring reports for submittal to the USACE and CDFW as required by project permits.

Gill Ranch Mitigation Bank

Biologist, Sacramento County, California

Ms. Peterson conducted branchiopod surveys, and dip net monitoring of historic (i.e., naturally occurring) and constructed/restored mitigation vernal pools as mitigation for vernal pool fairy shrimp, California fairy shrimp, and tadpole shrimp. She also monitored mitigation pools for appropriate hydrology, a vegetative establishment, as required by

the Mitigation and Monitoring Plan, reviewed associated reports, and delineated wetlands.

City of Roseville Open Space Monitoring
Biologist, Placer County, California
Ms. Peterson acted as the monitoring biologist for the City. She conducted surveys for federally listed Branchiopods over multiple years as a component of the perpetual monitoring of constructed and preserved vernal pools, as well as 5-year success criteria monitoring of constructed or restored wetlands for mitigation purposes for all of the City's Open Space Preserves. She conducted annual vernal pool floristic assessments and ground nesting bird surveys, recorded residual dry matter data (RDM), and surveyed for factors such as invasive / nonnative plant species, hydrologic integrity, fencing integrity, condition of signage, and evidence of unauthorized use. She has written annual reports addressing the above issues and recommending necessary maintenance and management actions.

Laguna Creek Mitigation Bank
Biologist, Sacramento County, California
Ms. Peterson located and surveyed all associated native and elderberry mitigation plantings for survival rate, size class, and overall health. All elderberry shrubs were monitored for the presence of VELB, and additional stem count data was taken. She collected and organized the data for and prepared the annual monitoring report.

Silverado Oaks Urban Reserve
Biologist, Placer County, California
As a project biologist, Ms. Peterson supervised the collection of data and report preparation for success criteria monitoring for VELB and associated native plantings and oversaw the long-term monitoring of the Open Space Preserve area as required by the Operations and Management Plan for the site.

Attachment B

Target Plant Species Reference Population Information

Target Plant Species Reference Population Information
for the SVLC 23 Property
Special-Status Plant Survey

Plant Species	Location of Reference Population	Date of Visit	Phenology of Reference Population/ Distinctive Characteristics
Downingia pusilla Dwarf downingia	WestPark Open Space Preserve (VP_554)	20 May 2020	Four plants in bloom. This population was also visited on 8 May 2020 and the pool was inundated at that time.
Legenere limosa Legenere	Private property in South Sacramento County	15 April 2020	Robust population of multiple plants being monitored for future seed collection. Wetland was inundated and plants were submerged but identifiable.
Sagittaria sanfordii Sanford's arrowhead	Population north of Tempo Community Park in Citrus Heights	10 June 2020	three plants with emergent leaves.

Attachment C

Plant Species Observed within the SVLC 23 Study Area

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Plant Species Observed within the SVLC 23 Property Project Area
15 and 16 April and 15 and 20 May 2020

Family / Species Name	Common name	Native / Non-Native
AGAVACEAE		
Chlorogalum angustifolium	Narrowleaf soap plant	Native
Chlorogalum pomeridianum var. pomeridianum	Wavyleaf soap plant	Native
APIACEAE		
Eryngium castrense	Great valley coyote-thistle	Native
Torilis arvensis	Tall sock-destroyer	Naturalized
APOCYNACEAE		
Asclepias fascicularis	Narrow-leaf milkweed	Native
ASTERACEAE		
Achyrachaena mollis	Blow wives	Native
Carduus pycnocephalus subsp. pycnocephalus	Italian thistle	Naturalized
Centaurea solstitialis	Yellow star-thistle	Naturalized
Centromadia fitchii	Fitch's spikeweed	Native
Erigeron canadensis	Horseweed	Native
Holocarpha virgata subsp. virgata	Slender tarweed	Native
Lactuca serriola	Prickly lettuce	Naturalized
Leontodon saxatilis subsp. saxatilis	Hairy hawkbit	Naturalized
Micropus californicus	Q-tips	Native
Pseudognaphalium luteoalbum	Pearly everlasting	Naturalized
Pseudognaphalium microcephalum	Wright's cudweed	Native
Psilocarphus brevissimus var. brevissimus	Dwarf woollyheads	Native
Sonchus asper subsp. asper	Prickly sow thistle	Naturalized
Tragopogon dubius	Yellow salsify	Naturalized
BIGNONIACEAE		
Catalpa bignonioides	Southern catalpa	Naturalized
BORAGINACEAE		
Plagiobothrys greenei	Greene's spiny-nut popcornflower	Native
Plagiobothrys stipitatus var. micranthus	Slender popcorn flower	Native
CYPERACEAE		
Carex barbarae	Santa barbara sedge	Native
Cyperus eragrostis	Tall nutsedge	Native

Plant Species Observed within the SVLC 23 Property Project Area
15 and 16 April and 15 and 20 May 2020

Family / Species Name	Common name	Native / Non-Native
Eleocharis macrostachya	Creeping spikerush	Native
Schoenoplectus acutus var. occidentalis	Common tule	Native
EUPHORBIACEAE		
Triadica sebifera	Chinese tallowtree	Naturalized
FABACEAE		
Acmispon americanus var. americanus	Spanish lotus	Native
Gleditsia triacanthos	Honey locust	Naturalized
Trifolium glomeratum	Clustered clover	Naturalized
Trifolium hirtum	Rose clover	Naturalized
Trifolium subterraneum	Subterranean clover	Naturalized
Vicia sativa subsp. sativa	Spring vetch	Naturalized
Vicia villosa subsp. villosa	Winter vetch	Naturalized
Quercus douglasii	Blue oak	Native
Quercus lobata	Valley oak	Native
Quercus wislizeni var. wislizeni	Interior live oak	Native
GERANIACEAE		
Erodium botrys	Filaree	Naturalized
HYPERICACEAE		
Hypericum perforatum subsp. perforatum	Klamathweed	Naturalized
JUNCACEAE		
Juncus bufonius	Toad rush	Native
LAMIACEAE		
Pogogyne zizyphoroides	Sacramento beardstyle	Native
LILIACEAE		
Calochortus luteus	Yellow mariposa lily	Native
LYTHRACEAE		
Lythrum hyssopifolia	Hyssop loosestrife	Naturalized
ONAGRACEAE		
Epilobium canum	California fuchsia, zauschneria	Native
Epilobium torreyi	Torrey's willow-herb	Native

Plant Species Observed within the SVLC 23 Property Project Area
15 and 16 April and 15 and 20 May 2020

Family / Species Name	Common name	Native / Non-Native
OROBANCHACEAE		
Castilleja campestris subsp. campestris	Yellow owl's clover	Native
PHRYMACEAE		
Mimulus guttatus	Seep-spring monkeyflower	Native
PLANTAGINACEAE		
Callitriche marginata	Winged water starwort	Native
Gratiola ebracteata	Bractless hedge-hyssop	Native
Plantago erecta	Dotseed plantain	Native
Plantago lanceolata	English plantain	Naturalized
POACEAE		
Aegilops triuncialis	Barbed goat grass	Naturalized
Agrostis stolonifera	Creeping bent	Naturalized
Avena fatua	Wild oat	Naturalized
Briza minor	Annual quaking grass	Naturalized
Bromus hordeaceus	Soft chess	Naturalized
Cynodon dactylon	Bermuda grass	Naturalized
Cynosurus echinatus	Bristly dogtail grass	Naturalized
Deschampsia danthonioides	Annual hair grass	Native
Elymus caput-medusae	Medusa head	Naturalized
Festuca perennis	Rye grass	Naturalized
Glyceria declinata	Low manna grass	Naturalized
Paspalum dilatatum	Dallis grass	Naturalized
POLEMONIACEAE		
Leptosiphon bicolor	Miniature lupine	Native
Navarretia intertexta	Needle leaf navarretia	Native
Persicaria punctata	Dotted smartweed	Native
Polygonum aviculare subsp. depressum	Prostrate knotweed	Naturalized
RANUNCULACEAE		
Delphinium sp.	Larkspur	Native
Ranunculus bonariensis var. trisepalus	Carter's buttercup	Native
ROSACEAE		
Prunus cerasifera	Cherry plum	Naturalized

Plant Species Observed within the SVLC 23 Property Project Area
15 and 16 April and 15 and 20 May 2020

Family / Species Name	Common name	Native / Non-Native
Pyrus calleryan	Callery PEAR	Naturalized
Rosa californica	California rose	Native
Rosa sp.	Cultivated rose	Naturalized
Rubus armeniacus	Himalayan blackberry	Naturalized
SALICACEAE		
Populus fremontii subsp. fremontii	Fremont cottonwood	Native
Salix exigua var. exigua	Sandbar willow	Native
Salix sp.	Willow	Naturalized
THEMIDACEAE		
Brodiaea elegans subsp. elegans	Harvest bordiaea	Native
Dichelostemma capitatum	Blue dicks	Native
Dichelostemma multiflorum	Wild hyacinth	Native
Triteleia hyacinthina	White brodiaea, fool's onion	Native
TYPHACEAE		
Typha latifolia	Broad-leaved cattail	Native
VITACEAE		
Vitis californica	California wild grape	Native

MADRONE ECOLOGICAL CONSULTING

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(916) 822-3230

18 August 2020

John Welch
SVLC 23, LLC
c/o Sierra View Land Company
105 Alta Vista Drive
Roseville, CA 95678

Subject: **SVLC 23 Valley Elderberry Longhorn Beetle Habitat Survey, Placer County, California**

Dear Mr. Welch:

At the request of SVLC 23, LLC., Madrone Ecological Consulting, LLC (Madrone) conducted a protocol-level survey for the federally threatened Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*, VELB) habitat within the SVLC 23 Property (Project Area). This letter report presents the methods and results of the survey.

The approximately 23-acre Study Area is comprised of APN 015-011-029-000, located north of Shasta Street and south of Diamond Oaks Road, just east of the Sierra View Country Club in the City of Roseville, Placer County, California. The Study Area falls within Sections 26, 34, and 35, Township 11 North, Range 6 East (MDB&M) of the "Roseville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2018[1]) (**Figure 1**).

Madrone senior biologist Bonnie Peterson surveyed the Project Area on 15 and 16 April and 15 and 20 May 2020. The survey was conducted according to the Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (USFWS 2017[2]). No elderberry shrubs were observed within the Plan Area and no evidence of VELB was observed.

If you have any questions or require additional information, please contact me at (916) 822-3225 or svonderohe@madroneEco.com.

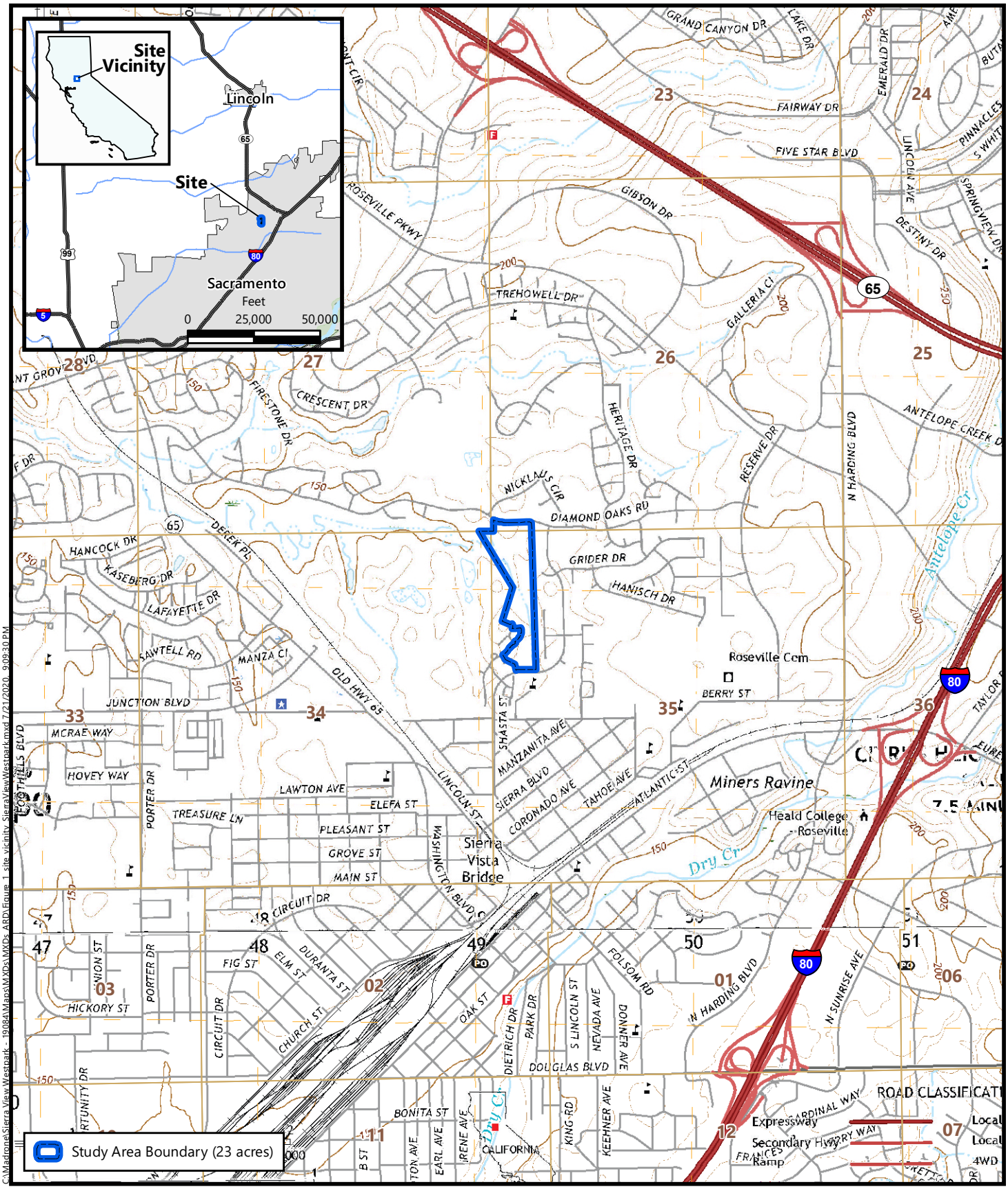
Sincerely,

Sarah VonderOhe

Sarah VonderOhe
Principal

[1] U.S. Geological Survey (USGS). 2018. "Roseville, California" 7.5-Minute Series Topographic Quadrangle Map. U. S. Geological Survey. Denver, Colorado.

[2] U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle. Dated May 2017.



Source: United States Geologic Survey, 2018
"Roseville, California" 7.5-Minute Topographic Quadrangle
Sections 26, 34, and 35, Township 11 North, Range 6 East
Longitude -121.283085, Latitude 38.764232

Figure 1
Site and Vicinity

SVLC 23 Property
Roseville, Placer County, California

MADRONE ECOLOGICAL CONSULTING

2019-20 Dry-Season & Wet-Season Branchiopod Survey 90-Day Report

SVLC 23 Property

(2020-TA-0318)

Placer County, California
19 August 2020

MADRONE ECOLOGICAL CONSULTING

Prepared for:
SVLC 23, LLC
c/o Sierra View Land Company
105 Alta Vista Drive
Roseville, CA 95678

Recommended Citation:
Madrone Ecological Consulting, Inc. (Madrone). 2020. *2019-20 Dry-Season & Wet-Season Branchiopod Survey 90-Day Report, SVLC 23 Property (2020-TA-0318)*. Prepared for SVLC 23, LLC. Published on 19 August 2020.

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2019-20 Dry-Season & Wet-Season Branchiopod Survey 90-Day Report SVLC 23 Property

Figures

Attachments

1.0 OBJECTIVE

The purpose of this report is to summarize the results of protocol surveys for listed large vernal pool branchiopods conducted by Madrone Ecological Consulting (Madrone) within the SVLC 23 Property (formally Sierra View – Westpark) Project Area (Study Area) during the 2019-2020 dry-season and wet-season. Target species included the federally endangered conservancy fairy shrimp (*Branchinecta conservatio*) and vernal pool tadpole shrimp (*Lepidurus packardi*), as well as the federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*). Dry-season and wet-season surveys were conducted under the authority of U.S. Fish and Wildlife Service (USFWS) Recovery Permits for Dustin Brown (TE85084C-0) and Bonnie Peterson (TE205600-1) of Section 10(a)(1)(A) of the ESA, 16 U.S. Code 1531 et seq. and in accordance with the 13 November 2017 Survey Guidelines for the Listed Large Branchiopods (Guidelines) (USFWS 2017). Authorization to conduct dry-season surveys was issued by the USFWS in an e-mail to Dustin Brown on 8 November 2019 and wet-season surveys was issued by the USFWS in an e-mail to Dustin Brown on 19 December 2019 (USFWS reference number 2020-TA-0318).

2.0 LOCATION

The approximately 23-acre Study Area is located north of Shasta Street and south of Diamond Oaks Road, just east of the Sierra View Country Club in the City of Roseville, Placer County, California. The Study Area falls within Section 35, Township 11 North, Range 6 East (MDB&M) of the "Roseville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 1992) (**Figure 1**).

3.0 METHODS AND MATERIALS

3.1 Dry-Season Survey

All potential large vernal pool branchiopod habitat within the Study Area was sampled. Potential habitat for federally listed large branchiopods is defined as any seasonally inundated depression that, on average, ponds water at a sufficient depth and duration for a listed large branchiopod to complete its lifecycle. Habitats that swiftly flow water (e.g., creeks, streams, and ephemeral drainages) or habitats that are semi-to-permanently inundated and support perennial populations of predators (e.g., bullfrogs, fish, and crayfish) generally do not provide suitable habitat for listed large branchiopods (USFWS 2017). **Figure 2** is an exhibit of potential branchiopod habitat within the Study Area (City of Roseville 2019). All vernal pools, seasonal wetlands, and seasonal wetland swales were sampled during the dry-season survey totaling 19 features. The seasonal wetland swale (SWS-1) was sampled during the dry season survey. It was not sampled during the wet season survey because it did not pond and exhibited flowing water during rain events and was unsuitable habitat for vernal pool branchiopods.

Dry soil/substrate was collected from the top 1 to 3 centimeters with a hand spade from the lowest topographic areas within each sampled feature. Wherever possible, substrate samples were collected in chunks to avoid damaging branchiopod eggs. The number and volume of soil/substrate samples collected was proportionate

to the size of the sampled feature pursuant with the requirements summarized in Table 1 of the Guidelines (USFWS 2017). Soil/substrate samples were transferred to liter-sized plastic bags and marked with the project name, aquatic feature number, and collection date for transport to Madrone's laboratory. Madrone senior biologist Dustin Brown collected soil samples for 16 features on 12 November 2019. Three additional habitat features were identified during the wet season survey and soil for those three features (SW-13, 14, and 15) were collected by Bonnie Peterson upon drying. Dry-season samples were collected in accordance with the Guidelines (USFWS 2017) and the special terms and conditions of Mr. Brown's and Ms. Peterson's permits.

A brine solution was prepared in the lab by stirring non-iodized salt with lukewarm tap water in a large container. Soils/substrate samples collected from each aquatic feature were individually placed into the brine solution, and manually worked by hand to reduce soil structure. Floating organic material was decanted into either a 710-micron-diameter pore-size sieve stacked atop a 150- micron-diameter pore-size sieve. The soil material was processed through the top sieve by flushing it with lukewarm tap water while gently rubbing it with a soft-bristle brush. The organic material retained from the 150-micron-diameter pore-size sieve was then removed and thinly spread into plastic petri dishes.

All sieved fractions were microscopically inspected for the presence of large branchiopod eggs by Mr. Brown. Soil samples were prepared and inspected pursuant to the Guidelines (USFWS 2017) and the special terms and conditions of Mr. Brown's Take Permit (TE85084C-0) dated 5 March 2019.

If present, total egg abundance information for each sampled feature was reported in terms of: low abundance (estimate of 1-10 eggs/sampled feature); medium abundance (estimate of 11-50 eggs/sampled feature); and high abundance (estimate of more than 50 eggs/sampled feature).

Scanning electron micrographs of eggs (Gilchrist 1978, Hill and Shepard 1998, Mura 1991) are used to identify and compare any branchiopod eggs observed within the soil samples. Evidence of other aquatic invertebrates encountered was also noted on the lab data sheet. **Attachment A** contains the Dry-Season Lab Data Sheet, which lists sampled aquatic features.

3.2 Wet-Season Survey

Field surveys were conducted by Mr. Brown or Ms. Peterson every 14 days between 11 December 2019, and 28 April 2020, in accordance with the Guidelines (USFWS 2017). Sampling of inundated features occurred on 11 and 24 December 2019, 8 and 22 January, 5 and 19 February, 4 and 18 March, and 1 and 14 April 2020. All features representing appropriate federally-listed large vernal pool branchiopod habitat were dry by the final sampling date of 28 April 2019.

All potential large vernal pool branchiopod habitat was sampled with a 5-foot long dip net equipped with a 12-inch D-ring and 650 micron mesh. Sampling involved making a series of pulls by extending the net out and pulling it back in a sweeping motion. The net was examined for the presence of large vernal pool branchiopods and then cleaned of debris between pulls. The number of pulls made in each feature was commensurate to

feature size and ponding depth. In addition, all potential habitat was visually inspected for the presence of large vernal pool branchiopods throughout the sampling sessions. Air temperature, water temperature, and approximate maximum depth of ponding was measured and recorded during the sampling sessions. **Attachment B** contains the wet-season data sheets with the above described field data.

4.0 GENERAL SITE CONDITIONS AND HABITATS

The Study Area is bounded on the north by Diamond Oak Road and to the south by Shasta Street. The abutting area east of the Study Area is a residential development, and to the west is a community of townhomes and the Sierra View Country Club and Golf Course.

The Study Area ranges from approximately 160-175 feet above mean seal level (AMSL), with rolling terrain sloping towards the north and south. A transmission line corridor is located within the northern portion of the Study Area, and another bisects the center of the Study Area. An unnamed intermittent tributary to South Branch Pleasant Grove Creek flows to the northwest through the Study Area (SFEI 2020), and a drainage ditch from south to north towards the intermittent tributary.

The principal vegetation community within the Study Area is non-native annual grassland. This vegetation community is fairly sparse in the southern portion of the site, with a mix of non-native annual grasses including soft brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), perennial ryegrass (*Festuca perennis*), medusahead grass (*Elymus caput-medusa*), and wild oats (*Avena fatua*), and forbs such as Spanish lotus (*Acmispon americanus var. americanus*), Fitch's spikeweed (*Centromadia fitchii*), blue dicks (*Dichelostemma capitatum*), filaree (*Erodium botrys*), miniature lupine (*Lupines bicolor*), hairy hawkbit (*Leontodon saxatilis*), vetch (*Vicia* spp.), and English plantain (*Plantago lanceolata*). In the northern portion of the site, the annual grasslands are much denser in vegetation with a higher percentage of grass species and fewer forbs.

Interspersed throughout the grassland are a number of mature oaks, primarily blue oaks (*Quercus douglasii*), with scattered Valley oak (*Quercus lobata*) and live oak (*Quercus wislizeni*). A number of native and non-native trees are located along a drainage ditch and intermittent tributary including Chinese tallowtree (*Triadica sebifera*), southern catalpa (*Catalpa bignonioides*), honey locust (*Gleditsia triacanthos*), and willows (*Salix spp.*). Common shrubs in the riparian understory of the intermittent tributary include Himalayan blackberry (*Rubus armeniacus*), wild rose (*Rosa californica*), and narrow-leaf willow (*Salix exigua*).

Aquatic resource features delineated within the Study Area consist of the south to north flowing drainage ditch, an intermittent drainage and associated riparian wetland, a seasonal wetland swale and a number of scattered vernal pools and seasonal wetlands. See **Figure 2** for the sampling locations.

5.0 FINDINGS

No listed or non-listed large vernal pool branchiopod eggs (cysts) were observed in any sample collected during the 2019 and 2020 dry-season sampling. No listed or non-listed large branchiopods were observed within the Study Area during the 2019-20 wet-season protocol surveys.

6.0 REFERENCES

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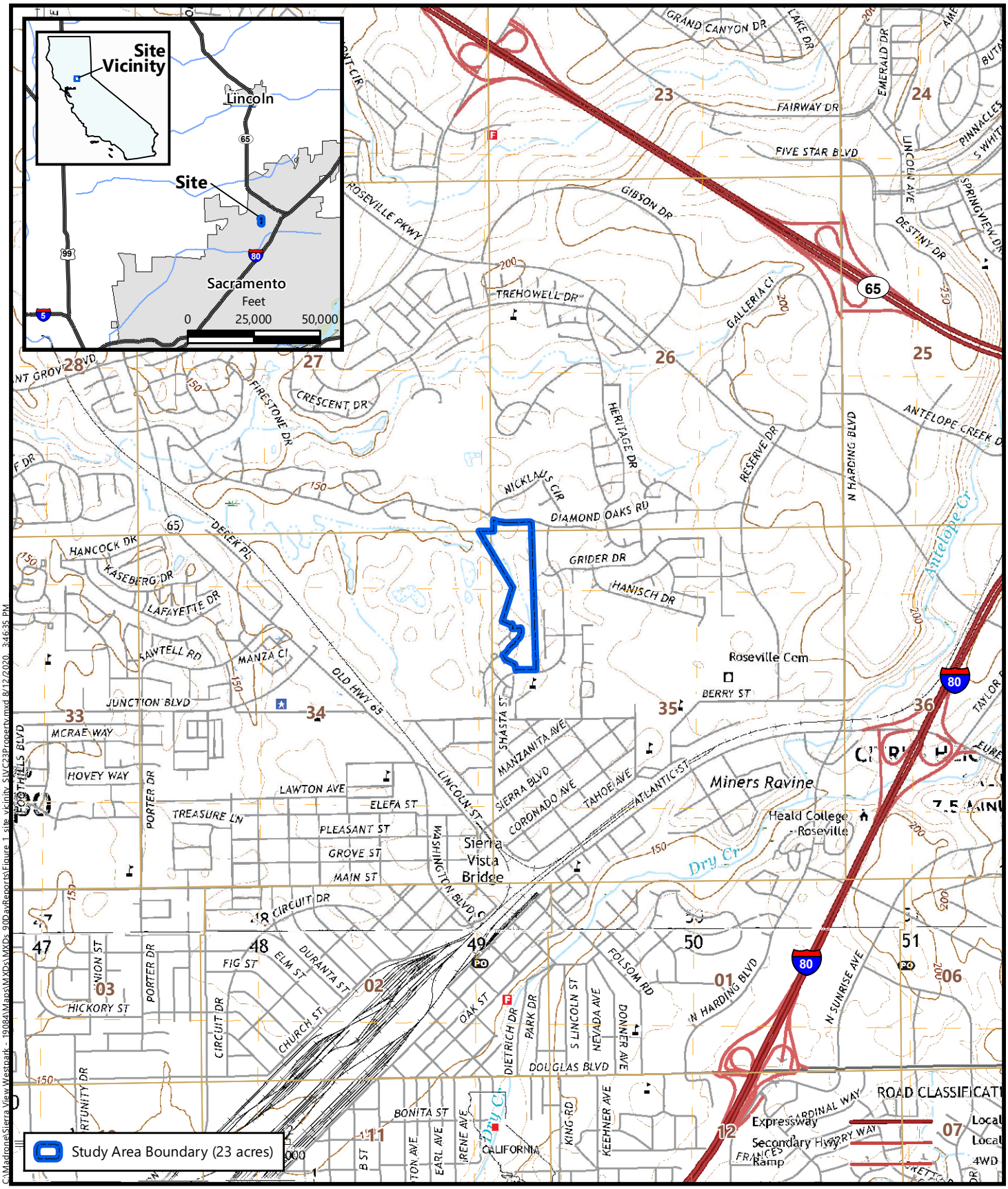
Figures



Source: United States Geologic Survey, 2018
"Roseville, California" 7.5-Minute Topographic Quadrangle
Sections 26, 34, and 35, Township 11 North, Range 6 East
Longitude -121.283085, Latitude 38.764232

Figure 1
Site and Vicinity

SLVC 23 Property
Roseville, Placer County, California

MADRONE ECOLOGICAL CONSULTING

Diamond Oaks Road
SW-2
IDR-2
SW-3
IDR-1
SW-1
SW-5
SW-4
IDR-2
SWS-1
DD-1
SW-13
SW-6
VP-1
SW-14
VP-2
DD-2
Shasta Street
SW-7
Spyglass Hill
Spyglass Court
VP-3
Walton Way
Saint Andrews Drive
SW-9
SW-8
SW-11
SW-10
Graeagle Court
DD-3
SW-12
SW-15
Shasta Street

Study Area Boundary (23 acres)
Culvert

Aquatic Resources (2.044 acres)

Potential Habitat (0.868 acre)

Seasonal Wetland (0.191 acre)
Seasonal Wetland Swale (0.024 acre)
Vernal Pool (0.653 acre)

Non-Habitat - Not Sampled (1.176 acres)

Drainage Ditch (0.223 acre)
Intermittent Drainage and Adjacent Riparian Wetland (0.953 acre)

N

Feet
0 80 160

C:\Madrone\Sierra View Westpark - 19084\Maps\MXDs\MXDs_90DayReports\Figure_2_SamplingLocs_SLVC23Property.mxd 8/12/2020 3:46:16 PM

Aerial Base: City of Roseville, 22 April 2019

Figure 2
Sampling Locations

SLVC 23 Property
Roseville, Placer County, California

MADRONE ECOLOGICAL CONSULTING

Attachments

Attachment A. Dry-Season Lab Data Sheet
Attachment B. Wet-Season Data Sheets
Attachment C. Representative Photographs

Attachment A

Dry-Season Lab Data Sheet

Dry Season Lab Data Sheet

Project Information		Biologist Information	
Project Name: Sierra View	Quad: Roseville	Name of Person(s) Who Conducted the Following Tasks and Permit Number(s):	
USFWS Project Number: 2020-TA-318	Township: 11 North	Soil Collection Conducted By: Bonnie Peterson TE 205600-1, Dustin Brown TE 85084C-0	
County: Placer	Range: 6 East	Soil Processing Conducted By: Dustin Brown	
Lat: 38.763889	Section: 35	Soil Analysis/Cysts ID Conducted By: Dustin Brown	
Long: 121.282714		Soil Collection Date: 11/12/19 and 4/15/20	Soil Processing Date: 12/2,3+4/2020 and 4/17/2020

Feature Number	Invertebrates Present (X)											Hydracarina Live	Nematoda	Collembola	Other Species	Comments
	Insect Exo-Skeletons	Micro-Turbellaria Cysts	*Cladocera ephippia*	Ostracods Live/Cysts/ Carapaces	Copepods Live/Cysts	Number of Large Branchiopod Eggs: *Branchinecta* sp.	*Lepidurus packardi*	*Linderiella occidentalis*	*Lynceus brachyurus*	*Cyzicus californicus*						
VP-3	X	X		X												3 plates
SW-6	X	X														6 plates
SW-11	X															5 plates
SW-5	X													X		5 plates
SW-10	X	X		X										X		4 plates
SW-4	X													X		4 plates
SW-9	X															8 plates
SW-3	X													X		5 plates
SW-2	X													X		3 plates
SW-8	X													X		6 plates
SW-1	X	X												X	Rotofirs	12 plates
SW-12	X	X		X										X	Rotofirs	7 plates
VP-1	X	X	X	X	X									X	Rotofirs	6 plates
VP-2	X	X		X	X								X		Rotofirs	8 plates
SW-7	X													X		5 plates
SWS-1	X	X												X	Rotofirs	6 plates
SW-13 (4/17/2020)	X	X												X		4 plates
SW-14	X	X											X	X		5 plates
SW-15	X	X	X	X	X									X		4 plates

Attachment B

Wet-Season Data Sheets

Wet Season Survey Data Sheet

MADRONE ECOLOGICAL CONSULTING

Project Name: SVLC 23 Property

12/11/2019 | **Weather Conditions: Overcast, Calm** | **Permit #: TE205600-1**

Start Time: 1100 | **Start Air Temperature (°C): 12** | **Permitted Biologist: Bonnie Peterson**

End Time:1255 | **End Air Temperature (°C): 14** | **Assisted By:**

Feature No.	Water Temperature (°C)	Present Ponded Depth inches	Current % Surface Area	Micro-Turbellaria	Crustacea										Insecta												Gastropoda	Hydracaini	Herps		Habitat Condition				Land Use					
					Amphipoda	Cladocera	Copepoda	Ostracoda	Large Branchiopods						Coleoptera			Diptera		Ephemeroptera	Hemiptera		Limnephilidae	Odonata					*Bufo boreas*	*Pseudacris sierra*	Undisturbed	Disturbed			Fallow	Agriculture	Grazed		
									BRLY	BRME	CYCA	LEPA	LIOC	LYBR	Dytiscidae	Hydrophilidae	Haliplidae	Chironomidae	Culicidae		Corixidae	Notonectidae		Zygoptera	Anisoptera							Tire Ruts	Garbage	Plowed or Disked			Light	Moderate	Heavy
SW-12	13	6.5	80																		X								egg	X				X				
SW-11	Satura	0	0																											X				X				
SW-10	13	4	80																											X	old			X				
SW-8	13	1	90																											X				X				
SW-9	13	4	90																											X				X				
VP-3	14	3	80																											X				X				
SW-7	Too sha	0.25	5																												old road							
VP-2	14	4	95																												old road							
VP-1	13	12	100																		X								egg	X				X				
SW-6	Dry	0	0																											X				X				
SW-4	Dry	0	0																											X				X				
SW-5	Dry	0	0																											X				X				
SW-2	Dry	0	0																											X				X				
SW-3	Dry	0	0																											X				X				
SW-1	Dry	0	0																											X				X				
SW-13	13	4	80																											X				X				
SW-14	13	3	65																												old road							
SW-15	13	3	95																												old road							

Large Branchiopods: BRLY = *Branchinecta lynchi,* BRME = *Branchinecta mesovallensis,* LIOC = *Linderiella occidentalis,* LEPA = *Lepidurus packardi,* CYCA = *Cyzicus californicus,* LYBR = *Lynceus brachyurus*

Land Use: Grazed (C = cattle, H = horse, S = sheep, O = other)

Hydrology: S = saturated, N/P = not ponded

X = species present, **Large Branchiopods abundance =** (1's, 10's, 100's, 1000's)

Wet Season Survey Data Sheet

MADRONE ECOLOGICAL CONSULTING

Project Name: SVLC 23 Property

12/24/2019 | **Weather Conditions: Overcast, breezy** | **Permit #: TE205600-1**

Start Time: 1100 | **Start Air Temperature (°C): 10** | **Permitted Biologist: Bonnie Peterson**

End Time:1300 | **End Air Temperature (°C): 10.5** | **Assisted By:**

					Crustacea										Insecta													Herps		Habitat Condition				Land Use					
									Large Branchiopods						Coleoptera			Diptera			Hemiptera			Odonata							Disturbed				Grazed				
Feature No.	Water Temperature (°C)	Present Ponded Depth inches	Current % Surface Area	Micro-Turbellaria	Amphipoda	Cladocera	Copepoda	Ostracoda	BRLY	BRME	CYCA	LEPA	LIOC	LYBR	Dytiscidae	Hydrophilidae	Haliplidae	Chironomidae	Culicidae	Ephemeroptera	Corixidae	Notonectidae	Limnephilidae	Zygoptera	Anisoptera	Gastropoda	Hydracaini	*Bufo boreas*	*Pseudacris sierra*	Undisturbed	Tire Ruts	Garbage	Plowed or Disked	Fallow	Agriculture	Light	Moderate	Heavy
SW-12	8	9	95																										X				X				
SW-11	Dry	0	0																										X				X				
SW-10	8	4	95																										X	old			X				
SW-8	8	3	95																										X				X				
SW-9	8	3	95																										X				X				
VP-3	8	1.5	45																										X				X				
SW-7	Dry	0	0																											old road							
VP-2	8	3	100																											old road							
VP-1	8	12	100																										X				X				
SW-6	Dry	0	0																										X				X				
SW-4	Dry	0	0																										X				X				
SW-5	Dry	0	0																										X				X				
SW-2	8	6	40																										X				X				
SW-3	Dry	0	0																										X				X				
SW-1	Dry	0	0																										X				X				
SW-13	8	3	95																										X				X				
SW-14	8	2	95																											old road							
SW-15	9	8	100																											old road							

Large Branchiopods: BRLY = *Branchinecta lynchi,* BRME = *Branchinecta mesovallensis,* LIOC = *Linderiella occidentalis,* LEPA = *Lepidurus packardi,* CYCA = *Cyzicus californicus,* LYBR = *Lynceus brachyurus*

Land Use: Grazed (C = cattle, H = horse, S = sheep, O = other)

Hydrology: S = saturated, N/P = not ponded

X = species present, **Large Branchiopods abundance =** (1's, 10's, 100's, 1000's)

Wet Season Survey Data Sheet

MADRONE ECOLOGICAL CONSULTING

Project Name: SVLC 23 Property		
1/8/2020	**Weather Conditions: Overcast, calm**	**Permit #: TE205600-1**
Start Time: 1300	**Start Air Temperature (°C): 11**	**Permitted Biologist: Bonnie Peterson**
End Time:1430	**End Air Temperature (°C): 11**	**Assisted By:**

					Crustacea										Insecta														Herps		Habitat Condition				Land Use					
									Large Branchiopods						Coleoptera			Diptera			Hemiptera			Odonata							Disturbed				Grazed				
Feature No.	Water Temperature (°C)	Present Ponded Depth inches	Current % Surface Area	Micro-Turbellaria	Amphipoda	Cladocera	Copepoda	Ostracoda	BRLY	BRME	CYCA	LEPA	LIOC	LYBR	Dytiscidae	Hydrophilidae	Haliplidae	Chironomidae	Culicidae	Ephemeroptera	Corixidae	Notonectidae	Limnephilidae	Zygoptera	Anisoptera	Gastropoda	Hydracaini	*Bufo boreas*	*Pseudacris sierra*	Undisturbed	Tire Ruts	Garbage	Plowed or Disked	Fallow	Agriculture	Light	Moderate	Heavy
SW-12	12	9.5	95	X			X																						X				X				
SW-11	Dry																												X				X				
SW-10	12	2	80				X																						X	old			X				
SW-8	Dry																												X				X				
SW-9	Dry																												X				X				
VP-3	Dry																												X				X				
SW-7	Dry																													old road							
VP-2	Dry																													old road							
VP-1	11	12	90	X		X	X	X											X		X							X	X				X				
SW-6	Dry																												X				X				
SW-4	Dry																												X				X				
SW-5	Dry																												X				X				
SW-2	Dry																												X				X				
SW-3	Dry																												X				X				
SW-1	Dry																												X				X				
SW-13	Dry																												X				X				
SW-14	Dry																													old road							
SW-15	13	7	90																											old road							

Large Branchiopods: BRLY = *Branchinecta lynchi,* BRME = *Branchinecta mesovallensis,* LIOC = *Linderiella occidentalis,* LEPA = *Lepidurus packardi,* CYCA = *Cyzicus californicus,* LYBR = *Lynceus brachyurus*

Land Use: Grazed (C = cattle, H = horse, S = sheep, O = other)

Hydrology: S = saturated, N/P = not ponded

X = species present, **Large Branchiopods abundance =** (1's, 10's, 100's, 1000's)

Wet Season Survey Data Sheet

MADRONE ECOLOGICAL CONSULTING

Project Name: SVLC 23 Property		
1/22/2020	**Weather Conditions: Overcast, calm**	**Permit #: TE205600-1**
Start Time: 1052	**Start Air Temperature (°C): 13**	**Permitted Biologist: Bonnie Peterson**
End Time:1200	**End Air Temperature (°C): 16**	**Assisted By:**

					Crustacea										Insecta														Herps		Habitat Condition				Land Use					
									Large Branchiopods						Coleoptera			Diptera			Hemiptera			Odonata							Disturbed				Grazed				
Feature No.	Water Temperature (°C)	Present Ponded Depth inches	Current % Surface Area	Micro-Turbellaria	Amphipoda	Cladocera	Copepoda	Ostracoda	BRLY	BRME	CYCA	LEPA	LIOC	LYBR	Dytiscidae	Hydrophilidae	Haliplidae	Chironomidae	Culicidae	Ephemeroptera	Corixidae	Notonectidae	Limnephilidae	Zygoptera	Anisoptera	Gastropoda	Hydracaini	*Bufo boreas*	*Pseudacris sierra*	Undisturbed	Tire Ruts	Garbage	Plowed or Disked	Fallow	Agriculture	Light	Moderate	Heavy
SW-12	12	9	100				X																						X					X				
SW-11	Dry																												X					X				
SW-10	12	5	100	X																									X	old				X				
SW-8/9	11	4	80																										X					X				
VP-3	Dry																												X					X				
SW-7	Dry																													old road								
VP-2	11	5	100	X																										old road								
VP-1	11	12	100	X		X	X								X				X		X								X					X				
SW-6	11	10	25	X				X																					X					X				
SW-4	Dry																												X					X				
SW-5	Dry																												X					X				
SW-2	Dry																												X					X				
SW-3	Dry																												X					X				
SW-1	Dry																												X					X				
SW-13	11	2	100					X							X														X					X				
SW-14	Dry																													old road								
SW-15	11	7	100																											old road								

Large Branchiopods: BRLY = *Branchinecta lynchi,* BRME = *Branchinecta mesovallensis,* LIOC = *Linderiella occidentalis,* LEPA = *Lepidurus packardi,* CYCA = *Cyzicus californicus,* LYBR = *Lynceus brachyurus*

Land Use: Grazed (C = cattle, H = horse, S = sheep, O = other)

Hydrology: S = saturated, N/P = not ponded

X = species present, **Large Branchiopods abundance =** (1's, 10's, 100's, 1000's)

Wet Season Survey Data Sheet

MADRONE ECOLOGICAL CONSULTING

Project Name: SVLC 23 Property

Date: 2/5/2020 | **Weather Conditions: Sunny, Clear** | **Permit #: TE205600-1**

Start Time: 0100 | **Start Air Temperature (°C): 14** | **Permitted Biologist: Bonnie Peterson**

End Time: 0215 | **End Air Temperature (°C): 14** | **Assisted By: None**

					Crustacea										Insecta													Herps		Habitat Condition				Land Use					
									Large Branchiopods						Coleoptera			Diptera			Hemiptera			Odonata							Disturbed				Grazed				
Feature No.	Water Temperature (°C)	Present Ponded Depth inches	Current % Surface Area	Micro-Turbellaria	Amphipoda	Cladocera	Copepoda	Ostracoda	BRLY	BRME	CYCA	LEPA	LIOC	LYBR	Dytiscidae	Hydrophilidae	Haliplidae	Chironomidae	Culicidae	Ephemeroptera	Corixidae	Notonectidae	Limnephilidae	Zygoptera	Anisoptera	Gastropoda	Hydracaini	*Bufo boreas*	*Pseudacris sierra*	Undisturbed	Tire Ruts	Garbage	Plowed or Disked	Fallow	Agriculture	Light	Moderate	Heavy
SW-12	20	9	80	X			X	X													X								X				X				
SW-11	Dry																												X				X				
SW-10	Dry																												X	old			X				
SW-8/9	Dry																												X				X				
VP-3	Dry																												X				X				
SW-7	Dry																													old road							
VP-2	Dry																													old road							
VP-1	16	12	85	X			X	X													X								X				X				
SW-6	16	3	10	X			X	X																					X				X				
SW-4	Dry																												X				X				
SW-5	Dry																												X				X				
SW-2	Dry																												X				X				
SW-3	Dry																												X				X				
SW-1	Dry																												X				X				
SW-13	Dry																												X				X				
SW-14	Dry																													old road							
SW-15	13	7					X	X																						old road							

Large Branchiopods: BRLY = *Branchinecta lynchi,* BRME = *Branchinecta mesovallensis,* LIOC = *Linderiella occidentalis,* LEPA = *Lepidurus packardi,* CYCA = *Cyzicus californicus,* LYBR = *Lynceus brachyurus*

Land Use: Grazed (C = cattle, H = horse, S = sheep, O = other)

Hydrology: S = saturated, N/P = not ponded

X = species present, **Large Branchiopods abundance =** (1's, 10's, 100's, 1000's)

Wet Season Survey Data Sheet

MADRONE ECOLOGICAL CONSULTING

Project Name: SVLC 23 Property

Survey Date: 2/19/20 | **Weather Conditions: Sunny, Clear** | **Permit #: TE205600-1**

Start Time: 1000 | **Start Air Temperature (°C): 14** | **Permitted Biologist: Bonnie Peterson**

End Time: 1100 | **End Air Temperature (°C): 14** | **Assisted By: None**

					Crustacea										Insecta														Herps		Habitat Condition				Land Use					
									Large Branchiopods						Coleoptera			Diptera			Hemiptera			Odonata							Disturbed				Grazed				
Feature No.	Water Temperature (°C)	Present Ponded Depth inches	Current % Surface Area	Micro-Turbellaria	Amphipoda	Cladocera	Copepoda	Ostracoda	BRLY	BRME	CYCA	LEPA	LIOC	LYBR	Dytiscidae	Hydrophilidae	Haliplidae	Chironomidae	Culicidae	Ephemeroptera	Corixidae	Notonectidae	Limnephilidae	Zygoptera	Anisoptera	Gastropoda	Hydracaini	*Bufo boreas*	*Pseudacris sierra*	Undisturbed	Tire Ruts	Garbage	Plowed or Disked	Fallow	Agriculture	Light	Moderate	Heavy
SW-12	Dry																												X				X				
SW-11	Dry																												X				X				
SW-10	Dry																												X	old			X				
SW-8/9	Dry																												X				X				
VP-3	Dry																												X				X				
SW-7	Dry																													old road							
VP-2	Dry																													old road							
VP-1	16	11	25	X		X	X	X											X									X	X				X				
SW-6	16	0.5	2	X																								X	X				X				
SW-4	Dry																												X				X				
SW-5	Dry																												X				X				
SW-2	Dry																												X				X				
SW-3	Dry																												X				X				
SW-1	Dry																												X				X				
SW-13	Dry																												X				X				
SW-14	Dry																													old road							
SW-15	16	2	40			X																								old road							

Large Branchiopods: BRLY = *Branchinecta lynchi,* BRME = *Branchinecta mesovallensis,* LIOC = *Linderiella occidentalis,* LEPA = *Lepidurus packardi,* CYCA = *Cyzicus californicus,* LYBR = *Lynceus brachyurus*

Land Use: Grazed (C = cattle, H = horse, S = sheep, O = other)

Hydrology: S = saturated, N/P = not ponded

X = species present, **Large Branchiopods abundance =** (1's, 10's, 100's, 1000's)

Wet Season Survey Data Sheet

MADRONE ECOLOGICAL CONSULTING

Project Name: SVLC 23 Property

Survey Date: 3/04/20 | **Weather Conditions: Sunny, Clear** | **Permit #: TE205600-1**

Start Time: 12:40 | **Start Air Temperature (°C): 25** | **Permitted Biologist: Bonnie Peterson**

End Time: 13:15 | **End Air Temperature (°C): 26** | **Assisted By: None**

					Crustacea										Insecta													Herps		Habitat Condition				Land Use					
									Large Branchiopods						Coleoptera			Diptera			Hemiptera			Odonata							Disturbed				Grazed			
Feature No.	Water Temperature (°C)	Present Ponded Depth inches	Current % Surface Area	Micro-Turbellaria	Amphipoda	Cladocera	Copepoda	Ostracoda	BRLY	BRME	CYCA	LEPA	LIOC	LYBR	Dytiscidae	Hydrophilidae	Haliplidae	Chironomidae	Culicidae	Ephemeroptera	Corixidae	Notonectidae	Limnephilidae	Zygoptera	Anisoptera	Gastropoda	Hydracaini	*Bufo boreas*	*Pseudacris sierra*	Undisturbed	Tire Ruts	Garbage	Plowed or Disked	Fallow	Agriculture	Light	Moderate	Heavy
SW-12	Dry																												X				X				
SW-11	Dry																												X				X				
SW-10	Dry																												X	old			X				
SW-8/9	Dry																												X				X				
VP-3	Dry																												X				X				
SW-7	Dry																												X	old road							
VP-2	Dry																												X	old road							
VP-1	Dry																												X				X				
SW-6	Dry																												X				X				
SW-4	Dry																												X				X				
SW-5	Dry																												X				X				
SW-2	Dry																												X				X				
SW-3	Dry																												X				X				
SW-1	Dry																												X				X				
SW-13	Dry																												X				X				
SW-14	Dry																													old road							
SW-15	Dry																													road, freq dist							

Large Branchiopods: BRLY = *Branchinecta lynchi,* BRME = *Branchinecta mesovallensis,* LIOC = *Linderiella occidentalis,* LEPA = *Lepidurus packardi,* CYCA = *Cyzicus californicus,* LYBR = *Lynceus brachyurus*

Land Use: Grazed (C = cattle, H = horse, S = sheep, O = other)

Hydrology: S = saturated, N/P = not ponded

X = species present, **Large Branchiopods abundance =** (1's, 10's, 100's, 1000's)

Wet Season Survey Data Sheet

MADRONE ECOLOGICAL CONSULTING

Project Name: SVLC 23 Property

Survey Date: 3/18/20 | **Weather Conditions: Sunny, Clear** | **Permit #: TE85084C-0**

Start Time: 12:05 | **Start Air Temperature (°F): 46** | **Permitted Biologist: Dustin Brown**

End Time: 14:25 | **End Air Temperature (°F): 49** | **Assisted By: None**

					Crustacea										Insecta													Herps		Habitat Condition				Land Use					
									Large Branchiopods						Coleoptera			Diptera			Hemiptera			Odonata							Disturbed				Grazed				
Feature No.	Water Temperature (°F)	Present Ponded Depth inches	Current % Surface Area	Micro-Turbellaria	Amphipoda	Cladocera	Copepoda	Ostracoda	BRLY	BRME	CYCA	LEPA	LIOC	LYBR	Dytiscidae	Hydrophilidae	Haliplidae	Chironomidae	Culicidae	Ephemeroptera	Corixidae	Notonectidae	Limnephilidae	Zygoptera	Anisoptera	Gastropoda	Hydracaini	*Bufo boreas*	*Pseudacris sierra*	Undisturbed	Tire Ruts	Garbage	Plowed or Disked	Fallow	Agriculture	Light	Moderate	Heavy
SW-12	55	11	90				x																						x	X				X				
SW-11	Dry	0																												X				X				
SW-10	55	5	80																											X	old			X				
SW-8/9	54	6	90																										x	X				X				
VP-3	Dry	0																												X				X				
SW-7	Dry	0																												X	old road							
VP-2	56	4	80																											X	old road							
VP-1	54	9	80				x																						x	X				X				
SW-6	58	6	50																											X				X				
SW-4	Dry	0																												X				X				
SW-5	Dry	0																												X				X				
SW-2	Dry	0																												X				X				
SW-3	56	3	40																											X				X				
SW-1	Dry	0																												X				X				
SW-13	55	5	80																											X				X				
SW-14	56	3	70																												old road							
SW-15	54	6	100																												road, freq dist							

Large Branchiopods: BRLY = *Branchinecta lynchi,* BRME = *Branchinecta mesovallensis,* LIOC = *Linderiella occidentalis,* LEPA = *Lepidurus packardi,* CYCA = *Cyzicus californicus,* LYBR = *Lynceus brachyurus*

Land Use: Grazed (C = cattle, H = horse, S = sheep, O = other)

Hydrology: S = saturated, N/P = not ponded

X = species present, **Large Branchiopods abundance =** (1's, 10's, 100's, 1000's)

Wet Season Survey Data Sheet

MADRONE ECOLOGICAL CONSULTING

Project Name: SVLC 23 Property

Survey Date: 4/1/20 | **Weather Conditions:Scattered clouds** | **Permit #: TE205600-1**

Start Time:1210 | **Start Air Temperature (°C): 24** | **Permitted Biologist: Bonnie Peterson**

End Time: 1455 | **End Air Temperature (°C): 25** | **Assisted By: None**

					Crustacea										Insecta													Herps		Habitat Condition				Land Use					
									Large Branchiopods						Coleoptera			Diptera			Hemiptera			Odonata							Disturbed				Grazed			
Feature No.	Water Temperature (°C)	Present Ponded Depth inches	Current % Surface Area	Micro-Turbellaria	Amphipoda	Cladocera	Copepoda	Ostracoda	BRLY	BRME	CYCA	LEPA	LIOC	LYBR	Dytiscidae	Hydrophilidae	Haliplidae	Chironomidae	Culicidae	Ephemeroptera	Corixidae	Notonectidae	Limnephilidae	Zygoptera	Anisoptera	Gastropoda	Hydracaini	*Bufo boreas*	*Pseudacris sierra*	Undisturbed	Tire Ruts	Garbage	Plowed or Disked	Fallow	Agriculture	Light	Moderate	Heavy
SW-12	22	3	5	X																									X				X				
SW-11	Dry	0																											X				X				
SW-10	Dry	0																											X	old			X				
SW-8/9	Dry	0																											X				X				
VP-3	Dry	0																											X				X				
SW-7	Dry	0																											X	old road							
VP-2	22	11	10	X	X																							X	X	old road							
VP-1	Dry	0																											X				X				
SW-6	Dry	0																											X				X				
SW-4	Dry	0																											X				X				
SW-5	Dry	0																											X				X				
SW-2	Dry	0																											X				X				
SW-3	Dry	0																											X				X				
SW-1	Dry	0																											X				X				
SW-13	Dry	0																											X				X				
SW-14	Dry	0																												old road							
SW-15	20	4	60																											road, freq dist							

Large Branchiopods: BRLY = *Branchinecta lynchi,* BRME = *Branchinecta mesovallensis,* LIOC = *Linderiella occidentalis,* LEPA = *Lepidurus packardi,* CYCA = *Cyzicus californicus,* LYBR = *Lynceus brachyurus*

Land Use: Grazed (C = cattle, H = horse, S = sheep, O = other)

Hydrology: S = saturated, N/P = not ponded

X = species present, **Large Branchiopods abundance =** (1's, 10's, 100's, 1000's)

Wet Season Survey Data Sheet

MADRONE ECOLOGICAL CONSULTING

Project Name: SVLC 23 Property

Survey Date: 4/15/20 | **Weather Conditions:Scattered clouds** | **Permit #: TE205600-1**

Start Time:1300 | **Start Air Temperature (°C): 25** | **Permitted Biologist: Bonnie Peterson**

End Time: 1355 | **End Air Temperature (°C): 25.6** | **Assisted By: None**

					Crustacea										Insecta													Herps		Habitat Condition				Land Use					
									Large Branchiopods						Coleoptera			Diptera			Hemiptera			Odonata							Disturbed				Grazed			
Feature No.	Water Temperature (°C)	Present Ponded Depth inches	Current % Surface Area	Micro-Turbellaria	Amphipoda	Cladocera	Copepoda	Ostracoda	BRLY	BRME	CYCA	LEPA	LIOC	LYBR	Dytiscidae	Hydrophilidae	Haliplidae	Chironomidae	Culicidae	Ephemeroptera	Corixidae	Notonectidae	Limnephilidae	Zygoptera	Anisoptera	Gastropoda	Hydracaini	*Bufo boreas*	*Pseudacris sierra*	Undisturbed	Tire Ruts	Garbage	Plowed or Disked	Fallow	Agriculture	Light	Moderate	Heavy
SW-12	25.2	6	10	X																									X	X					X				
SW-11	Dry	0																											X						X				
SW-10	Dry	0																											X	old					X				
SW-8/9	Dry	0																											X						X				
VP-3	Dry	0																											X						X				
SW-7	Dry	0																											X	old road									
VP-2	25.9	8	10	X																								X	X	old road									
VP-1	Dry	0																											X						X				
SW-6	Dry	0																											X						X				
SW-4	Dry	0																											X						X				
SW-5	Dry	0																											X						X				
SW-2	Dry	0																											X						X				
SW-3	Dry	0																											X						X				
SW-1	Dry	0																											X						X				
SW-13	Dry	0																											X						X				
SW-14	Dry	0																												old road									
SW-15	19.7	4	80																											road, freq dist									

Large Branchiopods: BRLY = *Branchinecta lynchi,* BRME = *Branchinecta mesovallensis,* LIOC = *Linderiella occidentalis,* LEPA = *Lepidurus packardi,* CYCA = *Cyzicus californicus,* LYBR = *Lynceus brachyurus*

Land Use: Grazed (C = cattle, H = horse, S = sheep, O = other)

Hydrology: S = saturated, N/P = not ponded

X = species present, **Large Branchiopods abundance =** (1's, 10's, 100's, 1000's)

Attachment C

Representative Photos

Photograph of VP-1 facing north on 12 November 2019

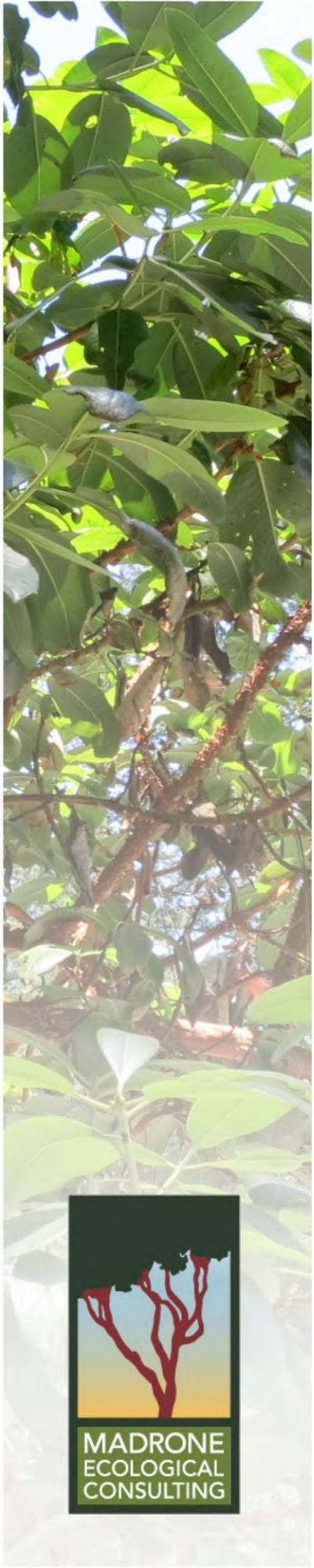
Photograph of the Study Area facing southwest on 12 November 2019

Photograph of SWS-1 facing south on 12 November 2019

Facing southwest at SW-12 on 18 March 2020

Facing north at SW-8 on 18 March 2020

Facing northwest at VP-1 on 18 March 2020



Aquatic Resources Delineation Report

SVLC 23 Property

APN: 015-011-029-000

Placer County, California
31 July 2020

MADRONE ECOLOGICAL CONSULTING

Prepared for:
SVLC 23, LLC
c/o Sierra View Land Company
105 Alta Vista Drive
Roseville, CA 95678

Recommended Citation:
Madrone Ecological Consulting, LLC (Madrone). 2020. *Aquatic Resources Delineation Report for SVLC 23 Property*. Prepared for SVLC 23, LLC. Published on 31 July 2020.

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1.0 INTRODUCTION

This report presents the results of a delineation of aquatic resources within the SVLC 23 Property site (Study Area) conducted by Madrone Ecological Consulting, LLC (Madrone). The approximately 23-acre Study Area is comprised of APN 015-011-029-000, located north of Shasta Street and south of Diamond Oaks Road, just east of the Sierra View Country Club in the City of Roseville, Placer County, California. The Study Area falls within Section 35,34, and 26, Township 11 North, Range 6 East (MDB&M) of the "Roseville, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2018) (**Figure 1**).

1.1 Contact Information

Property Owner

John Welch
SVLC 23, LLC
c/o Sierra View Land Company
105 Alta Vista Drive
Roseville, CA 95678

Agent

Sarah VonderOhe
Madrone Ecological Consulting, LLC
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Citrus Heights, CA 95610
(916) 822-3225
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2.0 METHODOLOGY

Madrone senior biologist Bonnie Peterson conducted a delineation of aquatic resources within the Study Area on 15 and 16 April and 15 and 20 May 2020. Aquatic features and data points were mapped in the field with a GPS unit capable of sub-meter accuracy (Arrow 100). Three-parameter data (vegetation, soils, and hydrology) were collected at each data point, documenting wetland/waters or upland status, as appropriate. The delineation map was prepared in accordance with the *Updated Map and Drawing Standards for the South Pacific Division Regulatory Program* (USACE 2016a). The GPS data was overlayed on an ortho-rectified aerial photograph (City of Roseville 2019).

The delineation was performed in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), and the Sacramento District's *Minimum Standards for Acceptance of Preliminary Wetlands Delineations* (USACE 2016b). U.S. Army Corps of Engineers (USACE) regulations (33 CFR 328) were used to determine the presence of Waters of the United States other than wetlands. The most recent *National Wetland Plant List* (Lichvar et al. 2016) was used to determine the wetland indicator status of plants observed in the Study Area. The *Jepson eFlora* (Jepson Flora Project 2020) was used for plant nomenclature.

3.0 EXISTING CONDITIONS

The Study Area is bounded on the north by Diamond Oak Road and to the south by Shasta Street. The abutting area east of the Study Area is a residential development, and to the west is a community of townhomes and the Sierra View Country Club and Golf Course.

The Study Area ranges from approximately 160-175 feet above mean seal level (AMSL), with rolling terrain sloping towards the north and south. A transmission line corridor is located within the northern portion of the Study Area, and another bisects the center of the Study Area. An unnamed intermittent tributary to South Branch Pleasant Grove Creek flows to the northwest through the Study Area (SFEI 2020), and a drainage ditch from south to north towards the intermittent tributary.

The principal vegetation community within the Study Area is non-native annual grassland. This vegetation community is fairly sparse in the southern portion of the site, with a mix of non-native annual grasses including soft brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), perennial ryegrass (*Festuca perennis*), medusahead grass (*Elymus caput-medusa*), and wild oats (*Avena fatua*), and forbs such as Spanish lotus (*Acmispon americanus var. americanus*), Fitch's spikeweed (*Centromadia fitchii*), blue dicks (*Dichelostemma capitatum*), filaree (*Erodium botrys*), miniature lupine (*Lupines bicolor*), hairy hawkbit (*Leontodon saxatilis*), vetch (*Vicia* spp.), and English plantain (*Plantago lanceolata*). In the northern portion of the site, the annual grasslands are much denser in vegetation with a higher percentage of grass species and fewer forbs.

Interspersed throughout the grassland are a number of mature oaks, primarily blue oaks (*Quercus douglasii*), with scattered Valley oak (*Quercus lobata*) and live oak (*Quercus wislizeni*). A number of native and non-native trees are located along a drainage ditch and intermittent tributary including Chinese tallowtree (*Triadica sebifera*), southern catalpa (*Catalpa bignonioides*), honey locust (*Gleditsia triacanthos*), and willows (*Salix spp.*). Common shrubs in the riparian understory of the intermittent tributary include Himalayan blackberry (*Rubus armeniacus*), wild rose (*Rosa californica*), and narrow-leaf willow (*Salix exigua*).

3.1 Hydrology

The Study Area includes a central drainage ditch that flows from south to north through the site into an intermittent tributary to South Branch Pleasant Grove Creek in the northern portion of the site. The intermittent tributary flows from east to west through the Study Area. In addition, there are a number of seasonal wetland and vernal pool features scattered throughout the Study Area. The wetlands and other waters are described in more detail within the results portion of this report.

The Study Area is located in the Upper Coon-Upper Auburn Watershed (HUC 18020161) (USGS 2020). Mean annual precipitation for the Study Area is approximately 20.27 inches per year, and the site received approximately 55% of average rainfall in the 2019-2020 water year (NOAA 2020)

3.2 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2020), two soil mapping units occurs within the Study Area (**Figure 2**): (141) Cometa-Fiddyment complex, 1 to 5% slopes and (142) Cometa-Ramona sandy loams, 1 to 5% slopes. While neither of these soil types are considered hydric, they contain minor hydric components in Alamo depressions and xerofluvent drainageways.

3.3 Driving Directions

To access the Study Area from Sacramento, drive north east on Interstate 80 towards Reno. Exit 105A into Atlantic Street turn right on Yosemite Street, and Right on Shasta Street. The Study Area is directly across from Ferris Spranger Elementary School. The Study Area is fenced and not accessible without prior arrangements.

4.0 RESULTS

Aquatic resource features delineated within the Study Area consist of the south to north flowing drainage ditch, an intermittent drainage and associated riparian wetland, a seasonal wetland swale and a number of scattered vernal pools and seasonal wetlands. Data sheets are included in **Attachment A**, a map of the aquatic resources is included as **Figure 3 and Attachment B**. A list of the plant species observed in the Study Area with their wetland indicator status is included in **Attachment C**. GIS Shapefiles and the *Aquatic Resources Excel Spreadsheet* for the aquatic resources are included on as **Attachment D**. Photographs of the Study Area and Aquatic Resources is included as **Attachment E**.

Table 1. Aquatic Resources Mapped within the Study Area

Waters Type	Acreage/ Linear Feet
Wetlands	
Seasonal Wetland	
SW-1	0.033
SW-2	0.020
SW-3	0.001
SW-4	0.008
SW-5	0.002
SW-6	0.022
SW-7	0.025
SW-8	0.002
SW-9	0.003
SW-10	0.075
SW-11	0.008
Seasonal Wetland Subtotal	**0.199**
Seasonal Wetland Swale	
SWS-1	0.024
Seasonal Wetland Swale Subtotal	**0.024**
Vernal Pool	

VP-1	0.614
VP-2	0.006
VP-3	0.028
Vernal Pool Subtotal	**0.648**
Other Waters	
Drainage Ditch	
DD-1	0.077/ 614
DD-2	0.109/ 876
DD-3	0.038/ 311
Drainage Ditch Subtotal	**0.223/ 1,801**
Intermittent Drainage	
IDR-1	0.047/ 215
IDR-2	0.921/ 1,791
Intermittent Drainage Subtotal	**0.953/ 2,006**
Total	**2.047 acres/ 3,807 linear feet**

4.1 Wetlands

4.1.1 Seasonal Wetlands

The Study Area contains 11 seasonal wetlands concentrated along the southern and northern boundaries. Seasonal wetlands are shallow ephemeral wetlands area characterized by seasonal ponding, Seasonal wetlands within the Study Area are typically dominated by opportunistic facultative wet to facultative grasses and forbs such as Mediterranean barley (*Hordeum marinum*), Italian ryegrass, rabbitfoot grass (*Polypogon monspellensis*), Bermuda grass (*Cynodon dactylon*), hyssop loosestrife (*Lythrum hyssopifolium*), and curly dock (*Rumex crispus*).

A few of the seasonal wetlands in the northern portion of the Study Area (SW-4, SW-5) did not display the necessary redox features to meet the redox dark surface hydric soil indicator, however, as saturation was observed during the growing season (May 16) it was assumed that the dark soils in these features where masking redoximorphic features when both wetland vegetation and wetland hydrology were present. None of the seasonal wetlands have a direct surface water connection to the ditch or intermittent drainage.

4.1.2 Seasonal Wetland Swale

The seasonal wetland swale (SWS-1) within the study area flows from south the north and is dominated entirely by Italian ryegrass. This feature lacks evidence of flow or an ordinary highwater mark and did not contain water during the 2019-2020 rainy season, but was saturated at the surface during the April survey. The seasonal wetland swale is connected to intermittent Drainage IDR-2.

4.1.3 Vernal Pools

The Study Area contains three vernal pools towards the center of the property. Vernal pools are shallow ephemeral wetlands characterized by seasonal ponding, and hydrologically similar to seasonal wetlands; however, vernal pools are typically underlain by an imperious substrate resulting in unique flora. The vernal pools in the Study Area were given this designation based on a dominance of vernal pool plant species, including slender pool popcorn flower (*Plagiobothrys stipitatus var. micranthus*), dwarf woolyheads

(*Psilocarphus brevissimus var. brevissimus*), great valley coyote-thistle (*Eryngium castrense*), creeping spikerush (*Eleocharis macrostachya*) and annual hairgrass (*Deschampsia danthonioides*) and a lower overall vegetative cover. Vernal pools in the Study Area exhibited primary hydrology indicators including inundation, saturation, and oxidized rhizospheres along living roots. Soils exhibited a depleted matrix (D3).

None of the vernal pools on-site have a direct surface water connection to the ditch or intermittent drainage. There is an earthen dam between VP-1 and SW-6 that prevents downstream flow and impounds water in VP-1.

4.2 Other Waters

4.2.1 Drainage Ditch

An earthen drainage ditch conveys irrigation run-off from developments south and east of the Study Area, north to the intermittent drainage. This feature is characterized by steep slopes, and is well vegetated with dense wetland obligates including water plantain (*Alisma lanceolatum*), broad-leaved cattail (*Triadica sebifera*), dotted smartweed (*Persicaria punctata*) and tall nutsedge (*Cyperus eragrostis*) with scattered native and non-native trees including Chinese catalpa, chinese tallow, willows, and Callery pear (*Pyrus calleryan*). This feature was apparently constructed concurrent with the adjacent development to the south and east sometime after 1966 and before 1993 (HistoricAerials.com 2020). A culvert under a dirt maintenance road is located between the two drainage ditch segments (DD-1 and DD-2), and between segments DD-2 and DD-3. Stormwater and irrigation runoff enter the ditch though a culvert at the southern end of DD-3. The ditch flows to the intermittent drainage IDR-2 in the northern portion of the Study Area.

4.2.2 Intermittent Drainage

An intermittent drainage and adjacent riparian wetland are located in the northern portion of the Study Area. This drainage flows from east to west through the Study Area and the two segments (IDR-1 and IDR-2) are connected via a culvert under a dirt maintenance road. The City of Roseville storm drainage system outfalls into the northern portion of IDR-2 in the northeast corner of the Study Area south of Diamond Oaks Road. The intermittent drainage is the upper watershed, and ultimately a tributary to, South Branch Pleasant Grove Creek.

IDR-1 and IDR-2 typically exhibit a bed, bank, and channel, ranging in width from 1-3 ft wide. Portions of this intermittent drainage lack an ordinary high water mark, or clear drainage patterns, and is characterized as riparian wetland with a mix of Santa Barbara sedge (*Carex Barbara*), dallisgrass (*Paspalum dilitatum*), dotted smartweed, tall nutsedge, Italian rygrass, dense Himalayan blackberry thickets, wild rose, and willows. The boundaries of the intermittent drainage were delineated at the ordinary high water mark, or the edge of riparian vegetation, whichever was in the most upland position. Minimal surface water was observed ponding in isolated section of this feature during the April field survey and non during the May visit. This intermittent drainage ultimately connects to the South Branch Pleasant Grove Creek.

5.0 CONCLUSION

Implementation of the USACE delineation protocol resulted in the identification of 2.047 acres/ 3,807 linear feet of wetlands or other waters within the Study Area. Each agency must determine if these wetlands and other waters, once delineated, are regulated by the local, state, and federal laws. The applicant is requesting the USACE concurrence regarding the quantity and locations of aquatic resources mapped within the Study Area (Figure 3, Attachment B) utilizing the USACE delineation protocol, and that the USACE determine Federal jurisdiction of these aquatic resources by providing the applicant with an approved jurisdictional determination letter. A signed form providing USACE staff accompanied access to the Study Area is included as **Attachment F**.

6.0 REFERENCES

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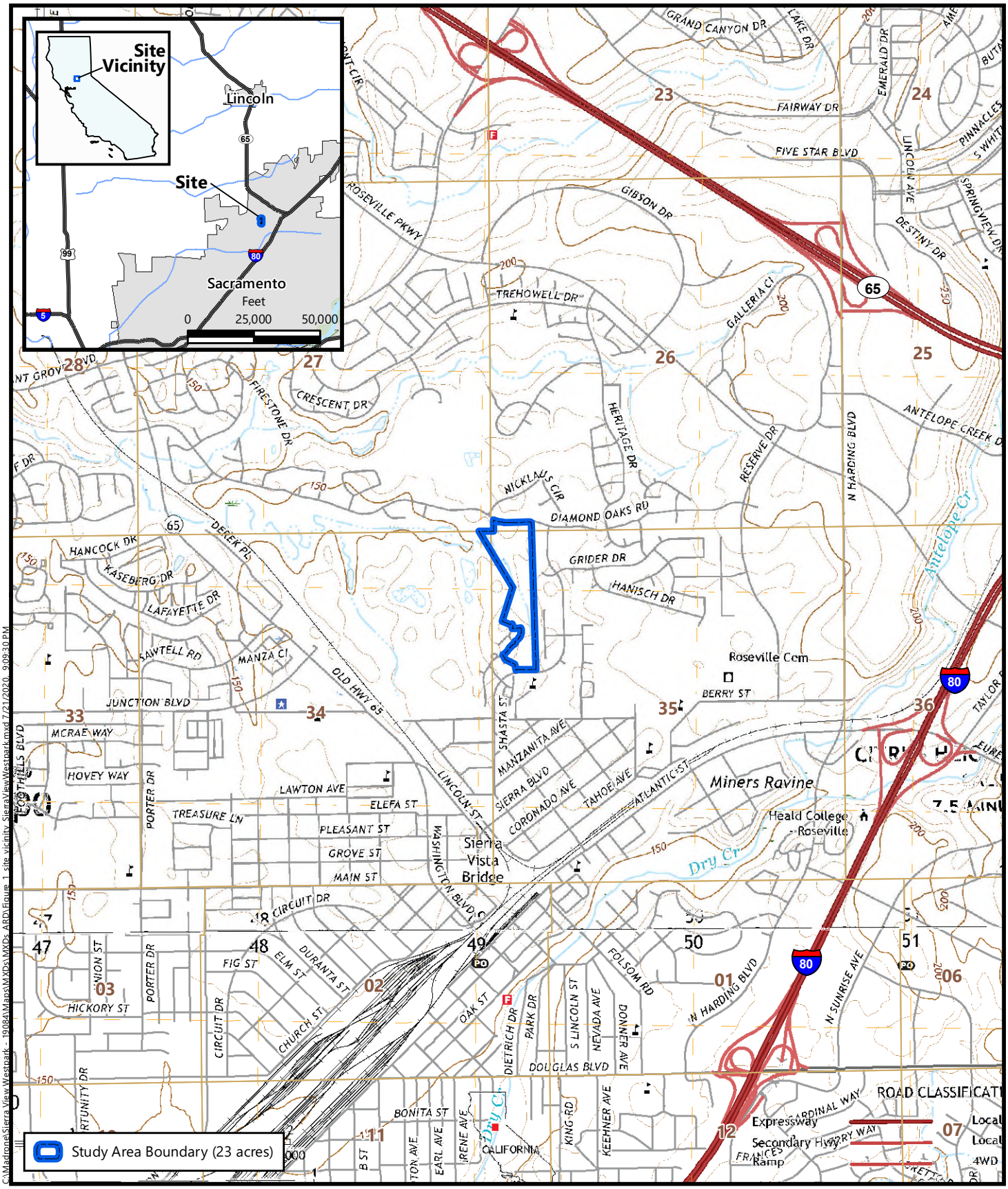
Figures



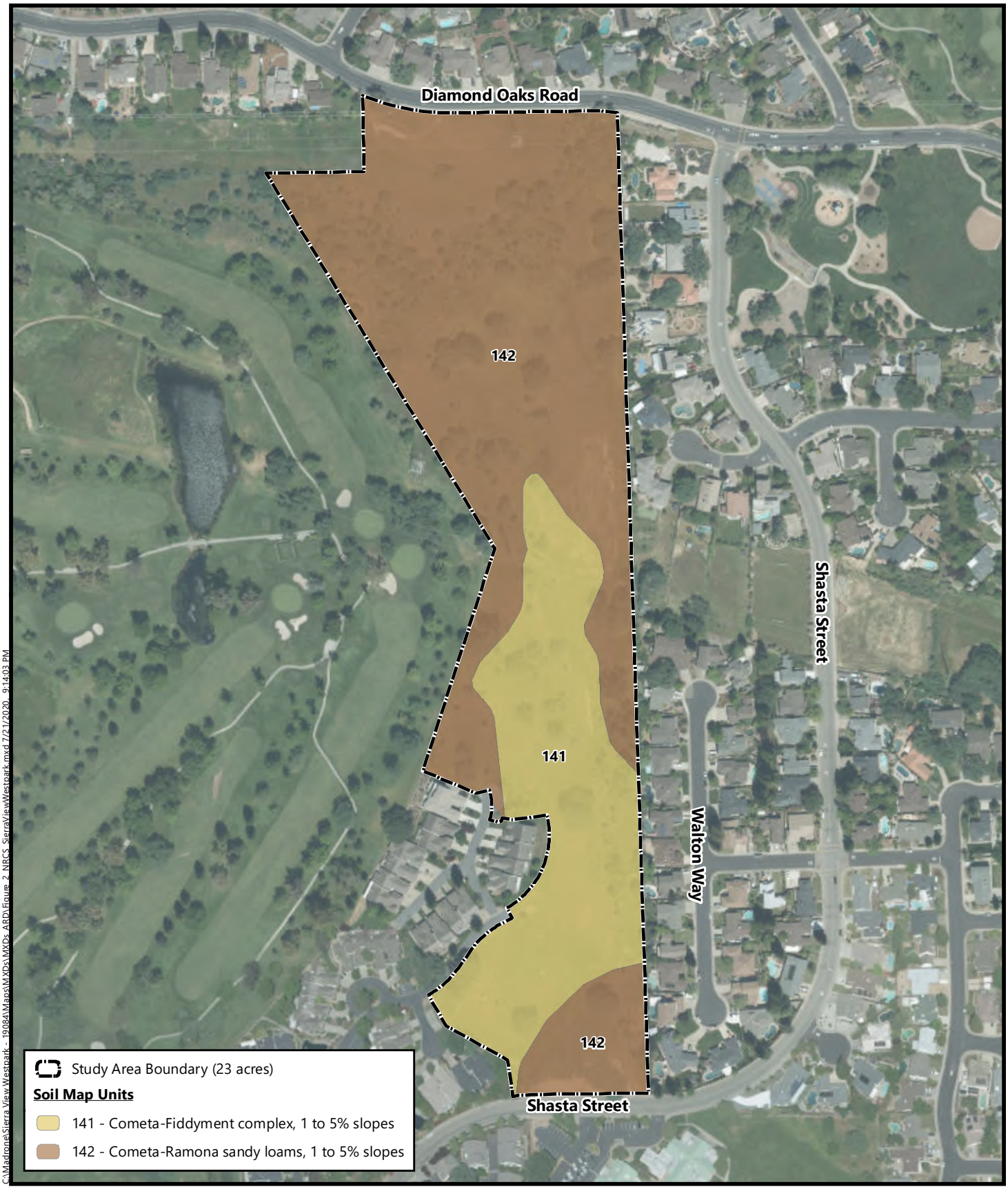
Source: United States Geologic Survey, 2018
"Roseville, California" 7.5-Minute Topographic Quadrangle
Sections 26, 34, and 35, Township 11 North, Range 6 East
Longitude -121.283085, Latitude 38.764232

Figure 1
Site and Vicinity

SVLC 23 Property
Roseville, Placer County, California

MADRONE ECOLOGICAL CONSULTING

C:\Madrone\Sierra View Westpark - 19084\Maps\MXDs\MXDs ARD\Figure 1 site vicinity SierraViewWestpark.mxd 7/21/2020 9:09:30 PM



Soil Survey Source: *USDA, Soil Conservation Service. Soil Survey Geographic (SSURGO) database for Placer County, California, Western Part*
Aerial Base: City of Roseville, 22 April 2019

Figure 2
Natural Resources Conservation Service Soils

SVLC 23 Property
Roseville, Placer County, California

MADRONE ECOLOGICAL CONSULTING

N

Feet
0 80 160

Aerial Base: City of Roseville, 22 April 2019

Figure 3
Aquatic Resources

SVLC 23 Property
Roseville, Placer County, California

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Attachments

Attachment A. Arid West Wetland Determination Data Forms

Attachment B. Aquatic Resources Delineation

Attachment C. Plant Species Observed within the Study Area

Attachment D. GIS Shapefiles and the Aquatic Resources Excel Spreadsheet

Attachment E. Representative Site Photographs

Attachment F. Permission to Enter

Attachment A

Arid West Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 4.16.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-1
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): Concave Slope (%): <2
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.7662057 Long: -121.2270614 Datum: NAD 83
Soil Map Unit Name: 142 - Cometa-Ramona sandy loams, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X*	No	
Wetland Hydrology Present?	Yes X	No	

Remarks:Located in lowest point of SW-4

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter sq)			
1. *Leontodon saxatilis*	20	Y	FACU
2. *Ranunculus bonariensis*	10	N	OLB
3. *Rumex crispus*	5	N	FAC
4. *Festuca perennis*	40	Y	FAC
5. *Trifolium campestre*	5	N	UPL
6. *Acmispon americanus*	5	N	UPL
7. *Geranium dissectum*	5	N	UPL
8.			
	90	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 10	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **1** (A)
Total Number of Dominant Species Across All Strata: **2** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **50%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**10** x1 =	**10**
FACW species	**0** x2 =	**0**
FAC species	**45** x3 =	**135**
FACU species	**20** x4 =	**80**
UPL species	**15** x5 =	**75**
Column Totals:	**90** (A)	**300** (B)

Prevalence Index = B/A = **3.3**

Hydrophytic Vegetation Indicators:
- Dominance Test is >50%
- X Prevalence Index is ≤3.0[1]
- Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: DP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10 YR 3/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X* **No** ___

Remarks: Note, required redox to meet F6 were not evident, however, they are likely masked by the dark soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes X No ___ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 4.16.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-2
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): Concave Slope (%): <2
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.76619457 Long: -121.2826728 Datum: NAD 83
Soil Map Unit Name: 142 - Cometa-Ramona sandy loams, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes X*	No	
Wetland Hydrology Present?	Yes X	No	

Remarks:Located at boundary of SW-4

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter sq)			
1. *Leontodon saxatilis*	5	N	FACU
2. *Ranunculus bonariensis*	5	N	OLB
3. *Festuca perennis*	35	Y	FAC
4. *Geranium disectum*	5	Y	UPL
5. *Trifolium campestre*	35	N	UPL
6. *Festuca bromoides*	5	N	FACU
7.			
8.			
	90	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 10	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **1** (A)
Total Number of Dominant Species Across All Strata: **2** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **50%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**5**	x1 = **5**
FACW species	**0**	x2 = **0**
FAC species	**35**	x3 = **105**
FACU species	**5**	x4 = **20**
UPL species	**40**	x5 = **200**
Column Totals:	**85** (A)	**330** (B)

Prevalence Index = B/A = **3.9**

Hydrophytic Vegetation Indicators:
Dominance Test is >50%
Prevalence Index is ≤3.0[1]
Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sampling Point: DP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10 YR 3/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks: Note, required redox to meet F6 were not evident, however, they are likely masked by the dark soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes X No ___ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 4.16.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-3
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.76620216 Long: -121.2826705 Datum: NAD 83
Soil Map Unit Name: 142 - Cometa-Ramona sandy loams, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes X*	No	
Wetland Hydrology Present?	Yes X	No	

Remarks:On very slight hillslope 0.5-1 ft higher then DP-1.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter sq)			
1. *Festuca bromoides*	15	Y	FACU
2. *Bromus hordeaceus*	15	Y	FACU
3. *Trifolium campestre*	55	Y	UPL
4. *Geranium dissectum*	trace	N	UPL
5. *Festuca perennis*	10	N	FAC
6.			
7.			
8.			
	95	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 5	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **3** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**0**	x1 = **0**
FACW species	**0**	x2 = **0**
FAC species	**10**	x3 = **30**
FACU species	**30**	x4 = **120**
UPL species	**55**	x5 = **275**
Column Totals:	**95** (A)	**425** (B)

Prevalence Index = B/A = **4.5**

Hydrophytic Vegetation Indicators:
Dominance Test is >50%
Prevalence Index is ≤3.0[1]
Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sampling Point: DP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10 YR 3/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X* **No** ___

Remarks: Note, required redox to meet F6 were not evident, however, they are likely masked by the dark soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 12

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 4.16.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-4
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): Concave Slope (%): <2
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.76627448 Long: -121.282582 Datum: NAD 83
Soil Map Unit Name: 142 - Cometa-Ramona sandy loams, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes *X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks:Located in lowest point of SW-5

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	

Herb Stratum (Plot size: 1 meter sq)			
1. *Leontodon saxatilis*	5	N	FACU
2. *Ranunculus bonariensis*	5	N	OLB
3. *Rumex crispus*	10	Y	FAC
4. *Festuca perennis*	25	Y	FAC
5. *Juncus bufonus*	t	N	OBL
6.			
7.			
8.			
	45	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 55 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **2** (A)
Total Number of Dominant Species Across All Strata: **2** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**5**	x1 =	**5**
FACW species	**0**	x2 =	**0**
FAC species	**35**	x3 =	**105**
FACU species	**5**	x4 =	**20**
UPL species	**0**	x5 =	**0**
Column Totals:	**45** (A)		**130** (B)

Prevalence Index = B/A = **2.9**

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: DP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10 YR 3/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** *X **No** ___

Remarks: Note, required redox to meet F6 were not evident, however, they are likely masked by the dark soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes X No ___ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 4.16.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-5
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): slope Slope (%): 2
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.7662729 Long: -121.2826705 Datum: NAD 83
Soil Map Unit Name: 142 - Cometa-Ramona sandy loams, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes X*	No	
Wetland Hydrology Present?	Yes X	No	

Remarks: Up slope of SW-5, visable shift in vegetation.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter sq)			
1. *Festuca bromoides*	30	Y	FACU
2. *Leontodon saxatilis*	35	Y	FACU
3. *Trifolium campestre*	30	Y	UPL
4. *Briza minor*	t	N	FAC
5.			
6.			
7.			
8.			
	95	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 5	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **3** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**0**	x1 =	**0**
FACW species	**0**	x2 =	**0**
FAC species	**0**	x3 =	**0**
FACU species	**35**	x4 =	**140**
UPL species	**30**	x5 =	**150**
Column Totals:	**65** (A)		**290** (B)

Prevalence Index = B/A = **4.5**

Hydrophytic Vegetation Indicators:
_____ Dominance Test is >50%
_____ Prevalence Index is ≤3.0[1]
_____ Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
_____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sampling Point: DP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10 YR 3/2	100					Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X* **No** ___

Remarks: Note, required redox to meet F6 were not evident, however, they may be masked by the dark soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes X No ___ Depth (inches): 12

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 10

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 5.15.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-6
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): Concave Slope (%): <2
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.7615538 Long: -121.2270614 Datum: NAD 83
Soil Map Unit Name: 141 - Cometa-Fiddyment complex, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks: Located in SW-7, this feature was previously mapped as two smaller features for the purposes for branchiopod surveys, but upon collection of three parameter data was remapped to one larger feature.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter sq)			
1. *Rumex crispus*	8	N	FAC
2. *Festuca perennis*	8	N	FAC
3. *Polypogon monspellensis*	2	N	FACW
4. *Juncus bufonius*	10	N	FACW
5. *Ranunculus bonariensis*	15	N	OBL
6. *Cynodon dactylon*	45	Y	FACU
7. *Hordeum marinum*	2	N	FAC
8.			
	90	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 10

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **1** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**15**	x1 = **15**
FACW species	**12**	x2 = **24**
FAC species	**18**	x3 = **54**
FACU species	**45**	x4 = **180**
UPL species	**0**	x5 = **0**
Column Totals:	**90** (A)	**273** (B)

Prevalence Index = B/A = **3.0**

Hydrophytic Vegetation Indicators:
- Dominance Test is >50%
- X Prevalence Index is ≤3.0[1]
- Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: DP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10 YR 3/2	98	gravel				Gravely loam	
3 - 12	10YR 4/2	95	7.5 yr 4/4	5	C	m	Gravely loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- X Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 5.15.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-7
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): none Slope (%): <1
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.76152805 Long: -121.2270614 Datum: NAD 83
Soil Map Unit Name: 141 - Cometa-Fiddyment complex, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes	No X	

Remarks: Located at upland limit of SW-7.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 1 meter sq)			
1. *Elymus caput-medusea*	25	Y	UPL
2. *Festuca perennis*	25	Y	FAC
3. *Leontodon saxatilis*	25	Y	FACU
4. *Brodea elegans*	5	N	FACU
5. *Lupinus bicolor*	trace	N	OBL
6. *Trifolium dubium*	5	N	FACU
7. *Briza minor*	2	N	FAC
8.			
	87	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 13 % Cover of Biotic Crust

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **1** (A)
Total Number of Dominant Species Across All Strata: **3** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **33%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**0** x1 =	**0**
FACW species	**0** x2 =	**0**
FAC species	**27** x3 =	**81**
FACU species	**35** x4 =	**140**
UPL species	**25** x5 =	**125**
Column Totals:	**87** (A)	**346** (B)

Prevalence Index = B/A = **4.0**

Hydrophytic Vegetation Indicators:
- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sampling Point: DP-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/2	90	7.5 yr 4/4	5	C	m	Gravely loam	
			5 YR 4/6	5	C	m	Gravely loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 5.15.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-8
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): concave Slope (%): <2
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.76138093 Long: -121.2270614 Datum: NAD 83
Soil Map Unit Name: 141 - Cometa-Fiddyment complex, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks: Located at in SW-8

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	

Herb Stratum (Plot size: 1 meter sq)			
1. *Epilobium torreyi*	15	Y	FACW
2. *Navarretia intertexta*	15	Y	FACW
3. *Triteleia hyacinthia*	5	N	FAC
4. *Lythrum hyssopifolium*	15	Y	OBL
5. *Hordeum marinum*	10	N	FAC
6. *Ranunculus bonarensis*	10	N	OBL
7. *Leontodon saxatilis*	20	Y	FACU
8. *Briza minor*	trace	N	FAC
	90	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 5

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **3** (A)
Total Number of Dominant Species Across All Strata: **4** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **75%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**25**	x1 =	**25**
FACW species	**30**	x2 =	**60**
FAC species	**15**	x3 =	**45**
FACU species	**20**	x4 =	**80**
UPL species	**0**	x5 =	**0**
Column Totals:	**90** (A)		**210** (B)

Prevalence Index = B/A = **2.3**

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No X

Remarks:

SOIL

Sampling Point: DP-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/2	95	7.5 yr 4/4	5	C	m	Gravely loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- X Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 5.15.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-9
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): None Slope (%): 0
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.76135796 Long: -121.2270614 Datum: NAD 83
Soil Map Unit Name: 142 - Cometa-Ramona sandy loams, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks: Located in a swale between SW-8 and SW-10. No hydrology observed during wet season branchiopod surveys.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	

Herb Stratum (Plot size: 1 meter sq)			
1. *Bromus hordeaceus*	15	N	FACU
2. *Festuca perennis*	15	N	FAC
3. *Elymus caput-medusa*	25	Y	UPL
4. *Leontodon saxatilis*	25	Y	FACU
5. *Triteleia hyacinthia*	2	N	FAC
6. *Epilobium torreyi*	2	N	FACW
7. *Rumex crispus*	2	N	FAC
8. *Briza minor*	2	N	FAC
	88	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 12 % Cover of Biotic Crust

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **2** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**0**	x1 =	**0**
FACW species	**2**	x2 =	**4**
FAC species	**21**	x3 =	**63**
FACU species	**40**	x4 =	**160**
UPL species	**25**	x5 =	**125**
Column Totals:	**88** (A)		**352** (B)

Prevalence Index = B/A = **4.0**

Hydrophytic Vegetation Indicators:
- Dominance Test is >50%
- X Prevalence Index is ≤3.0[1]
- Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No X

Remarks:

SOIL

Sampling Point: DP-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10 YR 4/2	90	7.5 YR 4/4	10	C	M/PL	Gravely loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 5.20.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-10
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): Concave Slope (%): <2
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.76615526 Long: -121.2829282 Datum: NAD 83
Soil Map Unit Name: 142 - Cometa-Ramona sandy loams, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks: Located in SW-1.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: _1 Sq meter____)			
1. *Polypogon monspeliensis*	10	N	FACW
2. *Lythrum hyssopifolium*	5	N	OBL
3. *Leontodon saxatilis*	20	Y	FACU
4. *Eleocharis macrostachya*	20	Y	OBL
5. *Festuca perennis*	30	Y	FAC
6. *Plagiobothrys stipitatus*	5	N	FACW
7.			
8.			
	90	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 5	% Cover of Biotic Crust 5		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **3** (A)
Total Number of Dominant Species Across All Strata: **3** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **100%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**25**	x1 =	**25**
FACW species	**15**	x2 =	**30**
FAC species	**30**	x3 =	**90**
FACU species	**20**	x4 =	**80**
UPL species	**0**	x5 =	**0**
Column Totals:	**90** (A)		**225** (B)

Prevalence Index = B/A = **2.5**

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: DP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5 YR 4/1	95	2.5 YR 4-6	5	C	m/pl	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- X Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 5.20.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-11
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): 142 - Cometa-Ramona sandy Local relief (concave, convex, none): none Slope (%): <1
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.7661764 Long: 38.7661764 Datum: NAD-83
Soil Map Unit Name: 142 - Cometa-Ramona sandy loams, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No **X**	**Is the Sampled Area within a Wetland?** Yes ____ No **X**
Hydric Soil Present?	Yes ____	No **X**	
Wetland Hydrology Present?	Yes ____	No **X**	

Remarks: Upland point slightly upslope of SW-1

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: _1 Sq meter____)			
1. *Aegilops triuncialis*	30	Y	UPL
2. *Elymus caput-medusae*	30	Y	UPL
3. *Acmispon americanus*	5	N	UPL
4. *Eschscholzia lobbii*	5	N	UPL
5. *Holocarpha virgata ssp. Virgata*	5	N	UPL
6. *Erodium botrys*	5	N	FACU
7. *Leontodon saxatilis*	5	N	FACU
8.			
	85	=Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		=Total Cover	
% Bare Ground in Herb Stratum 15	% Cover of Biotic Crust 0		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **2** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:
OBL species	**0**	x1 = **0**
FACW species	**0**	x2 = **0**
FAC species	**0**	x3 = **0**
FACU species	**10**	x4 = **40**
UPL species	**75**	x5 = **375**
Column Totals:	**85** (A)	**415** (B)

Prevalence Index = B/A = **4.9**

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No **X**

Remarks:

SOIL

Sampling Point: DP-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5 YR 3/2	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 5.20.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-12
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): Concave Slope (%): <2
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.76644879 Long: -121.282915 Datum: NAD 83
Soil Map Unit Name: 142 - Cometa-Ramona sandy loams, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area within a Wetland?** Yes X No
Hydric Soil Present?	Yes X	No	
Wetland Hydrology Present?	Yes X	No	

Remarks: Located in SW-3.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: _1 Sq meter____)			
1. *Festuca perennis*	75	N	FAC
2. *Rumex crispus*	2	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	77	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x1 =	0
FACW species	0	x2 =	0
FAC species	77	x3 =	231
FACU species	0	x4 =	0
UPL species	0	x5 =	0
Column Totals:	77 (A)		231 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No

Remarks:

SOIL

Sampling Point: DP-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5 YR 4/1	95	2.5 YR 4-6	5	C	m/pl	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Did not pond for most of the rainy season/ protocal level branchiopod survey period.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SVLC 23 Property City/County: Roseville/ Placer County Sampling Date: 5.20.2020
Applicant/Owner: WP Sierra View, LLC/ SVLC 23, LLC State: CA Sampling Point: DP-13
Investigator(s): Bonnie Peterson/Madrone Eco Section, Township, Range: M 11N 06E 35
Landform (hillslope, terrace, etc.): 142 - Cometa-Ramona sandy Local relief (concave, convex, none): None Slope (%): 0
Subregion (LRR): Mediterranean California (LRR C) Lat: 38.7664577 Long: -121.2829424 Datum: NAD 83
Soil Map Unit Name: 142 - Cometa-Ramona sandy loams, 1 to 5% slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** Yes No X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	

Remarks: Upland point slightly upslope of SW-1

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	=Total Cover	

Herb Stratum (Plot size: 1 Sq meter)			
1. *Aegilops triuncialis*	1	N	UPL
2. *Elymus caput-medusae*	85	Y	UPL
3. *Acmispon americanus*	1	N	UPL
4. *Avena barbata*	5	N	UPL
5. *Erodium botrys*	1	N	FACU
6. *Festuca perennis*	1	N	FAC
7.			
8.			
	94	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: **0** (A)
Total Number of Dominant Species Across All Strata: **1** (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: **0%** (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	**0**	x1 =	**0**
FACW species	**0**	x2 =	**0**
FAC species	**1**	x3 =	**3**
FACU species	**1**	x4 =	**4**
UPL species	**92**	x5 =	**460**
Column Totals:	**94** (A)		**467** (B)

Prevalence Index = B/A = **5.0**

Hydrophytic Vegetation Indicators:
- Dominance Test is >50%
- Prevalence Index is ≤3.0[1]
- Morphological Adaptationd[1] (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No X

Remarks:

SOIL

Sampling Point: DP-13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5 YR 3/2	100					Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** **X**

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Attachment B

Aquatic Resources Delineation

AQUATIC RESOURCE FEATURES

WETLANDS

Seasonal Wetland

Feature ID	Acreage
SW-1	0.033
SW-2	0.020
SW-3	0.001
SW-4	0.008
SW-5	0.002
SW-6	0.022
SW-7	0.025
SW-8	0.002
SW-9	0.003
SW-10	0.075
SW-11	0.008
	0.199

Seasonal Wetland Swale

Feature ID	Acreage
SWS-1	0.024
	0.024

Vernal Pool

Feature ID	Acreage
VP-1	0.614
VP-2	0.006
VP-3	0.028
	0.648
Total:	**0.871**

OTHER WATERS

Drainage Ditch

Feature ID	Acreage	Linear Feet
DD-1	0.077	614
DD-2	0.109	876
DD-3	0.037	311
	0.223	**1,801**

Intermittent Drainage and Adjacent Riparian Wetland

Feature ID	Acreage	Linear Feet
IDR-1	0.046	215
IDR-2	0.907	1791
	0.953	**2,006**
Total:	**1.176**	**3,807**

Aquatic Resources Total: 2.047 acres

* Rounding may result in small summation errors.

C:\Madrone\Sierra View Westpark - 19084\Maps\MXDs\MXDs_ARD\AttachB_SACE_ARD_SierraViewWestpark_20200723.mxd

Notes:
Scale: 1 inch = 45 feet
Coordinate System: California State Plane, Zone II
Datum: NAD83
Vertical Datum: NAVD 88
Projection: Lambert Conformal Conic
Aerial Base: City of Roseville
Aerial Base Flown: 22 April 2019
Topographic Contours: USGS NED 1/3 arc-second for SacramentoW, California. 1 October 2018
Date Map Prepared: 23 July 2020
Map Prepared by: N. Bente
Delineation Performed by: B. Peterson

N
0 45 90 180
Feet

Study Area Boundary (23 acres)
Data Point
Reference Point
Culvert
Ground Surface Elevation, 10 foot contour

Prepared For:
SVLC 23, LLC
105 Alta Vista Drive
Roseville, CA 95678

Aquatic Resources (2.047 acres)

Wetlands (0.871 acre)
Vernal Pool (0.648 acre)
Seasonal Wetland (0.199 acre)
Seasonal Wetland Swale (0.024 acre)

Other Waters (1.176 acres)
Drainage Ditch (0.223 acre)
Intermittent Drainage and Adjacent Riparian Wetland (0.953 acre)

Aquatic Resources Delineation SVLC 23 Property
Roseville, Placer County, California

MADRONE ECOLOGICAL CONSULTING
8421 Auburn Boulevard, Suite 248
Citrus Heights, California 95610
(916) 822.3220 | www.madroneeco.com

Attachment C

Plant Species Observed within the Study Area

SVLC 23 Property
Plant Species Observed 15 and 16 April and 15 and 20 May 2020

Species Name	**Common Name**	**AW Wetland Rating**
Achyrachaena mollis	Blow wives	FAC
Acmispon americanus var. americanus	Spanish lotus	UPL
Aegilops triuncialis	Barbed goat grass	UPL
Agrostis stolonifera	Creeping bent	FACW
Ailanthus altissima	Tree of heaven	FACU
Alisma lanceolatum	Water plantain	OBL
Asclepias fascicularis	Narrow-leaf milkweed	FAC
Avena fatua	Wild oat	UPL
Briza minor	Annual quaking grass	FAC
Brodiaea elegans subsp. elegans	Harvest brodiaea	FACU
Bromus hordeaceus	Soft chess	FACU
Callitriche marginata	Winged water starwort	OBL
Calochortus luteus	Yellow mariposa lily	UPL
Carduus pycnocephalus subsp. pycnocephalus	Italian thistle	UPL
Carex barbarae	Santa barbara sedge	FAC
Castilleja campestris subsp. campestris	Yellow owl's clover	FACW
Catalpa bignonioides	Southern catalpa	UPL
Centaurea solstitialis	Yellow star-thistle	UPL
Centromadia fitchii	Fitch's spikeweed	FACU
Chlorogalum angustifolium	Narrowleaf soap plant	UPL
Chlorogalum pomeridianum	Wavy-leaf soap plant	UPL
Cynodon dactylon	Bermuda grass	FACU
Cynosurus echinatus	Bristly dogtail grass	UPL
Cyperus difformis	Variable flat sedge	OBL
Cyperus eragrostis	Tall nutsedge	FACW
Delphinium sp.	Larkspur	UPL
Deschampsia danthonioides	Annual hair grass	FACW
Dichelostemma capitatum	Blue dicks	FACU
Dichelostemma multiflorum	Wild hyacinth	UPL
Eleocharis macrostachya	Creeping spikerush	OBL
Elymus caput-medusae	Medusa head	UPL
Epilobium canum	California fuchsia, zauschneria	UPL
Epilobium torreyi	Torrey's willow-herb	FACW
Erigeron canadensis	Horseweed	FACU
Erodium botrys	Filaree	FACU
Eryngium castrense	Great valley coyote-thistle	OBL
Erythranthe guttata	Seep-spring monkeyflower	OBL
Festuca perennis	Rye grass	FAC
Gleditsia triacanthos	Honey locust	FAC
Glyceria declinata	Low manna grass	FACW
Gratiola ebracteata	Bractless hedge-hyssop	OBL
Holocarpha virgata subsp. virgata	Slender tarweed	UPL
Hypericum perforatum subsp. perforatum	Klamathweed	FACU
Juncus bufonius	Toad rush (group 1)	FACW

SVLC 23 Property
Plant Species Observed 15 and 16 April and 15 and 20 May 2020

Species Name	**Common Name**	**AW Wetland Rating**
Lactuca serriola	Prickly lettuce	FACU
Leontodon saxatilis subsp. saxatilis	Hairy hawkbit	FACU
Lupinus bicolor	Miniature lupine	UPL
Lythrum hyssopifolia	Hyssop loosestrife	OBL
Micropus californicus	Q-tips	FACU
Navarretia intertexta	Needle leaf navarretia	FACW
Parthenocissus quinquefolia	Virgina creeper	FAC
Paspalum dilatatum	Dallis grass	FAC
Persicaria punctata	Dotted smartweed	OBL
Plagiobothrys greenei	Greene's spiny-nut popcornflower	FACW
Plagiobothrys stipitatus var. micranthus	Slender popcorn flower	FACW
Plantago erecta	Dotseed plantain	UPL
Plantago lanceolata	English plantain	FAC
Pogogyne zizyphoroides	Sacramento beardstyle	OBL
Polygonum aviculare subsp. depressum	Prostrate knotweed	FAC
Populus fremontii subsp. fremontii	Fremont cottonwood	FAC
Prunus cerasifera	Cherry plum	UPL
Pseudognaphalium luteoalbum	Pearly everlasting	FAC
Pseudognaphalium microcephalum	Wright's cudweed	FACU
Psilocarphus brevissimus var. brevissimus	Dwarf woollyheads	FACW
Pyrus calleryan	Callery pear	NL
Quercus douglasii	Blue oak	UPL
Quercus lobata	Valley oak	FACU
Quercus wislizeni var. wislizeni	Interior live oak	UPL
Ranunculus bonariensis var. trisepalus	Carter’s buttercup	OBL
Rosa californica	California rose	FAC
Rosa sp.	Cultivated rose	UPL
Rubus armeniacus	Himalayan blackberry	FAC
Rumex crispus	Curly dock	FAC
Salix exigua	Sandbar willow	FACW
Salix sp.	Willow	UPL
Schoenoplectus acutus var. occidentalis	Common tule	OBL
Sonchus asper subsp. asper	Prickly sow thistle	UPL
Torilis arvensis	Tall sock-destroyer	UPL
Tragopogon dubius	Yellow salsify	UPL
Triadica sebifera	Chinese tallowtree	FAC
Trifolium glomeratum	Clustered clover	UPL
Trifolium hirtum	Rose clover	UPL
Trifolium subterraneum	Subterranean clover	UPL
Triteleia hyacinthina	White brodiaea, fool's onion	FAC
Typha latifolia	Broad-leaved cattail	OBL
Vicia sativa	Spring vetch	FACU
Vicia villosa	Hairy vetch, winter vetch	UPL
Vitis californica	California wild grape	FACU

Attachment D

GIS Shapefiles and the Aquatic Resources Excel Spreadsheet

Attachment E

Representative Site Photographs

Season Wetland SW-2 facing south, 15 May 2020

Seasonal wetland (SW-3), facing south, 15 May 2020

Seasonal wetland (SW-1), facing south, 15 May 2020

Seasonal wetland (SW-4), facing west, 16 April 2020

Seasonal wetland (SW-5), facing west, 16 April 2020

Seasonal wetland swale(SWS-1), facing northwest, 16 April 2020

Drainage ditch (DD-1) facing northwest, 18 May 2020

Intermittent drainage (IDR-2) facing south, 18 May 2020

Intermittent drainage (IDR-1) facing west, 18 May 2020

Intermittent drainage (IDR-2) upper reach, City storm drain outfall facing south, 23 July 2020

Seasonal wetland (SW-10) facing south, 18 May 2020

Seasonal wetland (SW-9) facing east, 18 May 2020

Seasonal wetland (SW-7) facing north, 18 May 2020

Attachment F

Permission to Enter

Sierra View
COUNTRY CLUB

July 30, 2020

Project Manager
Regulatory Division
U.S. Army Corps of Engineers
1325 J Street, Room 1350
Sacramento, California 95814-2922

Re: SVLC 23, LLC Access

This letter serves as written permission to enter the SVLC 23, LLC property shown on the attached **Figure 1** when accompanied by Madrone Ecological Consulting, LLC (Madrone) staff. When accompanied by Madrone staff, you may dig soil pits by hand and collect plant materials related to the verification of potential Waters of the U.S. on the SVLC 23, LLC property. If you have any questions, please contact Sarah VonderOhe at Madrone (916) 822-3230 or svonderohe@madroneeco.com.

Sincerely,

John Welch
President/CEO
Sierra View Land Company

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

June 4, 2021

Regulatory Division (SPK-2020-00625)

SVLC 23, LLC
c/o Sierra View Land Company
Attn: Mr. John Welch
105 Alta Vista Drive
Roseville, CA 95678

Dear Mr. Welch:

We are responding to your August 13, 2020, request for an approved jurisdictional determination for the SVLC 23 Property site. The approximately 23-acre project site is located adjacent to, and just north of Shasta Street and south of Diamond Oaks Road and to the east of the Sierra View Country Club, at coordinates (NAD83) Latitude 38.7643°, Longitude -121.2830°, Roseville, Placer County, California.

Based on available information, we concur with your aquatic resources delineation for the site, as depicted on the enclosed July 23, 2020, *Aquatic Resources Delineation SVLC 23 Property* drawing(s) prepared by N. Bente of Madrone Ecological Consulting (enclosure 1). Approximately 2.047 acres of aquatic resources, consisting of 0.199 acres of seasonal wetlands, 0.024 acres of seasonal wetland swale, 0.871 acres of vernal pools, 1,801 linear feet of ephemeral drainages, and 2,006 linear feet of intermittent drainage are present within the survey area. This letter verifies that the location and boundaries of wetlands were delineated consistent with the wetland definition at 33 CFR §328.3(c)(16), the 1987 *Corps of Engineers Wetlands Delineation Manual* (Wetlands Research Program Technical Report Y-87-1) and the applicable regional supplements; the location and boundaries of tidal waters conform with the high tide line defined at 33 CFR §328.3(c)(4); and the location and boundaries of non-tidal waters conform with the ordinary high water mark definition at 33 CFR §328.3(c)(7), Regulatory Guidance Letter 05-05, and any applicable regional guide.

Of these aquatic resources, we have determined that those features identified as SWS-1, IDR-1, and IDR-2, totaling 0.992 acres are waters of the United States pursuant to 33 CFR Part 328 and are regulated under Section 404 of the Clean Water Act; and**,** features DD-1, 2, 3, and SW-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and VP-1, 2, 3, totaling 1.055 acres are not waters of the U.S., regulated under Section 404 of the Clean Water Act or under Section 10 of the Rivers and Harbors Act.

We are enclosing a copy of the *Approved Jurisdictional Determination Form* for your site (enclosure 2).

This approved jurisdictional determination is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 Code of Federal Regulations (CFR) Part 331. A *Notification of Appeal Process (NAP) and Request for Appeal (RFA) Form* is enclosed (enclosure 3). If you request to appeal this

determination, you must submit a completed RFA form to the South Pacific Division Office at the following address: Administrative Appeal Review Officer, Army Corps of Engineers, South Pacific Division, CESPD-PDO, 1455 Market Street, 2052B, San Francisco, California 94103-1399, Telephone: 415-503-6574, FAX: 415-503-6646.

In order for an RFA to be accepted by the Corps, we must determine that the form is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that the form was received by the Division Office within 60 days of the date of the NAP. It is not necessary to submit an RFA form to the Division Office unless you object to the determination in this letter.

We recommend that you provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

We appreciate feedback, especially about interaction with our staff and our processes.

Please refer to identification number SPK-2020-00625 in any correspondence concerning this project. If you have any questions, please contact Mr. Nathaniel Duyck at U.S. Army Corps of Engineers, Regulatory Division, 1325 J Street, Room 1350, Sacramento, California 95814, by email at nathaniel.f.duyck@usace.army.mil, or telephone at (916) 557-6883. For program information or to complete our Customer Survey, visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,

Chandra Jenkins
Chief, California Delta Section
Regulatory Division

Enclosures

cc:
Ms. Sarah VanderOhe; Madrone Ecological Services, svonderohe@madroneEco.com
Ms. Stephanie Tadlock, California Regional water Quality Control Board, stephanie.tadlock@waterboards.ca.gov
Mr. Joseph Morgan, U.S. EPA, morgan.joseph@epamail.epa.gov

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: John Welch, Sierra View Land Company Attn: Mr. John Welch	File No.: SPK-2020-00625	Date: June 1, 2021

Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
→	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at *http://www.usace.army.mil/cecw/pages/reg_materials.aspx* or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer (address on reverse). This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also, you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

U.S. Army Corps of Engineers

Phone: (916) 557-6883, FAX 916-557-7803
Email: Nathaniel.F.Duyck@usace.army.mil

If you only have questions regarding the appeal process you may also contact:

Thomas J. Cavanaugh
Administrative Appeal Review Officer
U.S. Army Corps of Engineers
South Pacific Division
1455 Market Street, 2052B
San Francisco, California 94103-1399
Phone: 415-503-6574, FAX: 415-503-6646)
Email: Thomas.J.Cavanaugh@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

Revised Cultural Resources Inventory and Evaluation Report

Sierra View Country Club
Placer County, California

Prepared For:

Westpark Communities
1420 Rocky Ridge Drive, Suite 265
Roseville, California 95661

Prepared By:

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ENVIRONMENTAL CONSULTANTS
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Revised June 2021

MANAGEMENT SUMMARY

In 2020, ECORP Consulting, Inc. was retained by Westpark Communities to conduct a cultural resources inventory for the proposed Sierra View Country Club Project in Placer County, California. Westpark Communities proposes to develop approximately 23.1 acres located east of the Sierra View Country Club Golf Course in Roseville, Placer County, California.

The inventory included a records search, literature review, and field survey conducted in two phases. The records search results indicated that four previous cultural resources studies have been conducted within a portion of the Project Area. As a result of those studies, one historic-period resource has previously been recorded within the Project Area: the historic-era Western Area Power Administration transmission line (P-31-3280), which has previously been determined not eligible for the National Register of Historic Places (NRHP).

As a result of the survey, two cultural resources were recorded: SV-001, a Sacramento Municipal Utilities District (SMUD) 230-kilovolt (kV) transmission line; and SV-002, a SMUD 115-kV distribution line. These historic-age built environment resources were evaluated based on survey-level data and archival research relative to the criteria for inclusion in the NRHP and the California Register of Historical Resources (CRHR). Both resources were determined not eligible under any criteria for the NRHP or CRHR and, therefore, they are not considered Historical Resources for purposes of the California Environmental Quality Act or Historic Properties for the purposes of Section 106 of the National Historic Preservation Act. Until the lead agencies concur with these cultural resource identification and evaluation, no ground-disturbing activities should occur. Recommendations for the management of unanticipated discoveries are also provided.

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AC	Alternating Current
APE	Area of Potential Effects
APN	Assessor Parcel Number
BLM	Bureau of Land Management
BP	Before present

LIST OF ACRONYMS AND ABBREVIATIONS

CCR	California Code of Regulations
CCTS	Central California Taxonomic System
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
DC	Direct Currents
DPR	Department of Parks and Recreation
GLO	General Land Office
MLD	Most Likely Descendant
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PFE	Pacific Fruit Express
PRC	Public Resources Code
Project	Sierra View Country Club Project
RPA	Registered Professional Archaeologist
SHPO	State Historic Preservation Officer
SMUD	Sacramento Municipal Utilities District
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USGS	U.S. Geological Survey
WAPA	Western Area Power Administration

1.0 INTRODUCTION

In 2020, ECORP Consulting, Inc. was retained by Westpark Communities to conduct a cultural resources inventory of the proposed Sierra View Country Club Project located in the city of Roseville, Placer County, California. A survey of the property was required to identify potentially eligible cultural resources (archaeological sites and historic buildings, structures, and objects) that could be affected by the Project.

1.1 Project Location

The Project Area consists of approximately 23.1 acres of property located in the northwestern quarter of Section 35, the northeastern quarter of Section 34, the southeastern quarter of Section 27, and the southwestern quarter of Section 26 of Township 11 North, Range 6 East, Mount Diablo Base and Meridian as depicted on the 1992 Roseville, California U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map (Figure 1). It is also known as Assessor Parcel Number (APN) 015-011-029. The Project Area is located east of the Sierra View Country Club golf course, north of Shasta Street, and south of Diamond Oaks Road in Roseville, California.

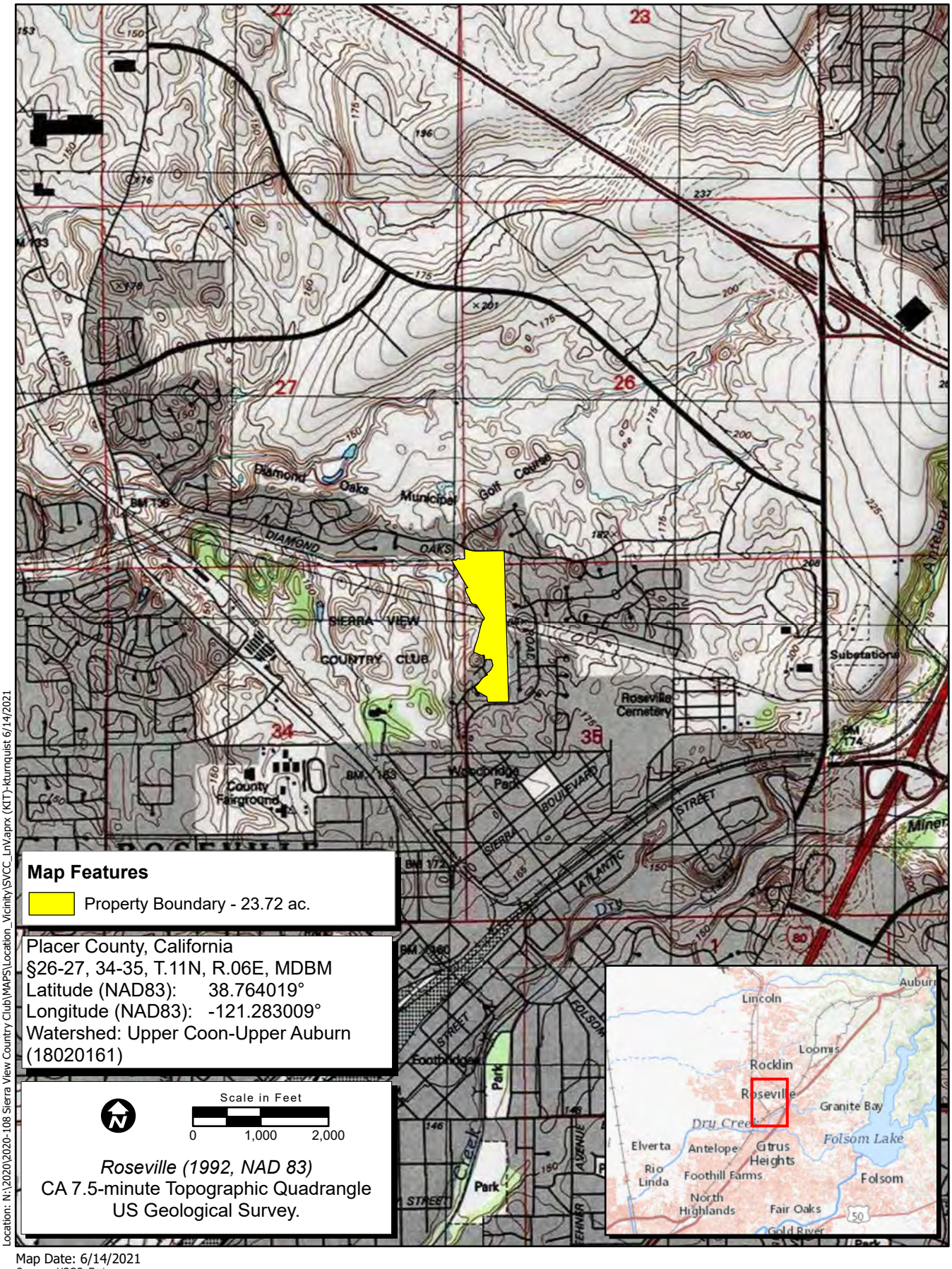
1.2 Project Description and Area of Potential Effects

The Proposed Project entails the construction of infill development and related infrastructure for single-family residences. No additional Project details were available at the time of the study, but sufficient information about the nature and type of the Project was available to inform this cultural resources inventory, including the potential for subsurface resources.

The Area of Potential Effects (APE) consists of the horizontal and vertical limits of a project and includes the area within which significant impacts or adverse effects to Historical Resources or Historic Properties could occur as a result of the project. The APE is defined for projects subject to regulations implementing Section 106 (federal law and regulations). For projects subject to the California Environmental Quality Act (CEQA), the term Project Area is used rather than APE. For the purpose of this document, the terms Project Area and APE are interchangeable.

The horizontal APE consists of all areas where activities associated with a project are proposed and in the case of the current Project, equals the Project Area subject to environmental review under the National Environmental Policy Act (NEPA) and CEQA. This includes areas proposed for construction, vegetation removal, grading, trenching, stockpiling, staging, paving, and other elements described in the official Project description. The horizontal APE is illustrated on Figure 1 and represents the survey coverage area. It measures approximately 0.42 mile in length (north-south) by 800 feet in width (east-west).

The vertical APE is described as the maximum depth below the surface to which excavations for project foundations and facilities will extend. Therefore, the vertical APE includes all subsurface areas where archaeological deposits could be affected. The subsurface vertical APE varies across the Project. This study assumes the vertical APE will not extend 20 feet below the current surface, and therefore, review of geologic and soils maps was necessary to determine the potential for buried archaeological sites that cannot be seen on the surface.



Location: N:\2020\2020-108 Sierra View Country Club\MAPS\Location_Vicinity\SVCC_LnV.aprx (KIT)-kturnquist 6/14/2021

Map Date: 6/14/2021
Sources: USGS, Esri

Figure 1. Project Location and Vicinity

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

The vertical APE also is described as the maximum height of structures that could impact the physical integrity and integrity of setting of cultural resources, including districts and traditional cultural properties. This study assumes the vertical APE will not exceed 30 feet above the ground surface.

1.3 Regulatory Context

To meet the regulatory requirements of this Project, this cultural resources investigation was conducted pursuant to the provisions for the treatment of cultural resources contained within Section 106 of the National Historic Preservation Act (NHPA) and in CEQA (Public Resources Code [PRC] § 21000 et seq.) The goal of NHPA and CEQA is to develop and maintain a high-quality environment that serves to identify the significant environmental effects of the actions of a proposed project and to either avoid or mitigate those significant effects where feasible. CEQA pertains to all proposed projects that require state or local government agency approval, including the enactment of zoning ordinances, the issuance of conditional use permits, and the approval of development project maps. The NHPA pertains to projects that entail some degree of federal funding or permit approval.

The NHPA and CEQA (Title 54 U.S. Code [USC] Section 100101 et seq. and Title 14, California Code of Regulations [CCR], Article 5, § 15064.5) apply to cultural resources of the historical and pre-contact periods. Any project with an effect that may cause a substantial adverse change in the significance of a cultural resource, either directly or indirectly, is a project that may have a significant effect on the environment. As a result, such a project would require avoidance or mitigation of impacts to those affected resources. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on either the California Register of Historical Resources (CRHR; PRC § 5024.1, Title 14 CCR, § 4852) or the National Register of Historic Places (NRHP) (36 Code of Federal Regulations [CFR] 60.4). Cultural resources eligible for listing on the NRHP are considered Historic Properties under 36 CFR Part 800 and are automatically eligible for the CRHR. Resources listed on or eligible for inclusion in the CRHR are considered Historical Resources under CEQA.

Tribal Cultural Resources are defined in Section 21074 of the California PRC as sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either included in or determined to be eligible for inclusion in the CRHR, or are included in a local register of historical resources as defined in subdivision (k) of Section 5020.1, or are a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. Section 1(b)(4) of Assembly Bill (AB) 52 established that only California Native American tribes, as defined in Section 21073 of the California PRC, are experts in the identification of Tribal Cultural Resources and impacts thereto. Because ECORP does not meet the definition of a California Native American tribe, this report only addresses information for which ECORP is qualified to identify and evaluate, and that which is needed to inform the cultural resources section of CEQA documents. This report, therefore, does not identify or evaluate Tribal Cultural Resources. Should California Native American tribes ascribe additional importance to or interpretation of archaeological resources described herein, or provide information about non-archeological Tribal Cultural Resources, that information is documented separately in the AB 52 tribal consultation record between the tribe(s) and lead agency, and summarized in the Tribal Cultural Resources section of the CEQA document, if applicable.

In addition, in the event that the Project may affect Waters of the U.S., thereby requiring the Project proponent to meet the requirements of Section 404 of the Clean Water Act and obtain a permit from the U.S. Army Corps of Engineers (USACE) Sacramento District Regulatory Division, this report was prepared to contribute to compliance with the 2014 *Sacramento District Regulatory Branch Guidelines for Compliance with Section 106 of the National Historic Preservation Act of 1966, as amended*. Moreover, because the Project may qualify as a federal undertaking, regulations (36 CFR 800) implementing Section 106 of the NHPA require that cultural resources be identified and then evaluated using NRHP eligibility criteria.

1.4 Report Organization

The following report documents the study and its findings and was prepared in conformance with the California Office of Historic Preservation's (OHP) *Archaeological Resource Management Reports: Recommended Contents and Format*. Attachment A includes a confirmation of the records search with the California Historical Resources Information System (CHRIS) and historical society coordination. Attachment B contains documentation of a search of the Sacred Lands File. Attachment C presents photographs of the Project Area, and Attachment D contains confidential cultural resource site locations and site records.

Sections 6253, 6254, and 6254.10 of the California Code authorize state agencies to exclude archaeological site information from public disclosure under the Public Records Act. In addition, the California Public Records Act (Government Code § 6250 et seq.) and California's open meeting laws (The Brown Act, Government Code § 54950 et seq.) protect the confidentiality of Native American cultural place information. Under Exemption 3 of the federal Freedom of Information Act (5 USC 5), because the disclosure of cultural resources location information is prohibited by the Archaeological Resources Protection Act of 1979 (16 USC 470hh) and Section 307103 of the NHPA, it is also exempted from disclosure under the Freedom of Information Act. Likewise, the Information Centers of the CHRIS maintained by the OHP prohibit public dissemination of records search information. In compliance with these requirements, the results of this cultural resource investigation were prepared as a confidential document, which is not intended for public distribution in either paper or electronic format.

2.0 SETTING

2.1 Environmental Setting

The Project Area is located in the transition zone between the Central Valley and the Sierra Nevada foothills. It is located to the east of an active golf course and is surrounded by suburban residential development to the north and east, and an elementary school to the south. The terrain is relatively flat, and elevations range from 150 to 170 feet above mean sea level. The south fork of Pleasant Grove Creek splits to the northwest and tributaries run 0.4 mile to the north and 0.4 mile to the west of the Project Area.

2.2 Geology and Soils

Rosenthal and Willis (2017) describe the geology of the Sacramento Valley as a large, asymmetric, structural trough (syncline) formed by westward-tilting blocks of plutonic and metamorphic rocks on the eastern side, and highly folded and faulted blocks of metamorphic rocks (Franciscan) on the western side. This basin has been partially filled by a thick sequence (up to 12.4 miles [20 kilometers] thick) of sedimentary rocks and alluvial deposits that range from late Jurassic to Historical in age. During the Pleistocene, erosion of the Sierra Nevada led to the deposition of large alluvial fans at the base of the foothills along the eastern side of the Sacramento Valley. Glacial conditions are generally credited for the deposition of these fans, while subsequent interglacial periods are marked by landscape stability, soil formation, and channel incision. Subsequent depositional cycles during the Holocene progressively buried downstream sections of many older alluvial fans and led to the formation of inset stream terraces and nested alluvial fans along the foothills (Rosenthal and Willis 2017).

According to the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) Web Soil Survey website (NRCS 2020), two soil types are located within the Project Area: Cometa-Ramona sandy loam (142) consist of fine loamy mixed, thermic, moderately deep, moderately well-drained soils found on older stream terraces that formed in alluvium from granitic rock sources; and Cometa-Fiddyment complex (141), 1 to 5 percent slopes, consists of moderately deep moderately well-drained to well-drained soils formed in consolidated sediments from mixed rock sources and alluvium from granitic rock sources; found on older stream terraces and nearly level to rolling terraces.

The potential exists for buried pre-contact archaeological sites in the Project Area due to the presence of alluvium along the tributaries to the south fork of Pleasant Grove Creek to the north and west of the Project Area and the likelihood of pre-contact archaeological sites existing along perennial waterways.

2.3 Vegetation and Wildlife

The Project Area is within an oak woodland setting. Annual grassland represents the dominant vegetation community within the Project Area. Representative plant species that may be present in this general area include medusahead grass (*Taeniatherum caput-medusae*), little quaking grass (*Briza minor*), ryegrass (*Lolium multiflorum*), slender wild oat (*Avena barbata*), soft brome (*Bromus hordeaceus*), vulpia (*Vulpia* sp.), Mediterranean barley (*Hordeum marinum*), sticky tarweed (*Holocarpha virgata*), rose clover (*Trifolium hirtum*), Fremont's tidy-tips (*Layia fremontii*), and yellow star-thistle (*Centaurea solstitialis*).

Wildlife species that have the potential to occur in the Project Area include black-tailed jackrabbit (*Lepus californicus*), rabbit (*Sylvilagus* sp.), gray squirrel (*Sciurus griseus*), coyote (*Canis latrans*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), red-tailed hawk (*Buteo jamaicensis*), prairie falcon (*Falco mexicanus*), California quail (*Callipepla californica*), mourning dove (*Zenaidura macroura*), Western scrub-jay (*Aphelocoma californica*), rattlesnake (*Crotalus viridus*), Pacific tree frog (*Pseudacris regilla*), and western fence lizard (*Sceloporus occidentalis*).

3.0 CULTURAL CONTEXT

3.1 Regional Pre-contact History

It is generally believed that human occupation of California began at least 10,000 years before present (BP). The archaeological record indicates that between approximately 10,000 and 8,000 BP, a predominantly hunting economy existed, characterized by archaeological sites containing numerous projectile points and butchered large animal bones. Animals that were hunted probably consisted mostly of large species still in existence today. Bones of extinct species have been found but cannot definitively be associated with human artifacts. Although small animal bones and plant grinding tools are rarely found within archaeological sites of this period, small game and floral foods were probably exploited on a limited basis. A lack of deep cultural deposits from this period suggests that groups included only small numbers of individuals who did not often stay in one place for extended periods (Wallace 1978).

Around 8,000 BP, there was a shift in focus from hunting towards a greater reliance on plant resources. Archaeological evidence of this trend consists of a much greater number of milling tools (e.g., metates and manos) for processing seeds and other vegetable matter. This period, which extended until around 5,000 years BP, is sometimes referred to as the Millingstone Horizon (Wallace 1978). Projectile points are found in archaeological sites from this period, but they are far fewer in number than from sites dating to before 8,000 BP. An increase in the size of groups and the stability of settlements is indicated by deep, extensive middens at some sites from this period (Wallace 1978).

In sites dating to after about 5,000 BP, archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments. Mortars and pestles were added to metates and manos for grinding seeds and other vegetable material. Flaked-stone tools became more refined and specialized, and bone tools were more common. During this period, new peoples from the Great Basin began entering southern California. These immigrants, who spoke a language of the Uto-Aztecan linguistic stock, seem to have displaced or absorbed the earlier population of Hokan-speaking peoples. During this period, known as the Late Horizon, population densities were higher than before and settlement became concentrated in villages and communities along the coast and interior valleys (Erlandson 1994; McCawley 1996). Regional subcultures also started to develop, each with its own geographical territory and language or dialect (Kroeber 1925; McCawley 1996; Moratto 1984). These were most likely the basis for the groups encountered by the first Europeans during the eighteenth century (Wallace 1978). Despite the regional differences, many material culture traits were shared among groups, indicating a great deal of interaction (Erlandson 1994). The introduction of the bow and arrow into the region sometime around 2,000 BP is indicated by the presence of small projectile points (Wallace 1978; Moratto 1984).

3.2 Local Pre-contact History

This section provides a regional overview with contextual elements drawn from California's Central Valley Region, the Western Foothills Region, and from the transition zone itself where the Project is located. There has been more extensive research and study of Central Valley prehistory than the prehistory of the Sierra Nevada foothill zone, but a fair amount of cultural overlap exists within these regions. This section

includes the most recent and readily available research of both regions (Rosenthal et al. 2007) and includes some reference to the climactic changes that swept the Sierra Nevada being a catalyst for population movement that led to cultural change in the foothills.

California's Great Central Valley has long held the attention of archaeologists and was a focus of early research in California. Archaeological work during the 1920s and 1930s led to the cultural chronology for central California presented by Lillard, Heizer, and Fenenga in 1939. This chronology was based on the results of excavations conducted in the lower Sacramento River Valley. This chronology identified three archaeological cultures, named Early, Transitional, and Late (Lillard et al. 1939).

Heizer (1949) redefined the description of these three cultures. He subsumed the three cultural groups into three time periods, designated the Early, Middle, and Late Horizons. He primarily focused his research and reexamination of Lillard et al. (1939) on the Early Horizon, which he named Windmiller. He also intimated that new research and a reanalysis of existing data would be initiated for cultures associated with the Middle and Late Horizons; however, he did not complete this work and other research filled in the gaps.

Following years of documenting artifact similarities among sites in the San Francisco Bay region and the Delta, Beardsley (1948, 1954) formatted his findings into a cultural model known as the Central California Taxonomic System (CCTS). This system proposed a linear, uniform sequence of cultural succession in Central California, and explicitly defined Early, Middle, and Late Horizons for cultural change. Archaeological researchers have subsequently refined and redefined aspects of the CCTS. For instance, Fredrickson (1973, 1974, and 1994) reviewed general economic, technological, and mortuary traits between archaeological assemblages across the region. He separated cultural, temporal, and spatial units from each other and assigned them to six chronological periods: Paleo-Indian (12,000 to 8,000 BP); Lower, Middle, and Upper Archaic (8,000 BP to AD 500); and Upper and Lower Emergent (AD 500 to 1800).

Fredrickson further defined three cultural patterns: The Windmiller (named after Heizer 1949 and Lillard et al. 1939), the Berkeley, and the Augustine patterns, and assigned them to the Early, Middle, and Late horizons of the CCTS. These patterns were defined to reflect the general sharing of lifeways within groups in a specific geographic region. The Windmiller pattern of the Early Horizon included cultural patterns dating from 5,000 to 3,000 BP; the Berkeley Pattern of the Middle Horizon (also known as the Cosumnes cultural pattern after Ragir 1972), included cultural patterns dating from 3,000 BP to AD 500, and the Augustine Pattern of the Late Horizon included the cultural patterns from AD 500 to the historic period.

Fredrickson's (1974) Paleo-Archaic-Emergent cultural sequence was redefined by Rosenthal, White, and Sutton (2007). Rosenthal et al.'s recalibrated sequence is divided into three broad periods: The Paleoindian Period (11,550 to 8,550 cal. BC); the three-staged Archaic period, consisting of the Lower Archaic (8,550 to 5,550 cal. BC), Middle Archaic (5,550 to 550 cal. BC), and Upper Archaic (550 cal. BC to cal. AD 1100); and the Emergent Period (cal. AD 1100 to Historic) (Rosenthal et al. 2007). The three divisions of the Archaic Period correspond to climate changes. This is the most recently developed sequence and is now commonly used to interpret Central California prehistory. The aforementioned periods are characterized by the following:

3.2.1 Paleo-Indian Period

This period began when the first people began to inhabit what is now known as the California culture area. It was commonly believed these first people subsided on big game and minimally processed foods, (i.e., hunters and gatherers), presumably with no trade networks. More recent research indicates these people may have been more sedentary, relied on some processed foods, and traded (Rosenthal et al. 2007). Populations likely consisted of small groups traveling frequently to exploit plant and animal resources.

3.2.2 Archaic Period

This period was characterized by an increase in plant exploitation for subsistence, more elaborate burial accoutrements, and increase in trade network complexity (Bennyhoff and Fredrickson 1994). The three divisions that correspond to pre-contact climate change are characterized by the following aspects (Rosenthal et al. 2007):

3.2.2.1 Lower Archaic Period

This period is characterized by cycles of widespread floodplain and alluvial fan deposition. Artifact assemblages from this period include chipped stone crescents and early wide-stemmed points, marine shell beads, eastern Nevada obsidian, and obsidian from the north Coast Ranges. These types of artifacts found on sites dating to this period indicate trade was occurring in multiple directions. A variety of plant and animal species were also utilized, including acorns, wild cucumber, and manzanita berries.

3.2.2.2 Middle Archaic Period

This period is characterized by a drier climate period. Rosenthal et al. (2007) identified two distinct settlement/subsistence patterns in this period: the Foothills Tradition and the Valley Tradition. Functional artifact assemblages consisting primarily of locally sourced flaked stone and groundstone cobbles characterize the Foothills Tradition, while the Valley Tradition was generally characterized by diverse subsistence practices and extended periods of sedentism.

3.2.2.3 Upper Archaic Period

This period is characterized by abrupt change to wetter and cooler environmental climate conditions. Much greater cultural diversity is evident from this period. More specialized artifacts, such as bone tools, ceremonial blades, polished and groundstone plummets, saucer and saddle *Olivella* shell beads, *Haliotis* shell ornaments, and a variety of groundstone implements are characteristic of this period.

3.2.3 Emergent Period

This period is most notably marked by the introduction of the bow and arrow, the emergence of social stratification linked to wealth, and more expansive trade networks signified by the presence of clam disk beads that were used as currency (Moratto 1984). The Augustine pattern (the distinct cultural pattern of the Emergent Period) is characterized by the appearance of small projectile points (largely obsidian),

rimmed display mortars, flanged steatite pipes, flanged pestles, and chevron-designed bird-bone tubes. Large mammals and small seeded resources appear to have made up a larger part of the diet during this period (Fredrickson 1968; Meyer and Rosenthal 1997).

The following discussion summarizes the cultural patterns and the different local developments that are represented in archaeological deposits in the region surrounding the current Project Area.

The Windmiller Pattern of the Early Horizon (as defined by Beardsley 1948), dates to the Middle Archaic (as defined by Rosenthal et al. 2007) and may be the most extensively studied of all the cultural patterns defined for the Central Valley. In fact, the similarity noted between elements of Windmiller and materials from other sites may have been the catalyst for early archaeologists identifying the material cultural "blending" of groups in the Central Valley during this period. The temporal span for Windmiller has been updated and reanalyzed several times in the archaeological literature (Fredrickson 1973, 1974; Heizer 1949; Moratto 1984; Ragir 1972). The date originally proposed for the emergence of Windmiller was 4,500 BP (Lillard et al. 1939; Ragir 1972), because the culture at 4,000 years ago appeared to have been fully developed and seemed to have been well integrated into the regional economic system.

Characteristics to identify the Windmiller pattern have been presented by multiple authors over time (Fredrickson 1973, 1974; Heizer 1949; Moratto 1984; Ragir 1972). Most notable characteristics are:

- large, heavy stemmed and leaf-shaped projectile points commonly made of a variety of materials other than obsidian;
- perforate charmstones;
- *Haliotis* and *Olivella* shell beads and ornaments;
- trident fish spears;
- baked clay balls (presumably for cooking in baskets);
- flat slab milling stones;
- small numbers of mortars; and
- ventrally extended burials oriented toward the west.

The subsistence pattern of Windmiller groups probably emphasized hunting and fishing, with supplemental seed collecting (possibly including acorns) (Heizer 1949; Moratto 1984; Ragir 1972).

Windmiller groups acquired obsidian from at least two Coast Ranges and three trans-Sierran sources, *Haliotis* and *Olivella* shells and ornaments from the coast, and quartz crystals from the Sierra Nevada foothills (Heizer 1949; Ragir 1972). It is widely hypothesized that the bulk of these materials were acquired through trade; however, some may have been acquired as part of seasonal movements between the Central Valley and the Sierra Nevada foothills.

There is evidence for seasonal transhumance in the distribution of Windmiller artifacts, sites, and burial patterns. Johnson's work (1967, 1970) along the edge of the Sierra Nevada foothills at Camanche Reservoir and CA-AMA-56, the Applegate site, suggests a link between Windmiller groups of the Central

Valley and the Sierra Nevada mortuary caves. Johnson (1970) suggested that his data reveals a pattern of gradual change from the Early through the Middle Horizon (as defined by Beardsley 1948), rather than a displacement of local groups by foreign populations as theorized by Baumhoff and Olmsted (1963) based on ethnolinguistic evidence. Rondeau (1980), also working at the edge of the Central Valley at CA-ELD-426, the Bartleson Mound, identified components of the Early Horizon (as defined by Beardsley 1948). He (1980) even postulated a potential relationship between the Early Horizon cultures and the Martis Complex (a basalt preferring culture in the Martis Valley of the Sierra Nevada). In addition, analysis of Windmiller burial orientation (Schulz 1970) and skeletal analyses (e.g., Harris Lines) by McHenry (1968) suggest a high percentage of winter death among Windmiller groups. Incorporating all of this data, Moratto (1984) postulated that Windmiller groups were exploiting the foothills of the Sierra Nevada during the summer and returning in the winter to villages in the Central Valley as early as 4,000 BP.

Excavations at CA-PLA-500 (Wohlgemuth 1984), the Sailor Flat site located near CA-PLA-101, sites at the Twelve Bridges Golf Course now known as Catta Verdera Country Club in Lincoln, and Spring Garden Ravine site CA-PLA-101 provide examples of Windmiller sites that had items in their cultural assemblages similar to the material culture of groups elsewhere in California and the foothills.

The succeeding Middle Horizon, namely the Cosumnes Culture after Ragir (1972), the Berkeley Pattern after Fredrickson (1974), and absorbed into the Middle and Upper Archaic designations by Rosenthal et al. (2007) was first recognized at site CA-SAC-66. Much less published material discusses the patterns defined for this era than does Windmiller; none the less, some of the most notable characteristics are:

- tightly flexed burials with variable orientation;
- red ochre stains in burials;
- distinctive *Olivella* and *Haliotis* beads and ornaments;
- distinctive charmstones;
- cobble mortars and evidence of wooden mortars;
- numerous bone tools and ornaments;
- large, heavy foliate and lanceolate concave base projectile points made of materials other than obsidian; and
- objects of baked clay.

Further classification of the Middle Archaic (as defined by Rosenthal et al. 2007) into the Foothills Tradition and Valley Tradition helped to clarify the different types of cultural sequences which occurred during these time periods. Functional artifact assemblages consisting primarily of locally sourced flaked stone and groundstone cobbles characterize the Foothills Tradition, with very few trade goods. Sites that represent the Valley Tradition are much fewer in number and are generally characterized by much more diverse subsistence practices and extended periods of sedentism. Specialized tools, trade goods, and faunal refuse that indicate year-round occupation are evident on sites of the Valley Tradition (Rosenthal et al. 2007). Distinct artifacts attributed to this tradition include one of the oldest dated shell bead lots in

Central California (4,160 BP) and a particular type of pestle used with a wooden mortar (Meyer and Rosenthal 1997).

The Sierra Nevada experienced significant climactic shifts and concomitant vegetation change throughout the Holocene, but pollen analysis and climactic records indicate that the current climate pattern and primary constituents of vegetation communities were in place by the Middle Archaic around 1,000 BC (Hull 2007). Seasonal transhumance practiced by indigenous populations of the Sierra may have become more consistent during this period of relative environmental stasis.

Paleobotanical analysis from sites of the Foothills Tradition including CA-CAL-789, CA-CAL-629, and CA-CAL-630 confirm that acorns and pine nuts were preferred for subsistence (Rosenthal and McGuire 2004; Wohlgemuth 2004) Sites near the Project Area associated with the Valley Tradition are rare in the early Middle Archaic (ca. 5,550 to 2,050 cal. BC) but include the Reservation Road site (CA-COL-247), and two buried sites in the northern Diablo Range (CA-CCO-637 and CA-CCO-18/548). Sites associated with later portions of the Middle Archaic (post-2,050 cal. BC) near the Project Area include CA-SAC-107 and CA-BUT-233, both of which produced elaborate material culture and diverse dietary and technological assemblages.

The next era in the region is identified as the Late Horizon by Beardsley (1948, 1954), the Hotchkiss Culture by Ragir (1972), and the Augustine Pattern by Fredrickson (1974). The culture was formed by populations during the later Upper Archaic and Emergent Periods, as defined by Rosenthal et al. (2007), and ranges in age from around 550 cal. BC to contact (dates vary between the different models of prehistory developed for the region). The Upper Archaic, as discussed above, corresponds with the late Holocene change in environmental conditions to a wetter and cooler climate. The Emergent Period and Late Horizon are markedly represented by the introduction of bow-and-arrow technology, as well as more pronounced cultural diversity as reflected in diversity of burial posturing, artifact styles, and material culture. Cultural patterns for this era are represented in the northern Sacramento Valley, namely within the Whiskeytown Pattern, at sites CA-SHA-47, CA-SHA-571/H, CA-SHA-890, CA-SHA-891, and CA-SHA-892 (Sundahl 1982, 1992).

This era primarily represents both local innovation and the blending of new cultural traits introduced into the Central Valley. The Emergent Occupation (as defined by Rosenthal et al. 2007) coincides with the Augustine Pattern (Fredrickson 1974) in the lower Sacramento Valley/Delta region, and with the Sweetwater and Shasta complexes in the northern Sacramento Valley (Fredrickson 1974; Kowta 1988; Sundahl 1982). The emergence of the Augustine Pattern appears to have been associated with the expansion of Wintun populations from the north, which appears to have led to an increase in settlements in the area after 550 BP (Bennyhoff 1994; Moratto 1984).

During this period in the Sierra Nevada, paleoenvironmental data suggests severe droughts occurred from around AD 892 to 1112 and AD 1210 to 1350 (Hull 2007; Lindström 1990; Stine 1994). These drier conditions surely affected the seasonal resource procurement rounds of the native populations during this time, and likely led to an influx of population movement and cultural blending into the foothills zone and Central Valley by Sierra Nevada groups.

Despite the varying designations, this emergent era is distinguished in the archaeological record by intensive fishing, extensive use of acorns, elaborate ceremonialism, social stratification, and cremation of the dead. Artifacts associated with the defined patterns (Augustine, Emergent, Hotchkiss) include bow-and-arrow technology (evidenced by small projectile points), mortars and pestles, and fish harpoons with unilaterally or bilaterally placed barbs in opposed or staggered positions (Bennyhoff 1950). Mortuary patterns include flexed burials and cremations, with elaborate material goods found in association with prestigious individuals. A local form of pottery, Cosumnes brownware, emerged in the lower Sacramento Valley (Rosenthal et al. 2007). Sites contain this ceramic type in their artifact assemblage near the Project Area include CA-SAC-6, CA-SAC-67, CA-SAC-107, CA-SAC-265, and CA-SAC-329. Human animal effigies are also a marker of this emergent era around the Project Area and are present at sites CA-SAC-6, CA-SAC-16, CA-SAC-29, CA-SAC-267, and CA-SAC-267.

3.3 Ethnography

Prior to the arrival of European-Americans in the region, indigenous groups speaking more than 100 different languages and occupying a variety of ecological settings inhabited California. Kroeber (1925, 1936), and others (i.e., Driver 1961; Murdock 1960), recognized the uniqueness of California's indigenous groups and classified them as belonging to the California culture area. Kroeber (1925) further subdivided California into four subculture areas: Northwestern, Northeastern, Southern, and Central.

When the first European explorers entered the regions between 1772 and 1821, an estimated 100,000 people, about 1/3 of the state's native population, lived in the Central Valley (Moratto 1984). At least seven distinct languages of Penutian stock were spoken among these populations: Wintu, Nomlaki, Konkow, River Patwin, Nisenan, Miwok, and Yokuts. Common linguistic roots and similar cultural and technological characteristics indicate that these groups shared a long history of interaction (Rosenthal et al. 2007). The Central area (as defined by Kroeber 1925) encompasses the current Project Area and includes the Nisenan or Southern Maidu.

Ethnographically, the Project Area is in the southwestern portion of the territory occupied by the Penutian-speaking Nisenan. Nisenan inhabited the drainages of the Yuba, Bear, and American rivers, and also the lower reaches of the Feather River, extending from the east banks of the Sacramento River on the west to the mid to high elevations of the western flank of the Sierra Nevada to the east (Wilson and Towne 1978). The territory extended from the area surrounding the current city of Oroville on the north to a few miles south of the American River in the south. The Sacramento River bounded the territory on the west, and in the east, it extended to a general area located within a few miles of Lake Tahoe.

As a language group, Nisenan (meaning "from among us" or "of our side") are members of the Maiduan Family of the Penutian stock and are generally divided into three groups based on dialect differences: the Northern Hill (mountain) Nisenan in the Yuba River drainage; the Valley Nisenan along the Sacramento River; and the Southern Hill (foothills) Nisenan along the American River (Beals 1933; Kroeber 1925; Wilson and Towne 1978). Individual and extended families "owned" hunting and gathering grounds, and trespassing was discouraged (Kroeber 1925; Wilson and Towne 1978). Residence was generally patrilocal, but couples actually had a choice in the matter (Wilson and Towne 1978).

The basic social and economic group for the Nisenan was the family or household unit. The nuclear or extended family formed a corporate unit. These basic units were combined into distinct village or hamlet groups, each largely composed of consanguine relatives (Beals 1933; Littlejohn 1928). Lineage groups were important political and economic units that combined to form tribelets, which were the largest sociopolitical unit identified for Nisenan (Wilson and Towne 1978). Each tribelet had a chief or headman who exercised political control over all villages within it. Villages typically included family dwellings, acorn granaries, a sweathouse, and a dance house, owned by the chief. The role of chief seems to have been an advisory role with little direct authority (Beals 1933) but with the support of the shaman and the elders, the word of the chief became virtually the law (Wilson and Towne 1978). Tribelets assumed the name of the head village where the chief resided (Beals 1933; Levy 1978).

The office of tribelet chief was hereditary, with the chieftainship being the property of a single patrilineage within the tribelet. Tribelet populations of Valley Nisenan were as large as 500 persons (Wilson and Towne 1982), while foothill and mountain tribelets ranged between 100 and 300 persons (Levy 1978; Littlejohn 1928). Each tribelet owned a bounded tract of land and exercised control over its natural resources (Littlejohn 1928). Beals (1933) estimated that Nisenan tribelet territories averaged approximately 10 miles along each boundary, or 100 square miles, with foothill territories tending to encompass more area than mountain territories. Littlejohn (1928) noted that in many instances, these boundaries were indicated by piles of stones. Regardless, Nisenan groups tended to stay within their village areas except during the summer season when groups of people would sojourn into the mountains to hunt and gather (Littlejohn 1928).

Nisenan practiced seasonal migration, a subsistence strategy involving moving from one area or elevation to another to harvest plants, fish, and hunt game across contrasting ecosystems that were in relatively close proximity to each other. Valley Nisenan generally did not range beyond the valley and lower foothills, while foothill and mountain groups ranged across a more extensive area that included jointly shared territory whose entry was subject to traditional understandings of priority of ownership and current relations between the groups (d'Azevedo 1963).

During most of the year, Nisenan usually lived in permanent villages located below 2,500 feet that generally had a southern exposure, were surrounded by an open area, and were located above, but close to watercourses (Littlejohn 1928). The rather large uninhabited region between the 3,000-foot contour and the summit of the Sierra Nevada was considered "open ground" that was only used by communities living along its edge (Littlejohn 1928). Beals (1933) noted that permanent villages in the foothills and mountains were usually located on high ground between rivers. Valley villages were also usually located on raised areas to avoid flooding. Littlejohn (1928) stated that at one time or another there were settlements located on every small stream within Nisenan territory, but permanent villages were not located in steep, dark, narrow canyons of large rivers, or at altitudes where deep snows persisted throughout the winter. In fact, permanent occupation sites above 3,500 feet were only located in protected valleys (Littlejohn 1928).

The availability of resources influenced the location of Nisenan permanent villages, since they acquired a proportion of their food resources from the general area surrounding them (Littlejohn 1928; Wilson and Towne 1978). Other essential and critical food resources were obtained during the summer, when small

base camps were established at higher altitudes in proximity to a water source. Individuals would stage expeditions to acquire natural, faunal, and plant resources from these camps (Littlejohn 1928; Wilson and Towne 1978).

Communally organized Nisenan task groups exploited a wide variety of resources. Communal hunting drives were undertaken to obtain deer, quail, rabbits, and grasshoppers. Bears were hunted in the winter when their hides were at their best condition. Runs of salmon in the spring and fall provided a regular supply of fish, while other fish such as suckers, pike, whitefish, and trout were obtained with snares, fish traps, or with various fish poisons such as soaproot (Beals 1933; Faye 1923; Wilson and Towne 1978). Birds were caught with nooses or large nets and were also occasionally shot with bow and arrow. Game was prepared by roasting, baking, or drying. In addition, salt was obtained from a spring near modern-day Rocklin (Wilson and Towne 1978).

Acorns were gathered in the fall and stored in granaries for use during the rest of the year. Although acorns were the staple of the Nisenan diet, they also harvested roots like wild onion and "Indian potato," which were eaten raw, steamed, baked, or dried and processed into flour cakes to be stored for winter use (Wilson and Towne 1978). Buckeye, pine nuts, hazelnuts, and other edible nuts further supplemented the diet. Key resources such as acorns, salmon, and deer were ritually managed through ceremonies to facilitate successful exploitation and equitable distribution of resources (Beals 1933; Swezey 1975; Swezey and Heizer 1977).

Trade was important with goods traveling from the coast and valleys up into the Sierra Nevada mountains and beyond to the east, and vice versa. Coastal items like shell beads, salmon, salt, and foothill pine nuts were traded for resources from the mountains and farther inland, such as bows and arrows, deer skins, and sugar pine nuts. In addition, obsidian was imported from the north (Wilson and Towne 1978).

Nisenan built residential dwellings, ceremonial structures, semi-subterranean sweat lodges, and menstruation huts (Wilson and Towne 1978). The typical hill and mountain dwelling was the conical bark house made by overlapping three or four layers of bark with no interior support. A thatched house was used at lower elevations, consisting of a conical framework of poles that was covered by brush, grass, or tules. Semi-subterranean earth lodge roundhouses were also built by hill and mountain groups and used for ceremonial gatherings, assemblies, local feasts, and for housing visitors (Beals 1933; Levy 1978).

Flaked and ground stone tools were common among the Nisenan and included knives, arrow and spear points, club heads, arrow straighteners, scrapers, rough cobble and shaped pestles, bedrock mortars, grinding stones (metates), pipes, charms, and short spears (Barrett 1917; Beals 1933; Voegelin 1942; Wilson and Towne 1978). Beals (1933) also noted that certain colored stone points were considered "lucky," and could be traded for four or five other projectile points. In addition, obsidian was highly valued and imported. Nisenan informants stated that obsidian only came from a place to the north, outside of Nisenan territory (Littlejohn 1928). Littlejohn (1928) also noted that soapstone was used for bowl mortars, although informants of Wilson and Towne (1978) claimed that neither they nor their ancestors made mortars.

Wood was used for a variety of tools and weapons, including both simple and sinew-backed bows, arrow shafts and points, looped stirring sticks, flat-bladed mush paddles, pipes, and hide preparation tools

(Wilson and Towne 1978). Cordage was made from plant material and was used to construct fishing nets and braided and twined tumplines. Soaproot brushes were commonly used during grinding activities to collect meal or flour. Specialized food processing and cooking techniques included the grinding and leaching of ground acorn and buckeye meal; burning of umbelliferae, a plant with cabbage-like leaves, to obtain salt; and roasting various foods in earth ovens (d'Azevedo 1986; Wilson and Towne 1978). Both hill and valley groups used the bedrock mortar and pestle (both rough cobble and shaped) to grind acorns, pine nuts, seeds, other plant foods, and meat. A soaproot brush was used to sweep ground meal into mortar cups and collect flour. Fist-sized, heated stones were used to cook or warm liquid-based foods such as acorn gruel and pine nut meal. Whole acorns were stored in granaries, and pine nuts were stored in large pine bough covered caches (Wilson and Towne 1978).

Nisenan groups managed many wild plants, primarily by controlled burning which removed underbrush and encouraged growth of edible grasses, seed producing plants, and other useful plant resources (e.g., basketry materials) (Blackburn and Anderson 1993). The use of fire for environmental modification and as an aid in hunting is frequently mentioned in the ethnographic literature relating to the Nisenan. Littlejohn (1928) noted that the lower foothills in the valley oak zone were thickly covered with herbaceous vegetation that was annually burned by the Nisenan to remove and limit its growth while facilitating the growth of oaks for harvesting acorns. The annual fires destroyed seedlings but did not harm established oak trees. Beals (1933) also noted that the Nisenan regularly burned the land, primarily for the purpose of driving game, and consequently created much more open stands of timber than currently exist in the area. Beals (1933) informants stated that before their traditional burning regimes were halted by European-Americans, "it was often a mile or more between trees on the ridges." In addition to removing underbrush, improving travel conditions, and facilitating plant growth, burning may also have improved areas of deer forage, potentially altering migratory patterns of deer populations by lessening their need to seek fresh forage on a seasonal basis (Matson 1972).

Nisenan used baskets for a variety of tasks, including storage, cooking, serving and processing foods, traps, cradles, hats, cages, seed beaters, and winnowing trays. Basket manufacturing techniques included both twining and coiling, and baskets were decorated with a variety of materials and designs. Other woven artifacts include tule matting and netting made of milkweed, sage fibers, or wild hemp (Wilson and Towne 1978).

Like most indigenous cultures, Nisenan groups had a holistic epistemology; a theorem of holistic knowledge in which any subject is a composite of all other subjects, and every aspect of knowledge is interconnected. The Nisenan world contained many ineffable supernatural beings and spirits, and all natural objects were endowed with potential supernatural powers (Beals 1933).

Stories about world creation and human origins vary amongst different ethnographic accounts as well as amongst different groups. Some expressed the idea that the world has always existed, but in different forms; some told that everything was made by someone, and that all birds and animals were once human; others told of a flood that killed the first people because they were bad (Kroeber 1929). In creation stories there was a culture hero, usually who created earth, and Coyote the trickster who introduced death and conflict to a once utopian existence (Beals 1933; Kroeber 1929).

Ethnographic accounts of specific religious practices were stymied by several factors, including reluctance on behalf of Nisenan groups to discuss their religion, many variations in cultural practices, and disease epidemics during contact period. Certain central themes were identified by Gifford (1927), who divided Nisenan religious ceremonies into three chronological strata: indigenous dances (early); northern-influenced dances of the *Kuksu* or god-impersonating cult performed in dance houses; and a *Kuksu* religious revival circa 1870 adapted to the Ghost Dance religion.

The *Kuksu* cult was the major religious system in Central California and was practiced by the Nisenan in various forms. Cult membership was reserved for initiated few, who danced disguised as the spirits of deities (Heizer 1962). Other religious ceremonies included a mourning ceremony, an annual ritual for the dead performed in the fall in which dancers covered their faces with ash and wailed and cried around a central brush pyre (Gifford 1927). This ceremony was observed and documented among mountain groups but little is known about whether valley and foothills groups performed similar rites (Wilson and Towne 1978). Other ceremonial dances included a *Kamin* dance celebrated in late March to mark the beginning of spring; the *Weda* or Flower dance of late April; a *Dappe* or Coyote Dance; and a *Nemulsa* or "Big Festival" to which people came from a distance to celebrate (Gifford 1927).

The Nisenan had two types of doctors or shamans, curing and religious, both of whom performed their rituals publicly in the village dance house (Wilson and Towne 1978). The curing shamans could be of either sex and possessed certain charms and medicines. They diagnosed feeling and sucked out the area of pain to remove the offending object (such as dead fly, a small bone, a blood clot), which was displayed, and then buried immediately. Curing shamans were only paid if they cured the afflicted patient (Wilson and Towne 1978). The religious shaman, or *oshpe*, represented the supernatural and was a dominant figure in dance house rituals. He gained control over spirits by dreams or esoteric encounters, and it was believed he could conjure up spirits and voices of the deceased (Wilson and Towne 1978).

The Spanish arrived on the Central California coast in 1769. Early contact with the first Spanish explorers to enter California was limited to the peripheries of Nisenan territory; they occurred mainly to the south on lands of the Miwok which had been explored by José Canizares in 1776, with only ephemeral explorations into Nisenan lands. There are no records of Nisenan groups being removed to the missions. They did, however, receive escapees from the missions, as well as pressure of displaced Miwok populations on their southern borders. The first known occupation by European-Americans was marked by American and Hudson Bay Company fur trappers in the late 1820s establishing camps in Nisenan territories. This occupation was thought to have been peaceful (Wilson and Towne 1978).

In 1833 a deadly epidemic (probably malaria) swept through the Sacramento Valley and had a devastating effect on Nisenan populations. Entire villages were lost and surviving Nisenan retreated into the hills. An estimated 75 percent of their population was wiped out, and only a handful were left to face the gold miners and settlers who were soon to follow (Cook 1955). Captain John Sutter settled in Nisenan territory in 1839, and through force and persuasion he coerced most of the remaining Valley Nisenan to be on peaceful terms (Wilson and Towne 1978).

The mountain Nisenan groups encountered Europeans in their territory but were not adversely affected by the epidemics and early settlers. The discovery of gold, however, led to their territory being overrun

within a matter of a few years. James Marshal's 1848 gold discovery was in the middle of Nisenan territory, and thousands of miners were soon living in the area. This dynamic led to widespread killing, destruction, and persecution of the Nisenan and their culture. The few survivors were relegated to working in agriculture, logging, ranching, or domestic pursuits (Wilson and Towne 1978). A native culture resurgence occurred around 1870 with influence from the Ghost Dance revival, but by 1890s the movement had all but ended in dissolution. By the time of the Great Depression, it was said that no living Nisenan could remember a time before European-American contact (Wilson and Towne 1978).

The turn of the century was fraught with deplorable conditions for the surviving Nisenan populations, marked by low educational attainment, high unemployment, poor housing and sanitation, and prevalence of alcoholism. The 1960 U.S. census (California State Advisory Commission of Indian Affairs 1966 as cited in Wilson and Towne 1978) reported 1,321 Native Americans resided in the counties originally held as Nisenan territory, but none had tribal affiliation. Sacramento County listed 802 Native Americans, of which only four were known descendants of the Valley Nisenan. El Dorado, Placer, Yuba, and Nevada counties had several Nisenan families in the 1970s who are descended from mountain groups and could speak the language and retained knowledge of traditional lifeways (Wilson and Towne 1978).

A few people still practiced Nisenan customs through the turn of the twenty-first century, but the old ways have been largely lost. Despite the hardships on their people through the past few centuries, many modern Native American populations participate in pan-Indian activities and celebrations. Nisenan descendants continue to be active in social movements and organizations that seek to improve the Native American situation in the dominant America culture.

3.4 Regional History

The first European to visit California was Spanish maritime explorer Juan Rodriguez Cabrillo in 1542. Cabrillo was sent north by the Viceroy of New Spain (Mexico) to look for the Northwest Passage. Cabrillo visited San Diego Bay, Catalina Island, San Pedro Bay, and the northern Channel Islands. The English adventurer Francis Drake visited the Miwok Native American group at Drake's Bay or Bodega Bay in 1579. Sebastian Vizcaíno explored the coast as far north as Monterey in 1602. He reported that Monterey was an excellent location for a port (Castillo 1978).

Colonization of California began with the Spanish Portolá land expedition. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junipero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterey Bay Area in 1769. As a result of this expedition, Spanish missions to convert the native population, presidios (forts), and pueblos (towns) were established. The Franciscan missionary friars established 21 missions in Alta California (the area north of Baja California) beginning with Mission San Diego in 1769 and ending with the mission in Sonoma established in 1823. The purpose of the missions and presidios was to establish Spanish economic, military, political, and religious control over the Alta California territory. No missions were established in the Central Valley. The nearest missions were in the vicinity of San Francisco Bay and included Mission San Francisco de Asis (Dolores) established in 1776 on the San Francisco peninsula, Mission Santa Clara de Asis at the south end of San Francisco Bay in 1777, Mission San Jose in 1797, Mission San Rafael, established as an *asistencia* in 1817 and a full mission in 1823, and Mission San Francisco Solano in Sonoma in 1823 (Castillo 1978;

California Spanish Missions 2011). Presidios were established at San Francisco and Monterey. The Spanish took little interest in the area and did not establish any missions or settlements in the Central Valley.

After Mexico became independent from Spain in 1821, what is now California became the Mexican province of Alta California with its capital at Monterey. In 1827, American trapper Jedediah Smith traveled along the Sacramento River and into the San Joaquin Valley to meet other trappers of his company who were camped there, but no permanent settlements were established by the fur trappers (Thompson and West 1880).

The Mexican government closed the missions in the 1830s and former mission lands, as well as previously unoccupied areas, were granted to retired soldiers and other Mexican citizens for use as cattle ranches. Much of the land along the coast and in the interior valleys became part of Mexican land grants or "ranchos" (Robinson 1948). During the Mexican period there were small towns at San Francisco (then known as Yerba Buena) and Monterey. The rancho owners lived in one of the towns or in an adobe house on the rancho. The Mexican Period includes the years 1821 to 1848.

John Sutter, a European immigrant, built a fort at the confluence of the Sacramento and American rivers in 1839 and petitioned the Mexican governor of Alta California for a land grant, which he received in 1841. Sutter built a flour mill and grew wheat near the fort (Bidwell 1971). Gold was discovered in the flume of Sutter's lumber mill at Coloma on the South Fork of the American River in January 1848 (Marshall 1971). The discovery of gold initiated the 1849 California Gold Rush, which brought thousands of miners and settlers to the Sierra foothills east and southeast of Sacramento.

The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the U.S. in 1848. As a result of the treaty, Alta California became part of the U.S. as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but usually with more restricted boundaries, which were surveyed by the U.S. Surveyor General's office. Land outside the land grants became federal public land that was surveyed into sections, quarter-sections, and quarter-quarter sections. The federal public land could be purchased at a low fixed price per acre or could be obtained through homesteading (after 1862) (Robinson 1948).

3.5 Project Area History

Roseville was originally named Junction because it was located where the California Central Railroad crossed the proposed route of the Central Pacific Railroad, a segment of the First Transcontinental Railroad. The name Roseville was given to the Central Pacific Railroad station and was named either for the most popular girl at a picnic (Gudde 1969) or was named for the nearby ranch of Rose Spring, owned by Judge James McGinley (Thompson and West 1882).

On April 25, 1864, the Central Pacific Railroad was completed from Sacramento to Roseville and soon trains were traveling to and from Sacramento on a daily basis (Department of Parks and Recreation [DPR] 1979). The Central Pacific Railroad connected with the Union Pacific Railroad at Promontory Point, Utah, in 1869 to form the First Transcontinental Railroad. The Central Pacific Railroad later merged with the Southern Pacific Railroad and was known as the Southern Pacific Railroad after 1885. The town served as a

stopping point for the transportation needs of the local farmers and ranchers. Between 1906 and 1909, Roseville became one of the fastest growing towns in the area when the Southern Pacific Railroad repair facilities and roundhouse, originally located in the neighboring city of Rocklin, were moved to Roseville. By the 1920s, Roseville had one of the largest freight yards west of the Mississippi River. During the early to mid-1900s, the town remained an important railroad depot; however, once Interstate 80 was completed, and other means of transportation became available, the depot was finally closed in 1972 (Davis 1993). Although Roseville was hit hard by the decline in railroad transportation, the town has proceeded to grow due to the introduction of many industrial headquarters and the central location of the city within the Sacramento Valley.

Roseville had its beginnings in the aftermath of the California Gold Rush when discouraged gold seekers left the mineral regions to take up farming along rich creek bottom lands. These pioneers formed the nucleus of what was to become the "first families" of Roseville. One of the first sections of southwestern Placer County to be settled was the rich lands of the Dry Creek District, located approximately three miles southwest of the Project Area (City of Roseville 2020; Davis 1964).

Among the European settlers of the Dry Creek District was Martin A. Schellhous who came to California with his wife and acquired a 240-acre ranch. Having brought a number of cattle with him from Michigan, Schellhous turned his attention to raising stock. Later diversifying and expanding his agricultural pursuits, he planted vineyards, orchards, and fields of grain on his property (City of Roseville 2020).

Between 1870 and 1879, Roseville experienced slow but steady development. New construction already underway and reported in the Placer Herald of January 1, 1870 included a new hotel, known as the Roseville Hotel, being erected by Daniel S. Neff, who had formerly operated the 17 Mile House on the old Auburn Road located in Sacramento County. The Roseville Hotel became one of the more prominent businesses in Roseville during the 1870s (Davis 1964). By 1890, though growth had not spiked, a movement toward a more industrial base had begun and business activity increased (City of Roseville 2020).

Fruit shipping became an important factor in the economy of Roseville at the beginning of the twentieth century. Figures compiled by the Roseville Board of Trade for 1901 revealed that during that year alone, more than 781,000 pounds of fresh deciduous fruits had been shipped from Roseville, along with 3,000 boxes of oranges, 22,380 pounds of pickled olives, and 8,000 pounds of olive oil. Hand-in-hand with the increased activity of shipping fruit was a great upsurge in viticulture. Historic records indicate that a total of 1,195,436 boxes of grapes were shipped from the Roseville depot in 1901 (City of Roseville 2020; Davis 1964).

The new State Highway was routed through Roseville in 1912. Roads were paved commencing at the lower end of Riverside Avenue and connecting to the State Highway on Lincoln Road. While Roseville was launching its new government and contributing its share to the war effort during World War I, the city continued to grow. In a 2.5-year period (September 1911 to January 1914), more than 110 new buildings were erected. Population increased from 2,608 in 1910 to 4,477 in 1920. By 1924, the Southern Pacific Railroad purchased 200 acres of land between Roseville and Antelope for relocation of Pacific Fruit

Express (PFE) shops and construction of 77 miles of new tracks to be used by both Southern Pacific and PFE. By June 1927, the new facilities were in operation (City of Roseville 2020).

The considerable building and commercial development that characterized Roseville throughout the 1920s was curbed drastically by the Great Depression; however, municipal improvements continued to progress in spite of the Depression. Although Roseville had become a "city" in 1909, it was not until 1935 that voters, by a 443 to 194 count, permitted the community to become a "charter city," which gave residents the ability to change how their city is governed. Between 1941 and 1942, no major building activity was reported in the columns of The Press Tribune. By the latter date, however, approximately 1,000 new residents had moved to Roseville; most of them worked in nearby defense installations or for the railroad (City of Roseville 2020).

The population boom, which hit southern California with sudden swiftness in the late 1940s and spread quickly to northern California in the following decades, focused on southwestern Placer County after 1960. George Buljan served as mayor during this period of rapid growth and great change. Buljan served on the City Council for 24 years. The city, among other things, named a middle school after him, which is located off Washington Boulevard, north of the Project Area. The population boom of the 1960s continued through the 1970s, and commercial and residential development continued through the turn of the twenty-first century.

3.5.1 Historical Context of Transmission Lines

The following broad historical overview of electric transmission is included to provide a sense of the historical developments, techniques, and significant events associated with electric transmission systems. Specific historical accounts and important information about electric transmission systems are often not documented in the historical record because these types of systems primarily serve a utilitarian function and their historical developments through time are linked to the service they provide. In order to assess whether or not a specific electric transmission line is relevant within the historical developments of these types of utilities, it is important to identify the major significant events of electric transmission, important companies, and other developments through time in addition to the property-specific information identified during focused archival research.

3.5.1.1 Electric Transmission in California

The number of electric utility companies in California significantly increased in the 1880s to meet the demand of the growing population and widespread use of Thomas Edison's new version of the incandescent light bulb (Adams 2010). Electric utility companies prior to the 1880s typically used low-voltage direct currents (DC), also invented by Edison, which transmitted electricity only about three miles. Because the electricity could not travel a long distance, only urban, densely populated areas could economically be served by these electric companies. Despite the limitations of DC systems, the California Electric Light Company of San Francisco was the first to begin installing long-distance electric transmission lines in California in 1879 (Adams 2010).

The alternating current (AC) system was developed later by Nikola Tesla and William Stanley (of the Westinghouse Company) and was more powerful than the DC system, with the capability of transmitting

higher voltages of electricity a significantly further distance (Adams 2010). California first saw use of the AC system when electrical engineer Almerian Decker and his partners opened the San Antonio Light and Power Company and in 1892 transmitted electricity over 14 miles in Pomona (JRP Historical Consulting, LLC 2007). In 1895 the Folsom power plant, designed by James Lighthipe of General Electric, produced and transmitted power to Sacramento approximately 22 miles away (JRP 2007). By the end of the 1890s, several cities in California began to use AC systems in their power plants because of the capability to transmit electricity longer distances. Another new invention in electrical transmission and distribution was the "converter," also called the transformer. Transformers are designed to reduce high electrical voltages passing along transmission lines to lower voltages to be safely distributed to residences and businesses (Adams 2010).

Electric transmission lines throughout California continued to grow in length significantly into the twentieth century. In 1899, the Edison Electric Company, predecessor of Southern California Edison, used glazed porcelain insulators to hold the conductor wire, which allowed construction of an 83-mile-long electric transmission line from the Santa Ana River to Los Angeles, the longest line at the time (Adams 2010). The length of electric transmission lines continued to increase over the next decade. In 1901, the Bay Counties Power Company constructed a 142-mile-long electric transmission line from the Colgate Powerhouse in the Sierra Nevada to Oakland. John Debo Galloway was the engineer who designed the 142-mile-long transmission line, which is given credit for being the longest in the world at the time. Galloway was a major pioneer in the design of electric transmission lines in California (Adams 2010).

Pacific Gas and Electric (PG&E) is one of the oldest electric utility companies in California. The California Electric Light Company was originally founded in 1879 by George Roe. The California Electric Light Company later opened the Folsom Powerhouse to develop hydroelectric power and distribute it to the area. This event was significant because it required the transmission of electricity over a long distance, a range achieved by only a few at the time. At this time, several electric utility companies were springing up throughout California, all competing in the electricity sales market. The Folsom Powerhouse and long-distance electric transmission capabilities of the California Electric Light Company gave them a significant advantage over competitors. Eventually, PG&E was formed in 1905 as a merger of the San Francisco Gas and Electric Company and the California Gas and Electric Corporation. Since formation, the company has expanded operations throughout the U.S. Currently, PG&E operates thousands of miles of electric transmission systems in California powering millions of homes (PG&E 2014).

3.5.2 Engineering

In order to adequately determine the eligibility of SV-001, Sacramento Municipal Utilities District (SMUD) 230-kV transmission line and SV-002, SMUD 115-kV distribution line for inclusion on the NRHP and CRHR, it is essential to understand the mechanical and physical components of the tower structures and poles supporting the conductor wires. All of the components and technologies of electric transmission lines discussed below are currently in use by PG&E, SMUD, and other electric utility companies in California and were included in this report to assist in the evaluation of the historic-age transmission lines within the Project Area.

The basic considerations of electric transmission tower and distribution pole construction focus on safety and structural load requirements. Towers and poles are designed to be able to withstand specific loads depending on environmental surroundings. A tower built in a valley must be able to withstand the structural loads of heavy winds while a tower built on a high mountain must be able to withstand the structural loads of heavy ice. A structure also has to withstand heavy stresses that are imposed on it, such as the tension of the wires it is supporting, the weight of conductors, stresses from guy wires stabilizing the towers, and the angles in the lines (Gonen 2009). Transmission towers span a variety of environments in long transmission systems, and therefore, tower foundations are selected depending on the characteristics of the ground at the location of a particular tower. Since towers typically stand on four angled legs, the foundation they sit on is generally designed to cover a small surface. These foundations are called spread foundations and contain steel plates and grillages set in concrete (Adams 2010).

Conductor wires are typically made of copper or aluminum metals (Sevick 2001). Aluminum is a lighter metal and is stronger than copper, but not as conductive of electricity. Insulators are used as separators between the conductor and the structure holding the wire. Insulators are typically made of porcelain, glass treated with epoxy resins, or fiberglass, though porcelain is the most commonly used (Gonen 2009). There are several types of insulators commonly used on today's electric transmission lines. These are the pin type, suspension type, and strain type insulators. Pin insulators are designed and commonly used for small-voltage transmission lines under 44 kV. Suspension insulators hold the conductor wire suspended from an arm of a tower and are typically seen on high-voltage transmission lines (Gonen 2009). Strain insulators are designed to withstand heavy stress and are typically used where a transmission line system turns a curve or crosses an obstruction or where a system closes off a circuit. In addition, high-voltage electric transmission lines typically support overhead grounding wire. Overhead grounding wires are designed to absorb electrical impulses in the atmosphere that could interfere with electrical currents in the conductor wire or damage the transmission line (Gonen 2009).

4.0 METHODS

4.1 Personnel Qualifications

All phases of the cultural resources investigation were conducted or supervised by Registered Professional Archaeologist (RPA) Lisa Westwood, who meets the Secretary of the Interior's Professional Qualifications Standards for prehistoric and historical archaeology. Staff archaeologist Laurel Zickler-Martin, RPA, conducted the background research and Senior Archaeologist Theadora Fuerstenberg, RPA, prepared the report with assistance from Staff Archaeologist Megan Webb. Fieldwork was conducted in two phases by Megan Webb, Senior Archaeologist Brian S. Marks, and Project Assistant Shannon Joy. The architectural history evaluation and analysis of the transmission towers was conducted by Senior Architectural Historian Jeremy Adams, who meets the Secretary of the Interior's Professional Qualifications Standards for architectural history and built environment. Lisa Westwood provided technical report review and quality assurance.

Lisa Westwood, the Principal Investigator, has 26 years of experience. She holds a B.A. in Anthropology and an M.A. in Anthropology (Archaeology). She has participated in or supervised numerous survey, testing, and data recovery excavations, has recorded and mapped hundreds of pre-contact and historical

sites, and has cataloged, identified, and curated hundreds of thousands of artifacts. She has conducted evaluations of cultural resources for eligibility to the NRHP and CRHR and is well versed in impact assessment and development of mitigation measures for CEQA and Section 106 (NHPA) projects. She is the Director of Cultural Resources for ECORP.

Theadora Fuerstenberg is a Senior Archaeologist for ECORP. She holds a B.A. in Anthropology and an M.A. in Cultural Resources Management, and has more than 16 years of experience, specializing in historic-era California, pre-contact central, southeastern, northern coastal California, and the Great Basin. Her principal professional abilities include identification and treatment of cultural resources and preparation of technical documents as required for compliance with CEQA, NEPA, and Sections 106 and 110 of the NHPA; conducting archival and background research; directing large and complex archaeological survey and archaeological excavations; directing and performing laboratory analysis of pre-contact and historic-era collections; and writing research designs, management plans, and reports for archaeological and cultural resource management projects.

Jeremy Adams meets the Secretary of the Interior's Standards for Architectural History and History, holding a B.A. in History and a M.A. in History (Public History). Mr. Adams has more than 11 years of experience specializing in historic resources of the built environment. He is skilled in carrying out historical research at repositories such as city, state, and private archives, libraries, CHRIS information centers, and historical societies. He has experience conducting field reconnaissance and intensive surveys. Mr. Adams has conducted evaluations of cultural resources for eligibility to the NRHP and CRHR.

Megan Webb is a Staff Archaeologist for ECORP and has more than five years of experience in cultural resources management, primarily in California. She holds a B.A. in Anthropology and has participated in all aspects of archaeological fieldwork, including survey, test excavation, and data recovery, in addition to months of archaeological laboratory experience.

Brian S. Marks has been an archaeologist since 1997, and has been working in cultural resources management in California since 2010 following eight years of archaeological work in the southeast U.S. Dr. Marks holds a Ph.D. and an M.S. in Anthropology. He has participated or supervised well over 200 survey, testing, and data recovery excavations; has recorded and mapped a multitude of pre-contact and historical sites including Civil War battlefields, Gold Rush boom towns, submerged pre-contact sites, and others. He has conducted evaluations of cultural resources for eligibility to the NRHP and CRHR and is well versed in impact assessment and development of mitigation measures for CEQA and Section 106 (NHPA) projects. He is a Senior Archaeologist for ECORP.

Shannon Joy is a Project Assistant and has more than two years of experience in cultural resources management in California. She is currently completing her B.A. in Anthropology (Archaeology) and has participated in all aspects of archaeological fieldwork, including survey, test excavation, and data recovery.

Laurel Zickler-Martin is a Staff Archaeologist at ECORP with over 10 years of experience in cultural resources management in California and the Great Basin, as well as project experience in Washington state and Oregon. Ms. Zickler-Martin has conducted all aspects of archaeological fieldwork, laboratory work, and reporting, including survey, site recording, test excavation, data recovery, and monitoring; cataloging, artifact analysis, curation, and collections and database management; CHRIS records searches,

archival research, preparation of DPR and IMACS site forms, determinations of NRHP and CRHR eligibility for archaeological and built environment resources, and preparation of and contributions to numerous technical reports. Faunal and human osteology analysis are Ms. Zickler-Martin's areas of specialization.

4.2 Records Search Methods

ECORP requested a records search for the property with the North Central Information Center (NCIC) of the CHRIS at California State University, Sacramento on June 17, 2020 (NCIC search #PLA-20-71; Attachment A). The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the Proposed Project location, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area.

In addition to the official records and maps for archaeological sites and surveys in Placer County, the following historic references were also reviewed: Historic Property Data File for Placer County (OHP 2012); The National Register Information System (National Park Service [NPS] 2020); *Office of Historic Preservation, California Historical Landmarks* (OHP 2020); California Historical Landmarks (OHP 1996 and updates); California Points of Historical Interest (OHP 1992 and updates); Directory of Properties in the Historical Resources Inventory (1999); *Caltrans Local Bridge Survey* (Caltrans 2019); *Caltrans State Bridge Survey* (Caltrans 2018); and *Historic Spots in California* (Kyle 2002).

Other references examined include a RealQuest Property Search and historic General Land Office (GLO) land patent records (Bureau of Land Management [BLM] 2020). Historic maps reviewed include:

- 1855 BLM GLO Plat map for Township 11 North Range 6 East;
- 1891 USGS Sacramento, California topographic quadrangle map (1:125,000 scale);
- 1910 USGS Roseville, California topographic quadrangle map (1:31,680 scale);
- 1953 USGS Roseville, California topographic quadrangle map (1:24,000 scale);
- 1967 USGS Roseville, California topographic quadrangle map (1:24,000 scale);
- 1967 photo revised 1981 USGS Roseville, California topographic quadrangle map (1:24,000 scale); and
- 1992 USGS Roseville, California topographic quadrangle map (1:24,000 scale).

Historic aerial photos taken in 1947, 1957, 1964, 1966, and more recent aerial photos from 1993, 1998, 2002, 2005, 2009, 2010, 2012, 2014, and 2016 were also reviewed for any indications of property usage and built environment.

The nearest local historical register is limited to the city of Sacramento and does not extend to the area subject to this assessment.

4.3 Sacred Lands File Coordination Methods

In addition to the records search, ECORP contacted the California Native American Heritage Commission (NAHC) on June 17, 2020 to request a search of the Sacred Lands File for the APE (Attachment B). This search will determine whether or not Sacred Lands have been recorded by California Native American tribes within the APE, because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. The responsibility to formally consult with the Native American community, however, lies exclusively with the federal and local agencies under applicable state and federal law. ECORP was not delegated authority by the lead agencies to conduct tribal consultation.

4.4 Other Interested Party Consultation Methods

ECORP mailed letters to the Placer County Historical Society and the Roseville Historical Society on June 17, 2020 to solicit comments or obtain historical information that the repository might have regarding events, people, or resources of historical significance in the area (Attachment A). No response has been received to date.

4.5 Field Methods

On June 23, 2020 and June 14, 2021, ECORP subjected the APE to intensive pedestrian surveys under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* (NPS 1983) using transects spaced 15 meters apart (Figure 2). ECORP expended one person-day in the field. At that time, the ground surface was examined for indications of surface or subsurface cultural resources. The general morphological characteristics of the ground surface were inspected for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances were examined for artifacts or for indications of buried deposits. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

All cultural resources encountered during the survey were recorded using DPR 523-series forms approved by the California OHP. The resources were photographed, mapped using a handheld Global Positioning System receiver, and sketched as necessary to document their presence using appropriate DPR forms.

Location: N:\2020\2020-108 Sierra View Country Club\MAPS\Cultural_Resources\SVCC_SurveyCoverage_20210611.mxd (KIT)-kturnquist 6/14/2021

Map Date: 6/14/2021
Photo Source: NAIP 2018

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2. Survey Coverage

2020-108 Sierra View Country Club

5.0 RESULTS

5.1 Records Search

Eighteen previous cultural resource investigations have been conducted within 0.5 mile of the property, covering approximately 20 percent of the total area surrounding the property within the record search radius. The previous studies within the records search radius were conducted between 1979 and 2015. A list of the previous reports is provided in Attachment A. The results of the records search indicated that the transmission line right-of-way (a maximum of 200-foot-wide corridor) located within the property has been previously surveyed for cultural resources in 1986, 2001, and again in 2002; however, these studies were conducted in smaller segments, at different times, by different consultants, as many as 34 years ago under obsolete standards, and did not cover the entire APE. Therefore, a pedestrian survey of the entire 23.1-acre APE was conducted for the current Project under current (2014) USACE protocols. As a result of these studies, no cultural resources other than the Western Area Power Administration (WAPA) transmission line (P-31-3280) were identified in the APE.

The records search also determined that nine previously recorded pre-contact and historic period cultural resources are located within 0.5 mile of the Project Area. Of these, one is believed to be associated with Native American occupation of the vicinity, and eight are historic-period sites, associated with early European-American ranching and mining activities and built environment (railroads, bridges, roads, transmission line, and the Old Roseville Historic District). A list of the previously recorded resources is provided in Attachment A. The only site identified within the APE was the previously recorded 1950s WAPA transmission lines (P-31-3280).

The OHP's *Built Environment Resource Directory for Placer County* (dated March 3, 2020) did not include any resources within the Project Area (OHP 2020).

The National Register Information System (NPS 2020) failed to reveal any eligible or listed properties within the Project Area. The nearest National Register property, The Carnegie Library, is 0.5 mile southwest of the Project Area in downtown Roseville.

Resources listed as *California Historical Landmarks* (OHP 1996) and by the OHP (OHP 2020) were reviewed on June 17, 2020. The nearest listed landmark is #780-1: First transcontinental railroad, Roseville (plaque located 0.7 mile southwest of the Project Area).

A review of *Historic Spots in California* (Kyle 2002) mentions that the track of the Central Pacific Railroad reached the junction at Roseville on April 25, 1864. In 1908 the Southern Pacific Railroad moved its roundhouse to Roseville from neighboring Rocklin, making Roseville one of the largest railroad centers in the U.S.

Historic GLO land patent records from the BLM's patent information database (BLM 2020) showed that the State of California received a patent for the land in the northwestern quarter of Section 35 of Township 11 North, Range 6 East on July 3, 1871, under the California Enabling Act of 1853 (10 Stat. 244). The enabling act granted lands to states to support schools. This encompasses the majority of the Project Area land.

A RealQuest online property search for APN 015-011-029 revealed the property consists of 23.1 acres of vacant land. No other property history information was on record with RealQuest.

The Caltrans Bridge Local and State Inventories (Caltrans 2018, 2019) listed one bridge, Bridge No. 19C0067, (previously recorded as P-31-3747). The bridge carries Sierra Boulevard over the Union Pacific Railroad, and Amtrak, and is located 0.5 mile southwest of the Project Area. It is a concrete continuous arch bridge that was constructed in 1929, and it was evaluated by Caltrans as a Category 2, eligible for the NRHP. No bridges are located within the APE.

The *Handbook of North American Indians* (Wilson and Towne 1978) lists the nearest Native American village as *Pichiku*, located within several miles southwest of the Project Area.

5.2 Map Review and Aerial Photographs

The review of historical aerial photographs and maps of the Project Area provide information on the past land uses of the property and potential for buried archaeological sites. Based on this information, the property has been an undeveloped property since the 1850s. Following is a summary of the review of historical maps and photographs.

- The 1855 BLM GLO Plat map for Township 11 North Range 6 East does not show any features mapped within or in the immediate vicinity of the Project Area. The Project Area land is situated between the south fork of Pleasant Grove Creek and Dry Creek.
- The 1891 USGS Sacramento, California topographic quadrangle map (1:125,000 scale) shows the town of Roseville and the Southern Pacific Railroad going through it, but no features are mapped within or in the immediate vicinity of the Project Area.
- The 1910 USGS Roseville, California topographic quadrangle map (1:31,680 scale) shows that the Project Area land is undeveloped and located north of the town of Roseville. No development is depicted within the Project Area.
- Aerial photographs from 1947 show the Project Area, and land north of Roseville, as undeveloped oak woodland.
- The 1953 USGS Roseville, California topographic quadrangle map (1:24,000 scale) shows the Project Area as being located on property owned by the Sierra View County Club, with one transmission line transecting the Project Area, which is the line that corresponds to previously recorded resource P-31-3280.
- Aerial photographs from 1957 and 1966 show the country club developed adjacent to the west of the Project Area; however, the Project Area remains undeveloped. The WAPA transmission line towers of previously recorded resource P-31-3280 are present on the 1957 photographs.
- The 1967 USGS Roseville, California topographic quadrangle map (1:24,000 scale) shows one transmission line within the Project Area, the Diamond Oaks and the Sierra View golf courses, and the route of today's Shasta Street and Diamond Oaks Road north and south of the APE. Only the transmission line is present within the APE.

- The 1967 photo revised 1981 USGS Roseville, California topographic quadrangle map (1:24,000 scale) shows no changes to the Project Area land.
- Aerial photographs taken in 1981 show the residential properties located directly east of the Project Area in its early stages of construction. The Project Area remains east of the Sierra View golf course and with one historic-period transmission line (P-31-3280).
- The 1992 USGS Roseville, California topographic quadrangle map (7.5-minute) shows the Project Area east of the Sierra View Country Club and with two transmission lines traveling across the APE.
- Aerial photographs from 1993 show a north-south trending drainage through the northern portion of the Project Area. The 1993 aerial shows two transmission lines within the Project Area: the historic-period transmission line (P-31-3280) and a modern line.
- Aerial photographs from 1998 to present show the Project Area as it exists today, undeveloped land situated east of the Sierra View golf course and surrounded by residential development.

In sum, the property has been undeveloped and vacant since at least 1855, and by 1953 a single transmission line is mapped traveling southeast/northwest through the center of the APE. By 1957, the Sierra View County Club constructed a golf course to the west. By 1993, a second, modern transmission line is present within the Project Area.

5.3 Sacred Lands File Results

A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the Project Area. A record of all correspondence is provided in Attachment B.

5.4 Other Interested Party Consultation Results

No responses to the letters sent to the Placer County Historical Society and the Roseville Historical Society have been received as of the preparation of this document.

5.5 Field Survey Results

ECORP surveyed the property in two phases. Initially, a survey was performed for the original 21.2-acre Project Area for cultural resources on June 23, 2020. Following a subsequent change to the project footprint, which added additional area that was not previously surveyed, ECORP carried out a supplemental 1.9-acre survey on June 14, 2021.

Ground visibility during the original survey in 2020 was approximately 40 to 60 percent due to low-lying grasses (one to three inches tall) and shrubs covering the majority of the survey area (Figure 3). The Project Area is comprised of undeveloped oak woodland setting located east of the existing Sierra View golf course, bordered by Diamond Oaks Road on the north and Shasta Street on the south. A seasonal drainage with riparian vegetation meanders through the northern and eastern portions of the Project Area (Figure 4). Patches of exposed soil from rodent activity was also inspected, and the exposed soil consisted of a light brown to reddish brown soil with no cultural indications.

The central portion of the Project Area contains a transmission line corridor with two parallel lines. The northern line was built in the 1950s and has been previously recorded as P-31-3280 (WAPA transmission line; Figure 5). The southern line (Roseville – Elverta 230-kV transmission line) was determined to be modern (built in the early 1990s) and therefore not recorded as a cultural resource (Figure 5). During the survey, ECORP confirmed that the 460-foot-wide segment of the WAPA transmission line crosses the property; however, the tower itself is not located within the Project Area.

Ground visibility during the 2021 supplemental survey was approximately 10 to 40 percent due to low-lying grasses, with areas of near 100 percent visibility along the access roads. ECORP archaeologists observed one modern electrical distribution line and two historic-period lines within this newly added acreage: a SMUD 230kV transmission line (SV-001), and a SMUD 115kV distribution line (SV-002). The two historic-period electrical lines are first visible on 1966 aerial photographs, and the modern distribution line is first visible in the 1981 aerial photograph. Site descriptions follow, and confidential DPR site records are provided in Attachment D.

Figure 3. APE overview from south (view north; June 23, 2020).

Figure 4. Riparian vegetation within northern portion of APE (view north; June 23, 2020).

Figure 5. Transmission lines within central portion of APE (view west; June 23, 2020).

Figure 6. Overview of supplemental 1.9-acre Project Area and SV-001 from Diamond Oaks Road (view southeast, June 14, 2021).

5.5.1 Cultural Resources

5.5.1.1 P-31-3280 (WAPA Transmission Line)

This transmission line was originally recorded in July 2001 by Rand Herbert as a lattice-type steel tower transmission line constructed in 1952 and used to distribute power from the Folsom and Nimbus dams. A segment of the transmission line located north of Baseline Road, west of the Project Area, was later updated and evaluated by Mark Beason in December 2006 (JRP 2007). Beason described the transmission towers as retaining integrity; however, they did not appear to meet the criteria for listing on either the CRHR or the NRHP.

During the 2020 survey, ECORP observed the line from the Project Area and the lattice-type steel towers are located outside of the Project Area but the line is situated above the Project Area land. It could not be determined if the towers or lines had been updated or altered since their original construction, but they appeared to be in overall good condition (Figure 7).

Figure 7. P-31-3280 transmission tower (view south; June 23, 2020).

According to Beason, the lines have not made a significant contribution to the broad patterns of history (Criterion A), were not associated with persons known to have made important advancements in high-voltage transmission lines (Criterion B), are not the first of their kind or of unusual or rare design (Criterion C), and did not appear to be a source of information important in history (Criterion D). ECORP did not encounter any new information during the current study to suggest the lines are now eligible and agrees with the prior evaluations that the segment of P-31-3280 within the survey area is not eligible for the NRHP or CRHR under any criteria.

This resource was previously determined not eligible by the USACE, with concurrence from the State Historic Preservation Officer (SHPO) as part of the Placer Vineyards Specific Plan project. On July 29, 2016, the USACE made a determination that P-31-3280 is not a historic property and consulted with the SHPO on that finding. On September 30, 2016, the SHPO concurred with the USACE's finding of not eligible (COE-2012-1022-001; SPK-2003-00670). Site P-31-3280 is neither a historic property under Section 106 of the NHPA nor a historical resource under CEQA.

5.5.1.2 5.5.1.2 SV-001 (SMUD 230kV Transmission Line)

This transmission line has lattice-type steel towers and was constructed between 1957 and 1966, based on historic aerials. The line is used to distribute power between the Folsom and Elverta substations. Electrical line systems often bear names associated with regional landmarks or historically significant individuals; however, archival research yielded no evidence of such nomenclature for this line.

During the current survey, ECORP observed the transmission line and one of its lattice-type steel tower within the Project Area.

Figure 8. Overview: SV-001, SMUD 230kV transmission line; Diamond Oaks Road, right (view west, June 14, 2021).

5.5.1.3 SV-002 (SMUD 115kV Distribution Line)

This distribution line is a typical wood pole line with standard cross arms and porcelain insulators constructed between 1957 and 1966 based on historic aerials; it is used to distribute power within the Roseville area. Electrical line systems often bear names associated with regional landmarks or historically significant individuals; however, archival research yielded no evidence of such nomenclature for this line.

During the current survey, ECORP observed the distribution line and one of its wooden poles within the Project Area (Figure 9). Based on aerial photographs, this pole was relocated approximately 75 feet to the west sometime between 2007 and 2009.

Figure 9. Overview: SV-002, SMUD 115kV distribution line (view southwest, June 14, 2021).

Evaluation Summary for P-31-3280, SV-001 and SV-002 (SMUD 115kV Distribution Line)

The newly recorded electrical lines SV-001 and SV-002 are not significantly associated with any historical events related to economic or population growth or developments in electric transmission in California, the Country, or the region. The transmission lines are common and have not made a significant contribution to the broad patterns of history (Criterion A). No known significant individuals or groups are associated with the lines, and the companies with which they are associated did not make greater historical contribution as a result of the lines (Criterion B). The transmission lines are common, utilitarian, steel lattice and wooden pole construction, are not the first of their kind or of unusual or rare design, do not exhibit any special engineering characteristics, and are not associated with master engineers known to have made important advancements in high-voltage transmission, tower construction, or engineering. These electrical lines and their components are designed to efficiently transmit electricity, but do not include any unique features that exemplify that purpose. (Criterion C). Furthermore, the research potential of these electrical lines is exhausted with archival research and recording efforts herein. The lines are not a source of information important in history (Criterion D).

Resource P-31-003280 (WAPA transmission line) was previously determined not eligible by the USACE, with concurrence from the SHPO; however, SV-001 and SV-002 have not been subject to agency review yet. Based on these assessments, ECORP recommends the three resources within the Project Area, P-31-003280 (WAPA Transmission Line), SV-001 (SMUD 230kV transmission line), and SV-002 (SMUD 115kV distribution line) be considered not eligible for the NRHP or CRHR under any criteria, Further, these sites

do not contribute to any known or suspected historic districts, nor are they considered to be Historic Properties for the purpose of Section 106 NHPA, nor Historical Resources under CEQA.

Lastly, these electrical infrastructure resources are not listed in the local register of historical resources, as defined in PRC 5020.1(k), have not been identified as significant in an historical resources survey, as defined in PRC 5024.1(g), and have not been determined to be historically significant by the CEQA lead agency [CCR Title 14, § 15064.5(a)]. Therefore, it is not a historical resource under CEQA and is not a historic property under Section 106 of the NHPA.

Integrity

The two transmission lines and one distribution line are in overall good condition and remain in their original alignment corridor. It could not be determined whether the towers for the transmission lines had been updated or altered since their original construction, but the distribution line pole within the Project Area had been moved sometime between 2007 and 2009. Therefore, transmission lines P-31-3280 and SV-001 retain integrity of location, setting, feeling, and association, but their integrity of materials, workmanship, and design are uncertain. Distribution line SV-002 retains integrity of association and feeling, but not of location or setting, and its integrity of materials, workmanship, or design is uncertain. Regardless of integrity, none of the three electrical lines recorded during this study are eligible under any criteria to the NRHP or CRHR, (Table 1).

Table 1. Evaluation and Integrity Summary

Resource #	Criterion A	Criterion B	Criterion C	Criterion D	Retains Integrity?
P-31-3280	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Yes
SV-001	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Yes
SV-002	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Yes

6.0 MANAGEMENT CONSIDERATIONS

6.1 Conclusions

As a result of the records search and 2020 inventory, one historic period transmission line was found to have been previously recorded within the Project Area. The historic period transmission line, resource P-31-3280, has previously been determined not eligible for the NRHP or CRHR under any criteria, with SHPO concurrence. As a result of the 2021 supplemental inventory, two additional historic-period SMUD electrical lines (SV-001, 230kV transmission line and SV-002, 115kV distribution line) were recorded within the expanded Project Area. Both of these newly recorded electrical lines were evaluated under NRHP and CRHR criteria and were determined not eligible. Therefore, no Historic Properties under Section 106 of the NHPA or Historical Resources under CEQA will be affected by the Proposed Project. Until the lead agencies concur with the identification and evaluation of eligibility of cultural resources, including archaeological sites, standing structures, no ground-disturbing activity or demolition should occur.

6.2 Likelihood for Subsurface Cultural Resources

Due to the presence of alluvium along Dry Creek and the southern branch of Pleasant Grove Creek and given the likelihood of pre-contact archaeological sites located along perennial waterways, the potential exists for buried pre-contact archaeological sites in the Project Area. ECORP recommends that any unanticipated (or post-review) discoveries found during Project construction be managed through a procedure designed to assess and treat the find as quickly as possible and in accordance with applicable state and federal law.

6.3 Post-Review Discoveries

If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 50-foot radius of the discovery. A qualified professional archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for pre-contact and historic archaeologist shall be retained to evaluate the significance of the find and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, they shall immediately notify the lead federal agency, the lead CEQA agency, and applicable landowner. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures if the find is determined to be a Historical Resource under CEQA or a Historic Property under Section 106. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource or Historic Property; or 2) that the treatment measures have been completed to their satisfaction.
- If the find includes human remains, or remains that are potentially human, they shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Placer County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located

(AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

The lead agency is responsible for ensuring compliance with these mitigation measures because damage to significant cultural resources is in violation of CEQA and Section 106. Section 15097 of Title 14, Chapter 3, Article 7 of CEQA, *Mitigation Monitoring or Reporting*, "the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program."

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LIST OF ATTACHMENTS

Attachment A – Records Search Confirmation and Historical Society Coordination

Attachment B – Sacred Lands File Coordination

Attachment C – Project Area Photographs

Attachment D – ***Confidential*** Cultural Resource Site Locations and Site Records

ATTACHMENT A

Records Search Confirmation and Historical Society Coordination

California Historical Resources Information System

NORTH CENTRAL INFORMATION CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

California State University, Sacramento
6000 J Street, Folsom Hall, Suite 2042
Sacramento, California 95819-6100
phone: (916) 278-6217
fax: (916) 278-5162
email: ncic@csus.edu

6/18/2020 NCIC File No.: PLA-20-71

Laurel Zickler-Martin
ECORP Consulting, Inc.
2525 Warren Drive
Rocklin, CA 95677

Re: 2020-108_Sierra View

The North Central Information Center received your records search request for the project area referenced above, located on the Roseville USGS 7.5' quad. The following reflects the results of the records search for the project area and a ½-mi radius.

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☒ shapefiles

Resources within project area:	P-31-3280
Resources outside project area, within radius:	P-31-77 P-31-560 P-31-773 P-31-816 P-31-964 P-31-3672 P-31-3747 P-31-4240
Reports within project area:	355 2807 7130 9188
Reports outside project area, within radius:	274 367 396 2077 2604 2935 6675 7745 8619 10041 10434 10856 12430 12441

Resource Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed/NA

Resource Database Printout (details): ☒ enclosed ☐ not requested ☐ nothing listed/NA

Resource Digital Database Records: ☒ enclosed ☐ not requested ☐ nothing listed/NA

Report Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed/NA

Report Database Printout (details): ☒ enclosed ☐ not requested ☐ nothing listed/NA

Report Digital Database Records: ☒ enclosed ☐ not requested ☐ nothing listed/NA

Resource Record Copies: ☒ enclosed ☐ not requested ☐ nothing listed/NA

Report Copies: ☒ enclosed ☐ not requested ☐ nothing listed/NA

Built Environment Resources Directory:	☒ enclosed	☐ not requested	☐ nothing listed/NA
Archaeological Determinations of Eligibility:	☒ enclosed	☐ not requested	☐ nothing listed/NA
CA Inventory of Historic Resources (1976):	☒ enclosed	☐ not requested	☐ nothing listed/NA
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Historical Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Local Inventories:	☐ enclosed	☐ not requested	☒ nothing listed/NA
GLO and/or Rancho Plat Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Shipwreck Inventory:	☐ enclosed	☒ not requested	☐ nothing listed/NA
Soil Survey Maps:	☐ enclosed	☒ not requested	☐ nothing listed/NA

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Sincerely,

Paul Rendes, Coordinator
North Central Information Center

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
000274		1986	Maniery, James Gary and Mary L. Maniery	Cultural Resources Inventory and Evaluation of Rich, Shenker, and Carlsberg Parcels, Roseville, Placer County, California.	Public Anthropological Research	31-000038, 31-000039, 31-000040, 31-000041, 31-000042, 31-000043, 31-000044, 31-000045, 31-000554
000355		1986	Mikkelsen, Pat	An Archeological Reconnaissance of a 14 Mile Long Transmission Line Corridor Between the Elverta Street Substation, Sacramento County, and the Berry Street Substation, Placer County, California.	Far Western Anthropological Research Group, Inc.	
000367		1982	Foster, John W. and Daniel G. Foster	An Archeological Reconnaissance of the Diamond Oaks North Property, Placer County, California.	Foothill Archaeological Services	31-000075, 31-000076, 31-000077, 31-000078, 31-000079, 31-000080, 31-000081, 31-000082, 31-000083, 31-000084, 31-000085, 31-000086, 31-000087, 31-000088, 31-000089, 31-000090, 31-000556, 31-000557, 31-000558, 31-000559, 31-000560, 31-000773
000396		1979	Peak, Ann S.	Cultural Resource Assessment of Sacramento Municipal Utility District's Project C, Phase I, 230kV Tansmission Line, Tower No. 355, Placer County to Elverta Substation, Sacramento County, California.	Peak & Associates, Inc.	
002077		1990		Cultural Resource Assessment of the Atlantic Street Widening Project, City of Roseville, California.	Peak & Associates	
002604		2001	Self, William	Inspection of Line 64, 48, and 20 in Yuba, Placer and Sacramento Counties, California	William Self Associates	
002807		2001	Hatoff, B. and A. Wesson	Roseville Energy Facility Cultural Resources Appendix J of Application for Certification	URS	31-000263, 31-001254, 31-001255, 31-001256
002935		1999	Jones and Stokes Associates, Inc.	Cultural Resources Inventory Report for Williams Fiber Optic Cable System: Sacramento to CA/NV State Border	Jones and Stokes Associates, Inc.	29-000169, 29-000613, 29-000940, 29-000942, 29-000944, 29-000947, 29-000948, 29-000949, 29-000950, 31-000671, 31-000796, 31-000964, 31-001211, 31-001249, 31-001267, 31-001268, 31-001269, 31-001270, 31-001271, 31-001272, 31-001273, 31-001274, 31-001275, 31-001277, 31-001278, 31-001279, 31-001280, 31-001281, 31-001283, 31-001284, 31-001285, 31-001286, 31-001287, 31-001288, 31-001289, 31-001290, 31-001291, 31-001294, 31-002629, 34-000505, 34-005121

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
006675		2003	Jessica B. Feldman	Caltrans Historic Bridges Inventory Update	Myra L. Frank & Associates, Inc.	03-001482, 03-001620, 03-001786, 03-001787, 09-003308, 09-005046, 09-005050, 09-005231, 09-005425, 09-005426, 09-005427, 09-005428, 29-000814, 29-000815, 29-000945, 29-003146, 29-003155, 31-002962, 31-003747, 31-005380, 31-005381, 31-005382, 31-005383, 31-006344, 34-001291, 34-001374, 34-001375, 34-001376, 34-001377, 34-001610, 34-002396, 34-002434, 34-002469, 34-002470, 34-003386, 34-004293, 34-004294, 34-004295, 34-004296, 34-004297, 34-004298, 34-004299, 58-002552, 58-002624, 58-002625, 58-002627, 58-002628, 58-002629
006675A		2004	Christopher McMorris	Caltrans Historic Bridge Inventory Update: Timber Truss, Concrete Truss, and Suspension Bridges	JRP Historical Consulting	
006675B		2004	Christopher McMorris and Andrew Hope	Caltrans Historic Bridge Inventory Update: Metal Truss, Movable, and Steel Arch Bridges	JRP Historical Consulting (McMorris); Caltrans (Hope)	
006675C		2004	Christopher McMorris	Caltrans Historic Bridge Inventory Update: Concrete Arch Bridges	JRP Historical Consulting	
006675D		2004	Andrew Hope	Caltrans Statewide Historic Bridge Inventory Update Survey and Evaluation of Common Bridge Types	Caltrans	
007130		2002	Brian Hatoff and R. Egherman	Roseville Energy Facility Cultural Resources	URS	31-000964, 31-002679, 31-002681, 31-002682, 31-002683, 31-002684, 31-002685, 31-002686, 31-003280, 34-000440, 34-000455, 34-000490, 34-000491, 34-000505, 34-000507, 34-000508, 34-000606, 34-000698, 34-000746, 34-001550, 34-001551, 34-001552, 34-001666
007745		1987	McCarthy, Helen, Margaret Scully, and Clinton Blount	Cultural Resources Survey of the Proposed Sacramento to Roseville Pipeline Project Contrct SPPL-1994	Theodoratus Cultural Research Inc.	
008619		2006	Cindy Arrington et al	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	SWCA Environmental Consultants	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
009188		2002	Wendy J. Nelson and Kimberley Carpenter	Cultural Resources Survey for Right-of-Way Maintenance Along the Western Area Power Administration Transmission Lines Volumes I, II, and II	Far Western Anthropological Group	31-000964, 31-003280, 34-000066, 34-000121, 34-000335, 34-000343, 34-000441, 34-000445, 34-000455, 34-000490, 34-000491, 34-000505, 34-000508, 34-000606, 34-000625, 34-000746, 34-000858, 34-000860, 34-000861, 34-000862, 34-001302
009188A		2002	Rand F. Herbert and Amanda Blosser	Cultural Resources Survey for Right of Way Maintenance Along the Western Area Power Administration Transmission Lines in Sacramento, Placer, and Sutter Counties, California, Volume III: Historic Properties Report	JRP Historical Consulting Services	
010041		2009	Ric Windmiller	Negative Archaeological Survey Report Washington Boulevard Frontage Improvements Project, City of Roseville, Placer County, California	Private consultant	
010434		1997	John W. Snyder	Central Pacific Transcontinental Railroad, Sacramento to Nevada State Line - HAER CA-196	P.S. Preservation Services	29-000613, 31-000964, 31-003845, 31-003846, 31-003847, 31-003848, 31-003849, 31-003850, 31-003851, 34-000505
010856		2011	Lorna Billat	Sierra View County Club: New Tower ("NT") Submission Packet FCC Form 620	EarthTouch, Inc	
012430		2016	Mary Connell	Tiger Paw	Tetra Tech	
012441		2015	Jana Morehouse and Lance Rom	Archeological & Historic Architecture Records Review for the UP PTC Valley Subdivision, Mileposts 106.70, 108.20, 109.92, 111.50, 114.60, 118.50, 120.40, 124.80, 127.00, Placer County	Quality Services, Inc.	

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-31-000077		Other - IF #3	Other	Historic	AH08	1991 (Marianne L. Russo, NCIC)	000367
P-31-000560	CA-PLA-000434	Other - site 5; Other - IF-6; Other - IF-5; Other - Diamond Oaks {5)	Site	Prehistoric	AP04	1982 (Terry Brown-Sampson, Michael Sampson, D. Foster, J. Foster, C. McKee); 1982 (Terry Brown-Sampson, Michael Sampson, D. Foster, J. Foster, C. McKee, Unknown)	000367
P-31-000773	CA-PLA-000647H	Other - H 3; Other - 28 T; Other - 28 U; Other - 28 V; Other - 28 W; Other - IF #1; Other - IF #2; Other - IF #3; Other - IF #4; Other - IF #5	Site	Historic	AH11; HP46	; 1999 (Chris Morgan, Kelly Long, and Deb Sterling, Pacific Legacy, Inc); 2012 (Stephen Pappas, ECORP Consulting, Inc)	000367, 000368, 000380, 000416, 003827, 003832, 003868, 006945, 007180, 007533, 011047
P-31-000816	CA-PLA-000690H	Resource Name - California Central Railroad; Other - Map Reference #3; Other - Roseville A-1; Other - CCRR 1; Other - Union Pacific Railroad	Structure, Site	Historic	AH07	1990 (Patti Johnson, Sannie Osborn, US Army Corps of Engineers); 1999 (W.L. Norton, S.M. Atchley, Jones & Stokes Associates); 2000 (Unknown, JRP Historical Consulting Services); 2008 (Heidi Koenig); 2012 (Ric Windmiller); 2019 (Dylan Stapleton, Natural Investigations Company)	004058, 004872, 009376, 010998, 013013

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-31-000964	CA-PLA-000841H	Other - First Transcontinental Railroad; Other - Southern Pacific Railroad (now known as the Union Pacific Railroad); Other - Transcontinental Railroad; Other - CIHR 138; Other - CIHR 136; CHL - 780-2; CHL - 780-1; CHL - 780-3; CHL - 780-4; Resource Name - Central Pacific Rail Road Company of California; Resource Name - Central Pacific Railroad Company of California; Other - Site #2 Abandoned Railroad Grade; Other - REF 41-H; Other - WAPA 13	Structure, Site	Historic	AH07; HP39	1979 (Jim Arbuckle); 1979 (Jim Arbuckle); 1979 (Jim Arbuckle); 1979 (Jim Arbuckle); 1998 (W.L. Norton, Jones& Stokes Associates); 1999 (W.L. Norton, S.M. Atchley); 2001 (Rand Herbert, Amanda Blosser, JRP); 2002 (Amanda Blosser, Toni Webb, JRP); 2005 (Cynthia Toffelmier, JRP Historical Consulting Services); 2007 (Staff, David Levy Forestry); 2007 (Denise Jurich, Jesse Martinez, PBS&J); 2007 (Steven Melvin and Joseph Freeman, JRP)	002935, 003874, 007130, 007340, 008967, 009188, 009326, 009362, 010434, 010815, 012125, 012261, 012744
P-31-003280		Resource Name - WAPA Transmission Line; Other - REF 40-H; Other - WAPA 12	Structure	Historic	AH07; HP11	2001 (Rand Herbert, JRP Historical Consulting, LLC); 2001 (Rand Herbert, Amanda Blosser, JRP Historical Consulting Services); 2002 (Amanda Blosser, Andy Walters, JRP Historical Consulting Services); 2006 (Mark A. Beason, JRP Historical Consulting, LLC); 2010 (Stephen Pappas, Jay Baker, ECORP Consulting, Inc); 2012 (Ric Windmiller); 2015 (S. Pappas, M. Webb, ECORP Consulting, Inc.)	007130, 007726, 009188, 010590, 010998, 012443
P-31-003672		Resource Name - Lincoln Road; Other - Route 3; Other - WB-1	Other	Historic	AH07	2008 (Ric Windmiller, Consulting Archaeologist)	
P-31-003747		Resource Name - Sierra Bridge; Other - Bridge #19C-67; Other - Bridge 19C-67	Structure	Historic	HP19; HP80	1985; 1986; 2003 (TW/CT, JRP Historical Consulting)	006675

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-31-004240		Resource Name - Old Town Roseville Historic District; OHP PRN - 5678-0003-9999	District	Historic	HP06	1981 (Edwin S. Astone, Leonard Davis, Astone & Associates)	

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

June 17, 2020

Placer County Historical Society
P.O. Box 5643
Auburn, CA 95604

RE: Cultural Resources Identification Effort for the Sierra View Project, Placer County, California T11N, R6E, Sections 26, 27, 34, 35 (ECORP Project No. 2020-108).

Dear Placer County Historical Society:

ECORP Consulting, Inc. has been retained to assist in the planning of the development on the project indicated above. As part of the identification effort, we are seeking information from all parties that may have knowledge of or concerns with historic properties or cultural resources in the area of potential effect.

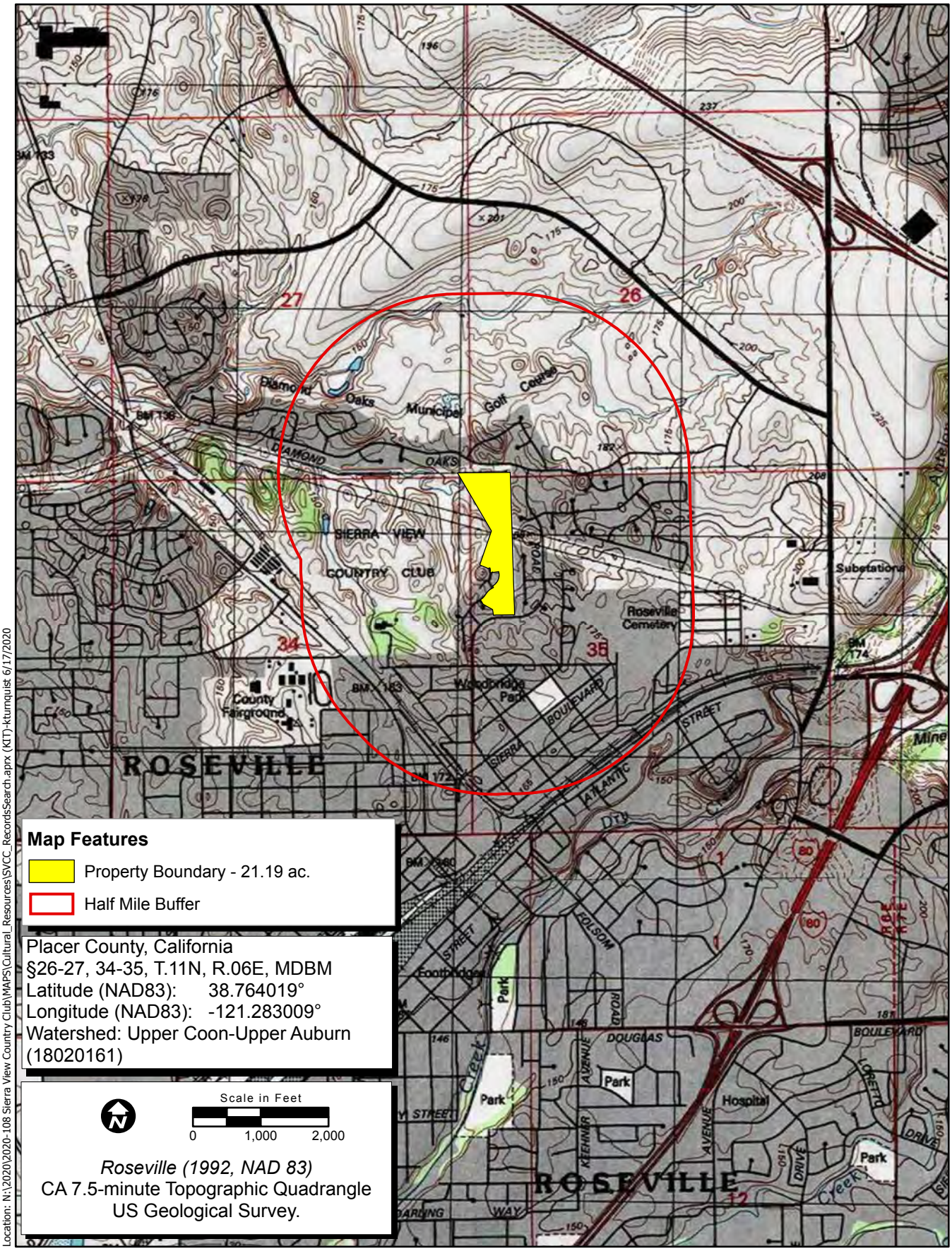
Included is a map showing the project area outlined. We would appreciate input on this undertaking from the historical society with concerns about possible cultural properties or potential impacts within or adjacent to the area of potential effect. If possible, please email or fax your response to my attention at (916) 782-9134 or lzicklermartin@ecorpconsulting.com. If you have any questions, please contact me at (916) 782-9100.

Thank you in advance for your assistance in our cultural resource management study.

Sincerely,

Laurel Zickler-Martin, M.A.
Staff Archaeologist

Attachment



Location: N:\2020\2020-108 Sierra View Country Club\MAPS\Cultural_Resources\SVCC_RecordsSearch.aprx (KIT)-kturnquist 6/17/2020

Map Date:

Sources:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Records Search

2020-108 Sierra View Country Club

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

June 17, 2020

Roseville Historical Society
557 Lincoln Steet
Roseville, CA 95678

RE: Cultural Resources Identification Effort for the Sierra View Project, Placer County, California T11N, R6E, Sections 26, 27, 34, 35 (ECORP Project No. 2020-108).

Dear Roseville Historical Society:

ECORP Consulting, Inc. has been retained to assist in the planning of the development on the project indicated above. As part of the identification effort, we are seeking information from all parties that may have knowledge of or concerns with historic properties or cultural resources in the area of potential effect.

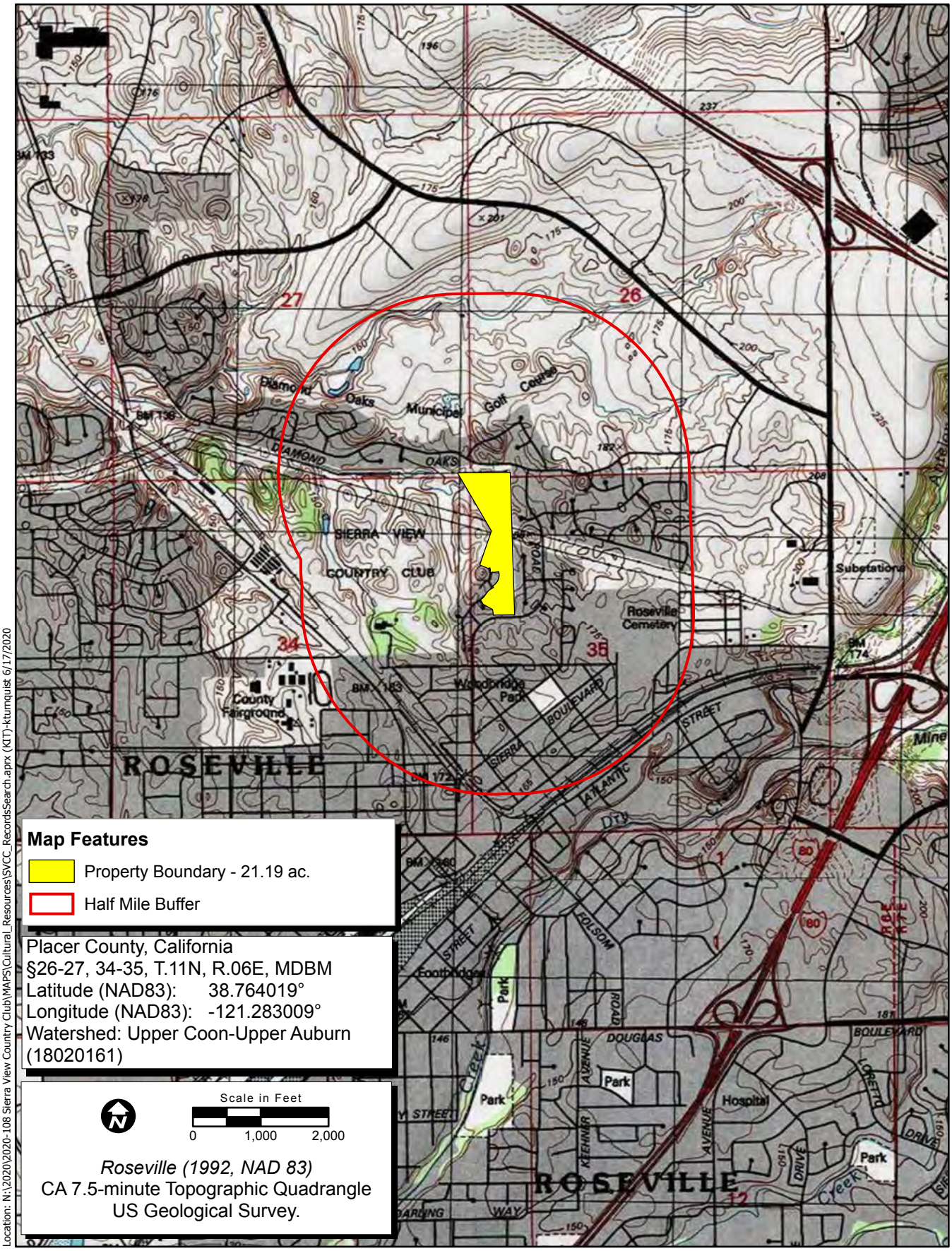
Included is a map showing the project area outlined. We would appreciate input on this undertaking from the historical society with concerns about possible cultural properties or potential impacts within or adjacent to the area of potential effect. If possible, please fax your response to my attention at (916) 782-9134. If you have any questions, please contact me at (916) 782-9100 or lzicklermartin@ecorpconsulting.com.

Thank you in advance for your assistance in our cultural resource management study.

Sincerely,

Laurel Zickler-Martin, M.A.
Staff Archaeologist

Attachment



Location: N:\2020\2020-108 Sierra View Country Club\MAPS\Cultural_Resources\SVCC_RecordsSearch.aprx (KIT)-kturnquist 6/17/2020

Map Date:

Sources:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Records Search

2020-108 Sierra View Country Club

ATTACHMENT B

Sacred Lands File Coordination

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: 2020-108_Sierra View

County: Placer

USGS Quadrangle Name: Roseville

Township: 11N **Range:** 06E **Section(s):** 26, 27, 34, 35

Company/Firm/Agency: ECORP Consulting, Inc.

Street Address: 2525 Warren Drive

City: Rocklin **Zip:** 95677

Phone: 916.782.9100

Fax: 916.782.9134

Email: lzicklermartin@ecorpconsulting.com

Project Description:

See attached letter and map.

June 17, 2020

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
nahc@nahc.ca.gov

RE: Cultural Resources Identification Effort for the Sierra View Project, Township 11N, Range 06E, Sections 26, 27, 34, 35

Dear NAHC Staff:

ECORP Consulting, Inc. has been retained to assist in the planning of the development on the project indicated above. As part of the identification effort, we are seeking information from all parties that may have knowledge of or concerns with historic properties or cultural resources in the area of potential effect.

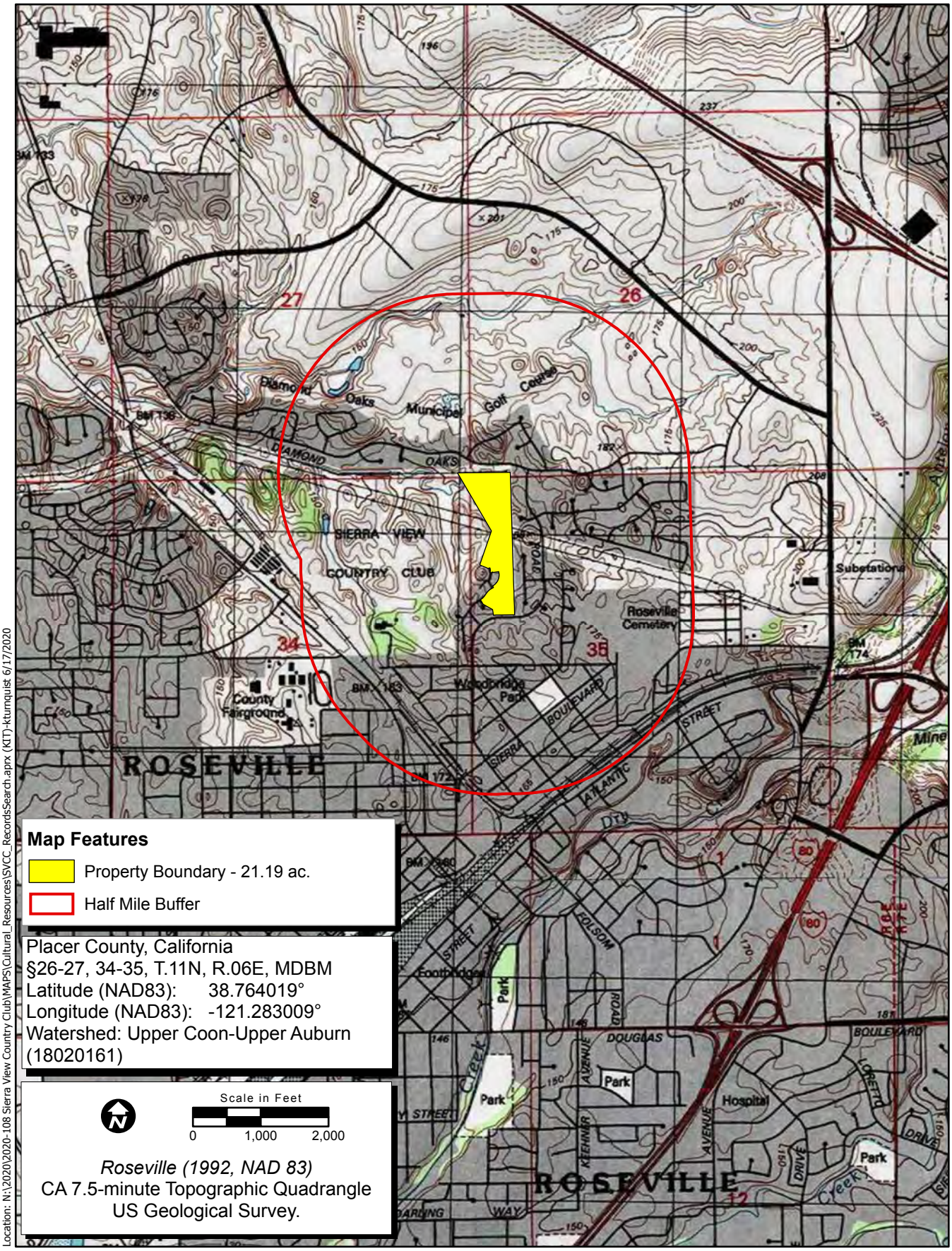
Included is a map showing the project area outlined. We would appreciate the results of your search of the Sacred Lands File and list of tribal contacts who can be contacted to provide input on this undertaking.

Please email or fax your response to my attention at lzicklermartin@ecorpconsulting.com or (916) 782-9134. If you have any questions, please contact me at (916) 782-9100.

Thank you in advance for your assistance.

Sincerely,

Laurel Zickler-Martin, M.A.
Staff Archaeologist



Location: N:\2020\2020-108 Sierra View Country Club\MAPS\Cultural_Resources\SVCC_RecordsSearch.aprx (KIT)-kturnquist 6/17/2020

Map Date:

Sources:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Records Search

2020-108 Sierra View Country Club

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

June 19, 2020

Laurel Zickler-Martin

ECORP Consulting, Inc.

Via Email to: lzicklermartin@ecorpconsulting.com

Re: **Sierra View Project (2020-108), Placer County**

Dear Ms. Zickler-Martin:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Placer County
6/19/2020

Shingle Springs Band of Miwok Indians
Regina Cuellar, Chairperson
P.O. Box 1340 Maidu
Shingle Springs, CA, 95682 Miwok
Phone: (530) 387 - 4970
Fax: (530) 387-8067
rcuellar@ssband.org

Tsi Akim Maidu
Grayson Coney, Cultural Director
P.O. Box 510 Maidu
Browns Valley, CA, 95918
Phone: (530) 383 - 7234
tsi-akim-maidu@att.net

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse, Chairperson
10720 Indian Hill Road Maidu
Auburn, CA, 95603 Miwok
Phone: (530) 883 - 2390
Fax: (530) 883-2380
bguth@auburnrancheria.com

Colfax-Todds Valley Consolidated Tribe
Clyde Prout, Chairperson
P.O. Box 4884 none Maidu
Auburn, CA, 95604 Miwok
Phone: (530) 577 - 3558
miwokmaidu@yahoo.com

Colfax-Todds Valley Consolidated Tribe
Pamela Cubbler, Treasurer
P.O. Box 4884 Maidu
Auburn, CA, 95604 Miwok
Phone: (530) 320 - 3943
pcubbler@colfaxrancheria.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Sierra View Project (2020-108), Placer County.

ATTACHMENT C

Updated Project Area Photographs

State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI#**

PHOTOGRAPH RECORD

Trinomial

Page 1 of 1 **Resource/Project Name:** Sierra View **Year** 2020
Camera: Lens Size: 35mm
Film Type and Speed: Digital Negatives Kept at: ECORP Consulting, Inc.

Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
6	23			APE overview from southeast corner	North	IMG_001
6	23			APE overview from southeast corner	NW	IMG_002
6	23			Dense vegetation surrounding drainage	SE	IMG_003
6	23			Dense vegetation surrounding drainage	East	IMG_004
6	23			Transmission towers within APE	West	IMG_005
6	23			APE overview from center	North	IMG_006
6	23			Eastern APE boundary near residential parcels	South	IMG_007
6	23			Transmission towers within APE	West	IMG_008
6	23			Northern APE boundary overview	West	IMG_009
6	23			Dense vegetation surrounding drainage at north end of property	North	IMG_010
6	23			Northern APE boundary overview	West	IMG_011
6	23			P-31-3280 transmission tower (tower not in APE)	South	IMG_012
6	23			P-31-3280 transmission tower footing (tower not in APE)	North	IMG_013
6	23			P-31-3280 transmission tower (tower not in APE)	West	IMG_014
6	23			Overview of P-31-3280 transmission line	East	IMG_015
6	23			P-31-3280 transmission tower (tower not in APE)	West	IMG_016
6	23			Transmission towers within APE	West	IMG_017
6	23			Modern transmission tower	West	IMG_018
6	23			Modern transmission tower, plague	Detail	IMG_019
6	23			Modern transmission tower footing	North	IMG_020
6	23			Modern transmission tower	North	IMG_021
6	23			Modern transmission tower	North	IMG_022
6	23			Golf course greens near APE	North	IMG_023
6	23			Golf course greens near APE	South	IMG_024
6	23			Overview of APE near townhomes (western edge)	North	IMG_025
6	23			Overview of southern portion of APE	East	IMG_026
6	23			Area north of Shasta Street	East	IMG_027
6	23			Overview of APE from south	North	IMG_028


IMG_0001


IMG_0002


IMG_0003


IMG_0004


IMG_0005


IMG_0006


IMG_0007


IMG_0008


IMG_0009


IMG_0010


IMG_0011


IMG_0012


IMG_0013


IMG_0014


IMG_0015


IMG_0016


IMG_0017


IMG_0018


IMG_0019


IMG_0020


IMG_0021


IMG_0022


IMG_0023

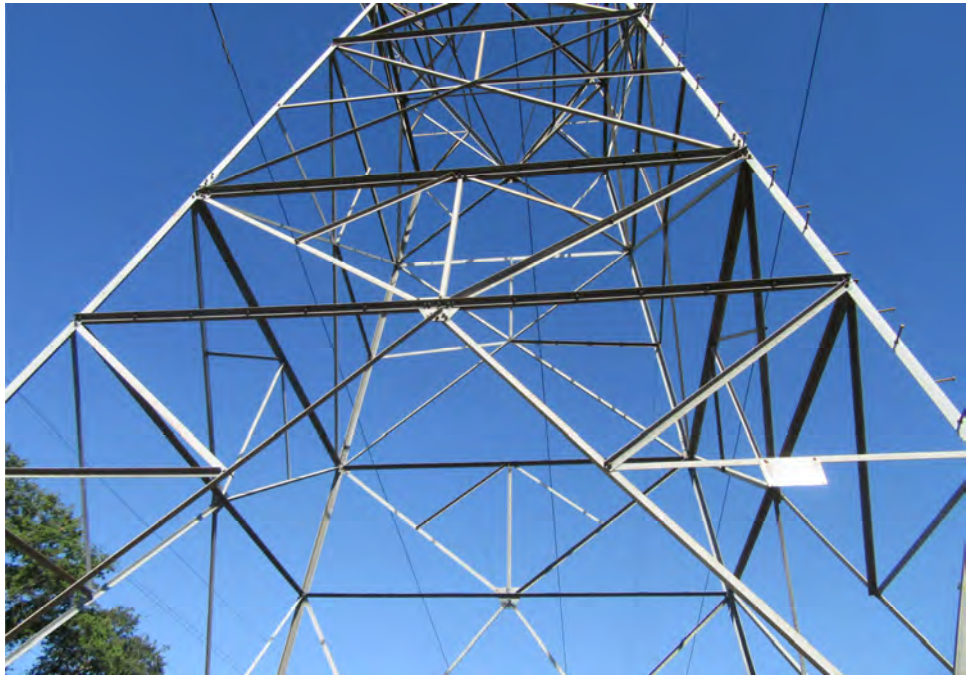

IMG_0024


IMG_0025


IMG_0026


IMG_0027


IMG_0028




MEYER IND
1-92
2288-100
POLE 1-1

State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI#**

PHOTOGRAPH RECORD

Trinomial

Page of **Resource/Project Name: Sierra View Country Club** **Year** June 2021
Camera: Samsung Galaxy S9 Lens Size: 35mm
Film Type and Speed: Cell Phone Originals Kept at: ECORP Consulting, Inc.

Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
06	14	9:06am	20210614_090655	Modern transmission line & access road	East	001
06	14	9:12am	20210614_091239	Transmission lines	West	002
06	14	9:12am	20210614_091244	Transmission lines	West	003
06	14	9:14am	20210614_091421	Project APE overview from Diamond Oaks Road	Southeast	004
06	14	9:14am	20210614_091427	Project APE overview from Diamond Oaks Road with transmission line in background	South	005

20210614_090655.jpg

20210614_091239.jpg

20210614_091244.jpg

20210614_091421.jpg

20210614_091427.jpg

State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI#**

PHOTOGRAPH RECORD

Trinomial

Page of **Resource/Project Name: Sierra View Country Club** **Year** June 2021
Camera: Samsung Galaxy S10 Lens Size: 35mm
Film Type and Speed: Cell Phone Originals Kept at: ECORP Consulting, Inc.

Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
06	14	9:06am	20210614_090644	Ground surface overview	East	006
06	14	9:06am	20210614_090647	View of western 20% of APE	West	007
06	14	9:10am	20210614_091033	Overgrown area in eastern portion of APE.	South	008
06	14	9:14am	20210614_091411	Exposed piping and utility access	South	009
06	14	9:14am	20210614_091459	Exposed bedrock in NW portion of APE	North	010
06	14	9:15am	20210614_091554	Buried Utility access	North	011
06	14	9:19am	20210614_091934	Wooden transmission pole	Southwest	012

20210614_090644.jpg

20210614_090647.jpg

20210614_091033.jpg

20210614_091411.jpg

20210614_091459.jpg

20210614_091554.jpg

20210614_091934.jpg

Confidential Cultural Resource Site Locations and Site Records

This Attachment contains information on the specific location of cultural resources. This information is not for publication or release to the general public. It is for planning, management and research purposes only. Information on the specific location of pre-contact and historic sites is exempt from the Freedom of Information Act and California Public Records Act.

Map Features

- Project Boundary - 23.72 ac.
- Site Boundary

Sources: NAIP 2018

ECORP- N:\2020\2020-108 Sierra View Country Club\MAPS\Cultural_Resources\SVCC_CRM_OV_20210615.mxd (KIT) -kturnquist 6/15/2021

Map Date: 6/15/2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 250

Attachment D. Cultural Resources Overview

2020-108 Sierra View Country Club

1. Impacts observed since site formation/use:
☐ Constructed trail ☐ Wildlife path ☐ Grading ☐ Recreational use by humans (campfire ring, etc.) ☐ Fire
☐ Erosion ☐ Vandalism/pothunting/artifact collection ☐ New vegetation growth ☐ Modern trash deposits
☐ Fire break ☐ Construction ☐ Vegetation removal ☒ None ☐ Other (explain):

2. Is the site location narrative accurate?
☒ Yes ☐ No (explain):

3. Is the site description narrative accurate?
☒ Yes ☐ No (explain):

4. Were new photos taken? Attach photograph record and paste representative photo below.
☒ Yes ☐ No (explain):

5. Date of site revisit: June 23, 2020

6. Revisited by: M. Webb; ECORP Consulting, Inc., 2525 Warren Drive, Rocklin, CA 55677

7. Reason for revisit (check all that apply):
☐ USACE 2-year requirement ☐ Collect GPS data/Impact Mapping ☐ Evaluation of Eligibility
☐ Change in project area conditions (fire, flood, etc.) ☒ Other (explain): Inventory of property

8. Report citation: ECORP Consulting, Inc. 2020 *Cultural Resources Inventory Report for the Sierra View Country Club Project, Placer County, California.* Prepared for Westpark Communities.

9. Were survey grade UTM coordinates gathered?
☒ Yes ☐ No (explain):

10. Remarks: This transmission line was originally recorded in July 2001 by Rand Herbert as a lattice-type steel tower transmission line constructed in 1952 and used to distribute power from the Folsom and Nimbus dams. A segment of the transmission line located north of Baseline Road, west of the Project Area, was later updated and evaluated by Mark Beason in December 2006 (JRP 2007). Beason described the transmission towers as retaining integrity; however, they did not appear to meet the criteria for listing on either the CRHR or the NRHP.

During the current survey, ECORP observed the line from the Project Area and the lattice-type steel towers are located outside of the Project Area but the line is situated above the Project Area land. It could not be determined if the towers or lines had been updated or altered since their original construction, but they appeared to be in overall good condition.

According to Beason, the lines have not made a significant contribution to the broad patterns of history (Criterion A), were not associated with persons known to have made important advancements in high-voltage transmission lines (Criterion B), are not the first of their kind or of unusual or rare design (Criterion C), and did not appear to be a source of information important in history (Criterion D). ECORP did not encounter any new information during the current study to suggest the lines are now eligible. Therefore, the segment of P-31-3280 within the survey area is not eligible for the NRHP or CRHR under any criteria. In addition, on July 29, 2016, the USACE made a determination that P-31-3280 is not a historic property and consulted with the SHPO on that finding. On September 30, 2016, the SHPO concurred with the USACE's finding of not eligible (COE-2012-1022-001; SPK-2003-00670). Site P-31-3280 is neither a historic property under NHPA nor a historical resource under CEQA.

P-31-3280 transmission tower (view south; June 23, 2020).

P-31-3280 transmission tower and modern line (view west; June 23, 2020).

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary # P-31-3280
HRI #
Trinomial

Page 3 **of** 3

***Resource Name or #:** WAPA Transmission Line

***Map Name:** Roseville and Citrus Heights, CA

***Scale:** 1:24,000

***Date of Map:** 1992

Location: N:\2020\2020-108 Sierra View Country Club\MAPS\Cultural_Resources\SVCC_CRM_DPR_LOCATION_20200629.mxd (j-kurnquist 6/29/2020

***Required Information**

0 1,000 2,000 4,000 Feet

0 250 500 1,000 Meters

DPR 523J (1/95)

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **PRIMARY RECORD**		Primary # HRI # Trinomial NRHP Status Code
Other Listings Review Code	Reviewer	Date

 *__Resource Name or #:__ SV-001

P1. Other Identifier: SMUD 230kV

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Placer

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Roseville **Date:** 1992 **T** 11N; **R** 06E; SW ¼ **of Sec** 26**;** M.D.**B.M.**

c. Address: N/A City: Roseville Zip:

d. UTM: Zone: 10; 649063 mE / 4292289 mN (western end); 649234 mE / 4292289 mN (eastern end)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 150 – 170ft AMSL

The resource is located 55 feet south of Diamond Oaks Road and 225 feet west-northwest of Shasta Street in Roseville, CA.

***P3a. Description:**

Resource SV-001 is a SMUD 230kV transmission line located on the southern side of Diamond Oaks Road, within a proposed addition to Sierra View Country Club in the City of Roseville. This transmission line is of lattice-type steel tower construction, built between 1957 and 1966 based on review of historic aerials. The line is used to transmit power between the Folsom and Elverta substations. It could not be determined whether the towers or lines had been updated or altered since their original construction, but they appeared to be in overall good condition.

***P3b. Resource Attributes:** (List attributes and codes) HP39 Other (utility line)

***P4. Resources Present:** ☐Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: Overview of SV-001 (SMUD 230kV transmission line) from Diamond Oaks Road (view southeast, Acc# 004 (20210614_091421)

***P6. Date Constructed/Age and Sources:** ☒Historic

***P7. Owner and Address:**
Sacramento Municipal Utility District
6301 S Street
Sacramento, CA 95817

***P8. Recorded by:**
Brian S. Marks and Shannon Joy
ECORP Consulting, Inc.
2525 Warren Drive
Rocklin, CA 95677

***P9. Date Recorded:** 6/14/2021

***P10. Survey Type:** Intensive pedestrian

***P11. Report Citation:** ECORP. 2021. *Revised Cultural Resources Inventory and Architectural History Evaluation Report, Sierra View Country Club, Placer County, California*. Prepared For: Westpark Communities, 1420 Rocky Ridge Drive, Suite 265 Roseville, California 95661.

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☐Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code

*Resource Name or # SV-001

B1. Historic Name: N/A
B2. Common Name: N/A
B3. Original Use: Electrical transmission
B4. Present Use: same
***B5. Architectural Style:** N/A
***B6. Construction History:** (Construction date, alterations, and date of alterations)

***B7. Moved?** ☐No ☐Yes ☒Unknown **Date:** **Original Location:**
***B8. Related Features:**

B9a. Architect:
b. Builder:
***B10. Significance: Theme:**
Area:
Period of Significance: **Property Type:** **Applicable Criteria:**
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Transmission line SV-001 is not significantly associated with any historical events related to economic or population growth or developments in electric transmission in California, the Country, or the region. The transmission line is common and has not made a significant contribution to the broad patterns of history (Criterion A). No known significant individuals or groups are associated with the line, and the companies it is associated with did not make greater historical contribution as a result of the construction or use of the line (Criterion B). Resource SV-001 is ofcommon, utilitarian, steel lattice construction, is not the first of its kind or of unusual or rare design, nor does it exhibit any special engineering characteristics, and it is not associated with master engineers known to have made important advancements in high-voltage transmission, tower construction, or engineering. This electrical line and its components are designed to efficiently transmit electricity, but do not include any unique features which exemplify that purpose. (Criterion C). Furthermore, the research potential of this electrical line is exhausted with archival research and recording efforts herein; the resource is not a source of information important in history (Criterion D).

The transmission line SV-001is in overall good condition and remains in its original alignment corridor. It could not be determined whether the towers had been updated or altered since their original construction.Therefore, transmission line SV-001 retains integrity of location, setting, feeling, and association, but its integrity of materials, workmanship, and design are uncertain. Regardless of integrity,this electrical line is not eligible to the NRHP or CRHR under any criteria.

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

B13. Remarks: None

***B14. Evaluator:** L. Zickler-Martin; J. Adams

***Date of Evaluation:** 06/15/2021

(Sketch Map with north arrow required.)

(This space reserved for official comments.)

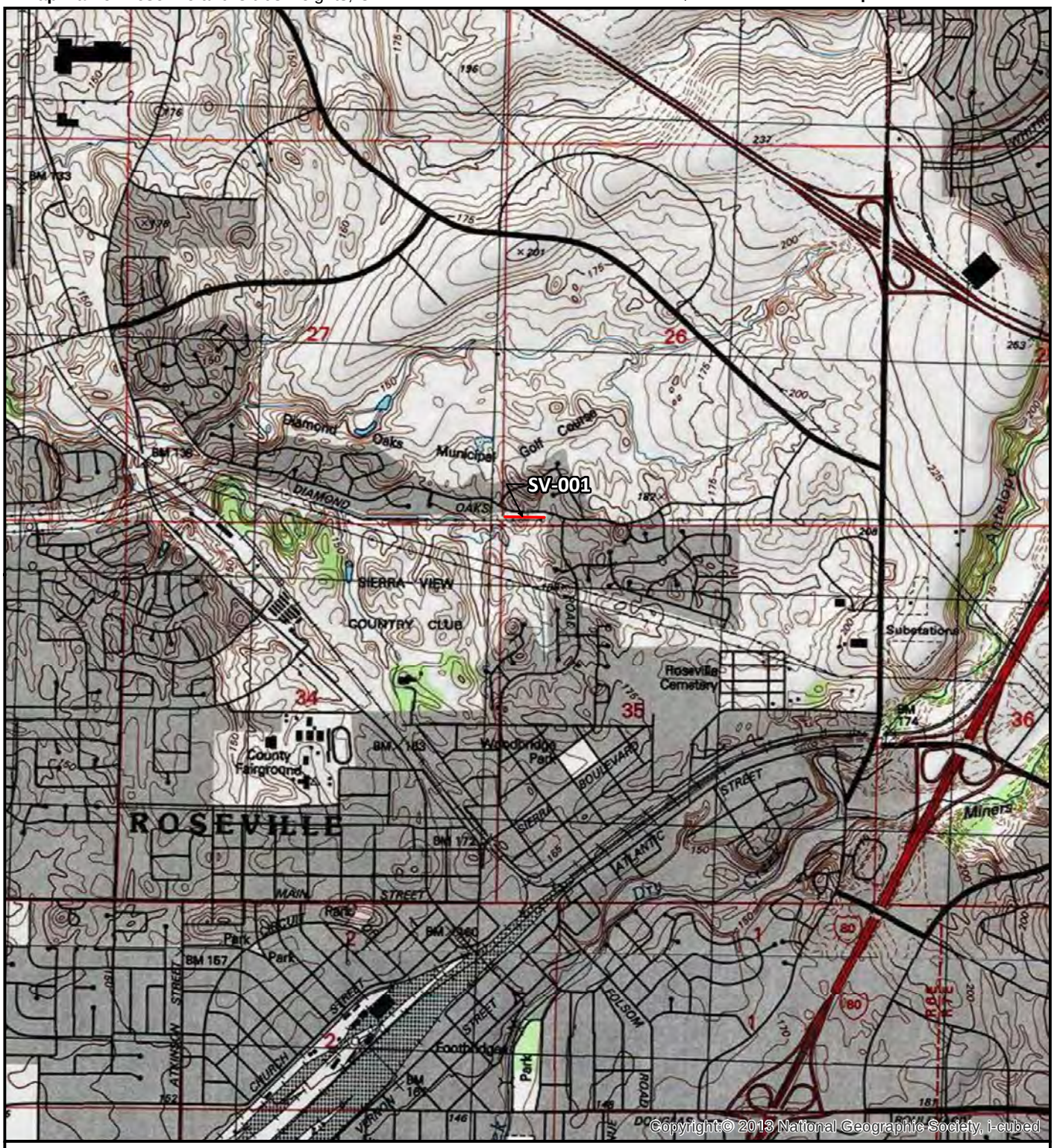
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI #
Trinomial

Page 3 **of** 3 ***Resource Name or #:** SV-001

***Map Name:** Roseville and Citrus Heights, CA ***Scale:** 1:24,000 ***Date of Map:** 1992



Location: N:\2021\2020-108 Sierra View Country Club\MAPS\Cultural_Resources\SVCC_CRM_DPR_LOCATION_20210615.mxd (j.kumquist 6/15/2021

***Required Information**

0 1,000 2,000 4,000 Feet
0 250 500 1,000 Meters

DPR 523J (1/95)

State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION **PRIMARY RECORD**	Primary # HRI # Trinomial NRHP Status Code	
Other Listings Review Code	Reviewer	Date

 *__Resource Name or #:__ SV-002

P1. Other Identifier: SMUD 115kV

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County:** Placer

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Roseville **Date:** 1992 **T** 11N; **R** 06E; SW ¼ **of Sec** 26; M.D.**B.M.**

c. Address: N/A City: Roseville Zip:

d. UTM: Zone: 10; 649063 mE / 4292289 mN (western end); 649234 mE / 4292289 mN (eastern end)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: 150 – 170ft AMSL

The resource is located 55 feet south of Diamond Oaks Road and 225 feet west-northwest of Shasta Street in Roseville, CA.

***P3a. Description:**

This distribution line is a typical wood pole line with standard cross arms and porcelain insulators, constructed between 1957 and 1966 based on review of historic aerial photographs. The line is used to distribute power within the Roseville area. The pole within the current Project Area was relocated approximately 75 feet to the west sometime between 2007 and 2009, based also on review of aerial photographs. It could not be determined if the remaining poles or lines had been updated or altered since their original construction, but they appeared to be in overall good condition.

***P3b. Resource Attributes:** (List attributes and codes) HP39 Other (utility line)

***P4. Resources Present:** ☐Building ☒Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: Overview: SV-002, SMUD 115kV distribution line (view southwest, Acc# 012 (20210614_091934)

***P6. Date Constructed/Age and Sources:** ☒Historic

***P7. Owner and Address:**
Sacramento Municipal Utility District
6301 S Street
Sacramento, CA 95817

***P8. Recorded by:**
Brian S. Marks and Shannon Joy
ECORP Consulting, Inc.
2525 Warren Drive
Rocklin, CA 95677

***P9. Date Recorded:** 6/14/2021

***P10. Survey Type:** Intensive pedestrian

***P11. Report Citation:** ECORP. 2021. *Revised Cultural Resources Inventory and Architectural History Evaluation Report, Sierra View Country Club, Placer County, California*. Prepared For: Westpark Communities, 1420 Rocky Ridge Drive, Suite 265 Roseville, California 95661.

***Attachments:** ☐NONE ☒Location Map ☐Sketch Map ☐Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code**

***Resource Name or #** SV-002

B1. Historic Name: N/A
B2. Common Name: N/A
B3. Original Use: Electrical distribution B4. Present Use: same
***B5. Architectural Style:** N/A
***B6. Construction History:** (Construction date, alterations, and date of alterations)

***B7. Moved?** ☐**No** ☒**Yes** (one pole) ☐**Unknown** **Date:** 2007 - 2009 **Original Location:** ~75 feet east
***B8. Related Features:**

B9a. Architect: b. Builder:
***B10. Significance: Theme:** **Area:**
Period of Significance: **Property Type:** **Applicable Criteria:**
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Distribution line SV-002 is not significantly associated with any historical events related to economic or population growth or developments in electric transmission in California, the Country, or the region. The distribution line is common and has not made a significant contribution to the broad patterns of history (Criterion A). No known significant individuals or groups are associated with the line, and the companies it is associated with did not make greater historical contribution as a result of the construction or use of the line (Criterion B). Resource SV-002 is of common, utilitarian, wooden pole construction, is not the first of its kind or of unusual or rare design, nor does it exhibit any special engineering characteristics, and it is not associated with master engineers known to have made important advancements in electrical distribution or engineering. This electrical line and its components are designed to efficiently transmit electricity, but do not include any unique features which exemplify that purpose (Criterion C). Furthermore, the research potential of this electrical line is exhausted with archival research and recording efforts herein; the resource is not a source of information important in history (Criterion D).

The The transmission line SV-002 is in overall good condition, but the distribution line pole within the current Project Area was moved sometime between 2007 and 2009. Therefore, SV-002 retains integrity of association and feeling, but not of location or setting, and its integrity of materials, workmanship, or design is uncertain. Regardless of integrity, none of the three electrical lines recorded during this study are eligible to the NRHP or CRHR, under any criteria.

B11. Additional Resource Attributes: (List attributes and codes)

***B12. References:**

B13. Remarks: None

***B14. Evaluator:** L. Zickler-Martin; J. Adams

***Date of Evaluation:** 06/15/2021

(Sketch Map with north arrow required.)

(This space reserved for official comments.)

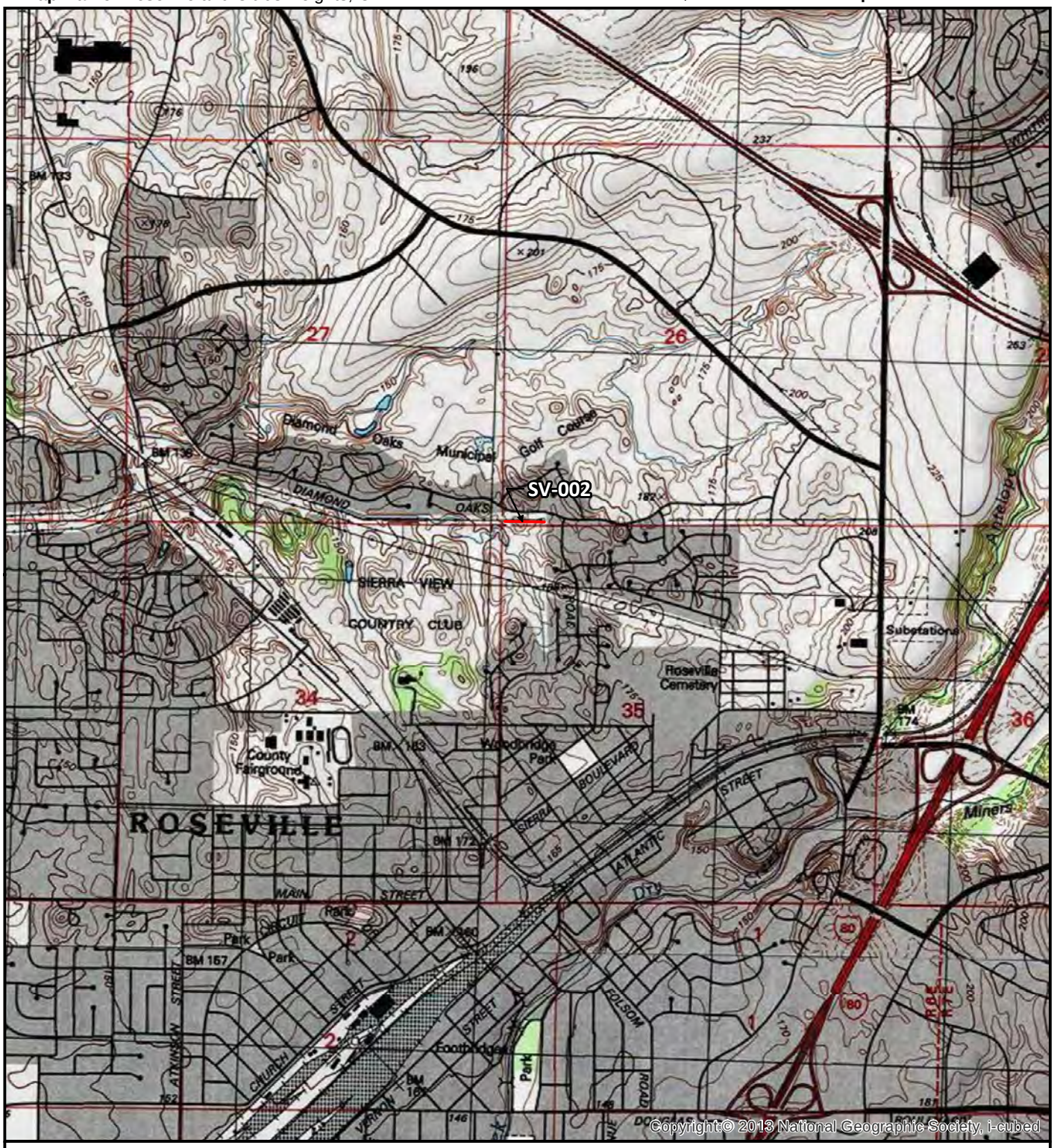
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI #
Trinomial

Page X **of** X ***Resource Name or #:** SV-002

***Map Name:** Roseville and Citrus Heights, CA ***Scale:** 1:24,000 ***Date of Map:** 1992



Location: N:\2021\2020-108 Sierra View Country Club\MAPS\Cultural_Resources\SVCC_CRM_DPR_LOCATION_002_20210615.mxd (-)kumquist 6/15/2021

***Required Information**

0 1,000 2,000 4,000 Feet
0 250 500 1,000 Meters

DPR 523J (1/95)