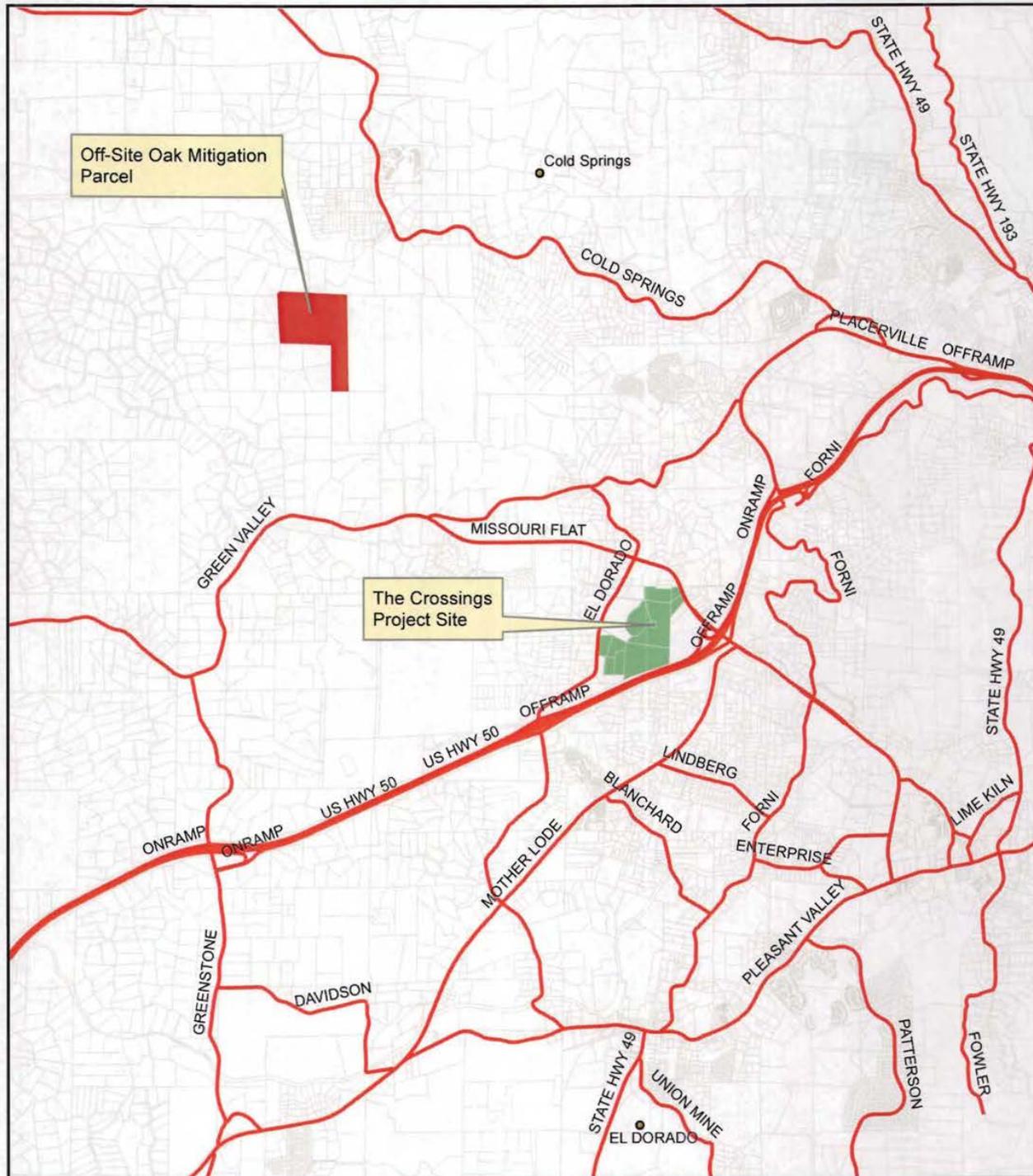


# Exhibit A: Location Map



- placenames
- cntly\_bnd
- major\_roads
- prclbase
- Export\_Output



PD97-0011 Off-Site Oak Mitigation  
Prepared By Aaron Mount

0 0.25 0.5 1 Miles

# EXHIBIT B

SUNDANCE PLAZA - As adopted by the Board of Supervisors December 8, 1998

## **Mitigation Measure 4.9-9: Oak Woodland Degradation.**

- a) Prior to issuance of a grading permit for any MC&FP retail development or roadway improvement projects, and Sundance Plaza and El Dorado Villages Shopping Center, the project proponent shall submit a tree survey to the El Dorado County Planning Department for approval. A map of all oak trees to be removed or disturbed during project construction will be included with the tree survey. The tree survey will also include a determination of the existing canopy cover on the project site (as determined from base line aerial photography or by site surveys performed by a qualified licensed arborist or botanist) and a preservation and replacement plan.
- b) Oaks not approved for removal that are within 200 feet of the grading activity shall be protectively fenced 5 feet beyond the dripline and root zone of each oak tree (as determined by a certified arborist). This fence, which is meant to prevent activities that result in soil compaction beneath the canopy or over the root zone, shall be maintained until all construction activities are complete. No grading, trenching, or movement of construction equipment shall be allowed to occur within fenced areas. Protection for oaks trees on slopes and hillsides will include installation of a silt fence. A silt fence shall be installed at the upslope base of the protective fence to prevent any soil drifting down over the root zone.
- c) To ensure that proposed replacement trees survive, a mitigation monitoring plan, including provisions for necessary replacement of trees, will be incorporated into the preservation and replacement plan. Detailed performance standards will be included to ensure that an 80% survival rate is achieved over a 5-year period. Annual reports identifying planting success and monitoring efforts will be submitted to the El Dorado County Planning Department and CDFG. During monitoring, the following information will be evaluated: average tree height, percent of tree cover, tree density, percent of woody shrub cover, seedling recruitment, and invasion by non-native species. Temporary irrigation equipment will be installed to facilitate sapling survival during the first several years of growth. During the revegetation process, tree survival will be maximized by using deer screens or other maintenance measures as recommended by a certified arborist.
- d) If the existing canopy cover is less than 10%, no further mitigation will be necessary.
- e) If the existing canopy cover exceeds 10%, the project will be subject to the canopy cover retention and replacement standards presented under Policy 7.4.4.4 of the El Dorado County General Plan.
- f) Mitigation could occur on-site within the slope areas around the project perimeter and potentially within project landscaping, or for Sundance Plaza only, within the park or cemetery. Partial mitigation of this impact may also occur off-site potentially in open space areas of other large projects in El Dorado County, similar to the concept practiced in Serrano open space areas.

# EXHIBIT C



Sierra Ecosystem  
Associates

October 29, 2013

Mr. Leonard Grado  
Palos Verdes Properties, Inc.  
4330 Golden Center Drive, Suite D  
Placerville, CA 95667

Subject: The Crossings at El Dorado Oak Canopy Assessment: Revised Final Map for Off-Site Mitigation

Dear Mr. Grado:

As you had requested, we have revised the figure illustrating the proposed subdivision of the Greenwood property to create a parcel which you plan to offer to El Dorado County as mitigation for impacts from developing The Crossings at El Dorado. We have also updated the text of the Oak Canopy Assessment Report to reflect this change. The revised final report can be filed with the County.

Per the County's requirements, 19.7 acres of oak tree canopy are needed as off-site mitigation for the Project's impacts in addition to the 9.9 acres retained on site. The northernmost section on the revised final map (Figure 5 in report), shown within the orange boundary, is approximately 30.54 acres in size and contains approximately 19.73 acres of oak tree canopy. The corners of the subdivided parcel are shown on the map, and the location of the corners is given in the table at the bottom of the map. The coordinate system for this map is NAD 83, State Plane, California Zone II. The units are in feet.

If you have any questions, please do not hesitate to call. Thank you again for the opportunity to work with you on this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Kris Kiehne".

Kris Kiehne  
Senior Biologist/Arborist

Attachment

**- Revised Final -  
Oak Woodland Acreage Analysis for  
The Crossings at El Dorado**

*Prepared for*  
Palos Verdes Properties, Inc.  
4330 Golden Center Drive, Suite D  
Placerville, CA 95667

*Prepared by*  
Sierra Ecosystem Associates  
1024 Simon Drive, Suite H  
Placerville, CA 95667

October 29, 2013

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## **Introduction**

The proposed Project, The Crossings at El Dorado, is located in an unincorporated area of El Dorado County, approximately 0.5 mile west of the City of Placerville, north of Highway 50, adjacent to Missouri Flat Road and east-northeast of El Dorado Road and covers approximately 73 acres. The proposed project was approved by the County in December, 1998, as the Sundance Plaza. According to the County Planning Department, the requirements of Development Agreement for Sundance Plaza (DA98-01) are applicable to The Crossings development (A. Mount, pers. Communication, June 25, 2013). DA98-01 requires that prior to the issuance of a grading permit, the applicant submit a tree survey that determines the existing canopy cover on-site and a preservation and replacement plan, in accordance with General Plan Policy 7.4.4.

Sierra Ecosystem Associates (SEA) was retained to calculate the oak tree canopy cover across the Project area, to evaluate both the impacts to the oak tree canopy that could occur due to development activities and subsequent mitigation for those impacts.

The proposed Project will be built in three phases. This report addresses the following for the entire Project area:

- Oak tree canopy cover existing on the property.
- Oak tree canopy proposed to be removed by the three phases of development activity.
- Oak tree mitigation for oak tree canopy removed, including on-site retention and off-site mitigation and a monitoring plan to assure survival rates for compliance with DA98-01.

## **Specific Project and Site Information**

A location map of the property is shown in Figure 1.

Owner: Palos Verdes Properties, Inc.

APN: 32522049, 32711002, 32711003, 32711006, 32711008, 32712019, 32712020, 32712021, 32712022, 32713001, 32713002

Zoning: Z97-22

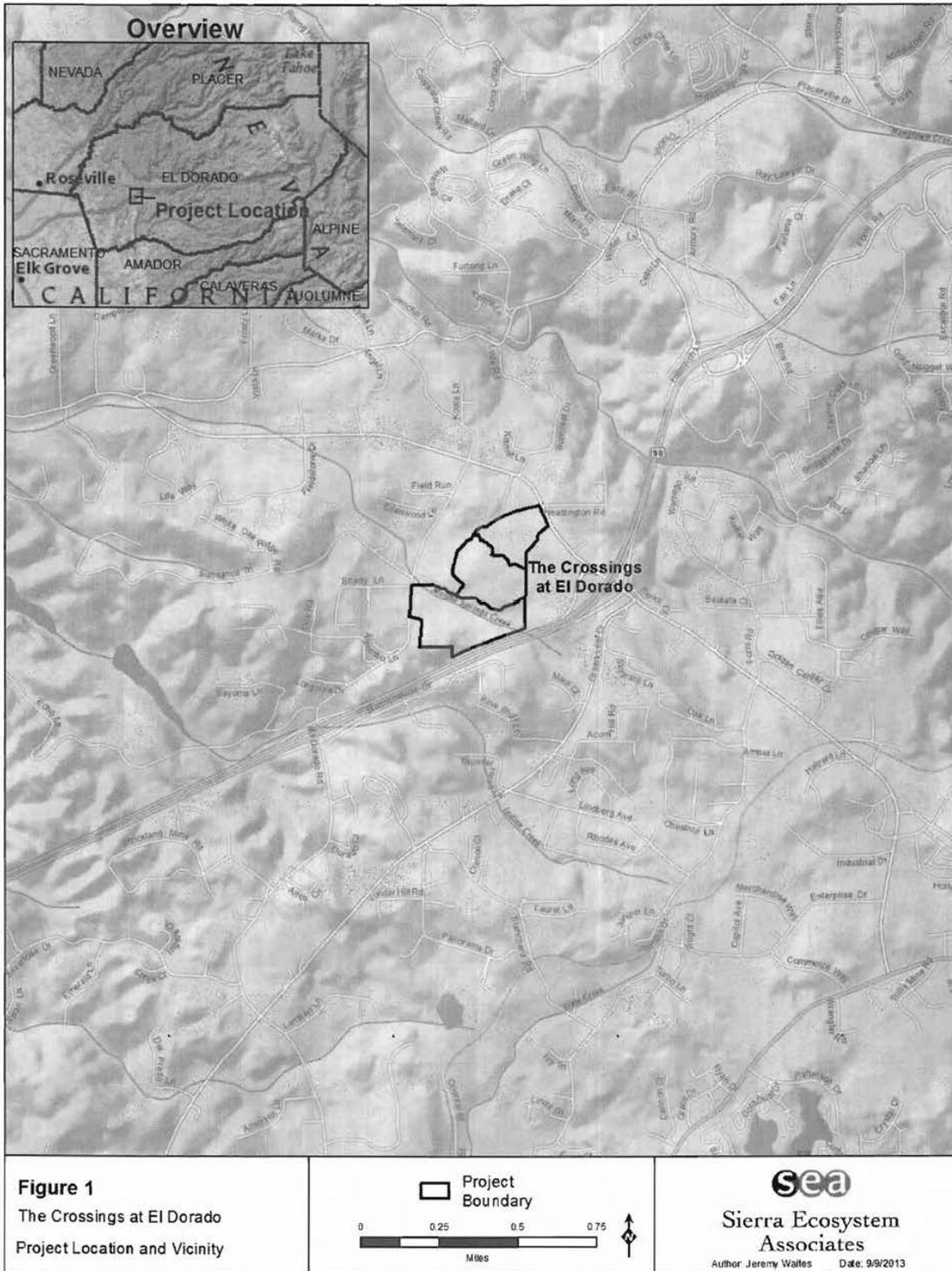


Figure 1. Project Location and Vicinity

## Project Setting

The topography of the Project area is rolling hills with an intermittent creek to the southwest. Figure 2 shows the development plan boundary overlaid on an aerial photograph of the area from 2011.

In the southwest part of the property, blue oak-foothill pine habitat dominates. The shrub understory is not well developed. This area transitions to one dominated by valley oak with large openings of grassland where yellow star thistle is encroaching. A large grassland area gives way to a ribbon of valley oak and blue oak along the floodplain of the intermittent creek.

Along the creek, shown as the Natural Area on Figure 2, the habitat is valley-foothill pine-riparian woodland. Native oaks, such as valley, blue, and interior live oak occur but the presence of Fremont cottonwood (*Populus fremontii*) and various willow species (*Salix* spp.) are indicative of the higher water table in this section of the property.

A small portion of the property in the northeast corner of the Project area is valley oak woodland with several large specimens of both valley and blue oaks. However, the remaining majority of the property is best characterized as blue oak-foothill pine. This large area is dominated by low-growing, multi-stemmed interior live oaks, manzanitas (*Arctostaphylos* spp.), toyon (*Heteromeles arbutifolia*), buck brush (*Ceanothus cuneatus*), poison oak (*Toxicodendron diversiloba*), and blackberry (*Rubus* spp.). Blue and black oaks, gray pine, and some Ponderosa pine trees are scattered throughout this area.

A small historic cemetery located near the center of the property will be left undisturbed by the development. This area is open grassland with blue oaks. There is an abandoned homesite on the property with various landscape trees and fruit trees which had been planted.



**Figure 2. Development Plan Boundary**

## Methodology

Oak tree canopy coverage estimates are to include canopies of all California native oaks on the development site, regardless of species or size, per the County General Plan.

Figure 2 shows the development plan projected on an aerial photo of the Project site taken in 2011. ArcGIS 10.0 with Spatial Analyst extension was used in the oak canopy analysis. The analysis was achieved using the most current satellite imagery dated August 23, 2012 with 0.5 meter resolution. The image was classified by spectral signature into multiple classes using an unsupervised classification which defined each pixel based on computer-derived clusters. This type of classification resulted in a coarse map that displayed oak canopy, grassland, pavement, gray pine, and other non-oak elements in the image.

The map displayed in Figure 2 was used to define areas for ground-truthing (verification) such as vegetation with similar signatures and other anomalies. The ground-truthing data was collected in the field using a Trimble Nomad GPS unit during two site visits in June 2013 to verify the oak tree canopy coverage estimates and the oak tree species composition. This data was then used as calibration for the ArcGIS software to complete a supervised classification which further refined the oak canopy area. A geometric calculation of the oak canopy area supplied an estimate of acreage. The results of this analysis and the estimate of oak canopy coverage are given in Table 1.

## Tree Survey and Inventory Results

Oak tree species composition was determined by evaluating randomized blocks of oak tree vegetation, and then projecting these estimates across the parcel through image analysis. A summary of oak tree species, and estimates of percentages in each development phase, is given in Table 1.

**Table 1. Oak Tree Composition, The Crossings at El Dorado**

% Contribution to canopy cover, by type	Overall %	% in Phase 1 Area	% in Phase 2 Area	% in Phase 3 Area
Interior Live Oak	52	66	58	28
Blue Oak	25	23	37	16
Valley Oak	16	1	0	54
Black Oak	7	10	5	2

## Oak Woodland Canopy Removal

The areas for each development phase were analyzed to estimate the percent oak tree coverage and the total acres. For purposes of the analysis, it was assumed that all vegetation in these areas would be removed.

## Oak Tree Canopy Retained

The areas of the parcel not slated for canopy removal are the Historic Open Space and the Natural Open Space, and are 18.2 acres in size, combined. The total oak tree canopy coverage of these areas is 9.9 acres.

The results of the oak tree canopy cover analysis are summarized in Table 2. Over the entire Project area, approximately 72 acres in size, the oak tree canopy cover is 51%. This figure accounts for subtracting the non-oak tree coverage, such as pine trees, and shrub coverage. Using the average percent cover, this is equivalent to 37 acres of oak tree canopy coverage.

Of the 72 acres, approximately 54 acres will be developed and 18 acres will be left undisturbed. In the 54 acres to be developed there are approximately 37 acres of oak tree canopy. According to General Plan Policy 7.4.4.4, parcels with this level of oak tree canopy cover are subject to a canopy retention or replacement standard of 80%, which is 29.6 acres.

In the undisturbed areas of the Project, 18 acres in size, the oak tree canopy cover is equivalent to 9.9 acres, which is the amount of oak tree canopy that will be retained on-site. The remaining acreage required by the retention or replacement standard is 19.7 acres.

**Table 2. Oak Tree Canopy Cover Analysis Summary, The Crossings at El Dorado**

Description	Size	Detail
Total Site, Acres	72.5	Total acres of the entire project site
Disturbance Area, Acres	54.3	Acres of land being developed
Historic Open Space and Natural Area, Acres	18.2	Acres of land not being developed
% Oak Canopy Cover On-site	51%	% of oak canopy over the entire project site
Oak Canopy , Acres	37	Acres of oak canopy over the entire project site
<i>Oak Canopy Removed by Development, Acres</i>	27.3	Acres of oak canopy in area to be developed
Retention or Replacement Standard from General Plan	80%	Policy 7.4.4.4
Oak Canopy to be Retained or Replaced, Acres	29.6	80% Retention or Replacement Standard
Oak Canopy Retained in Undeveloped Areas, Acres	1.4	Historic Open Space
	8.5	Natural Area
	<b>9.9</b>	<b>Total</b>
Oak Canopy Replacement Needed, Acres	19.7	Additional amount of oak canopy acres needed to meet 80% standard

## **Mitigation for Oak Tree Canopy Removed by Development**

The 1996 General Plan, in force at the time DA98-01 was signed, allowed mitigation for oak canopy impacts to occur on- or off-site. As described above, a total of 29.6 acres of oak tree canopy must be retained or replaced due to project impacts. Of this, 9.9 acres of oak tree canopy will be retained on-site. The applicant proposes to provide the balance of the mitigation, 19.7 acres of oak tree canopy, through off-site mitigation on a parcel with healthy, mature oak woodland. The applicant will subdivide a parcel, referred to as the Greenwood Property, and dedicate to the County a conservation easement on that parcel which contains the balance of oak tree canopy required as mitigation.

### *Description of the Property*

SEA staff evaluated the parcel, referred to as the Greenwood Property, on July 15, 2013. An aerial photograph of the parcel and surrounding area is shown in Figure 3. At the time of the site visit, the woodland appeared very healthy. There was little or no dieback in the canopies of the trees and no evidence of foliar disease was observed. The tree canopy was comprised of a mix of native oaks and native conifers and the understory shrubs typical of those associated with oak woodlands. The majority of oak tree canopy is in the northern portion of the parcel. The southeast portion of the parcel is a grassland with yellow star thistle encroaching. A list of typical species observed is in Table 3.

The parcel contains mature oak woodland. A number of very large black oak trees, greater than 30 inches DBH, were observed during the evaluation. Importantly, the area around these trees had many viable oak tree seedlings, indicating a promising level of seedling “recruitment” that could result in a sustained black oak woodland area over time. The Greenwood Property sits in what the County has identified as an Important Biological Corridor (IBC) (Figure 4).

The specific oak tree canopy cover acreage was determined by analyzing the Near Infrared (NIR) aerial imagery of the Greenwood property. The NIR images from the growing season (August 2012) and the dormant season (February 2012) were used to differentiate between the oak species and the conifer tree species. Further image analysis was completed as previously described in this report. The analysis showed that overall the Greenwood property has approximately 43% oak tree canopy cover total, most of which lies in the northern section of the parcel.

### *Description of the Parcel offered as mitigation*

The Greenwood Parcel is a total of 73.3 acres in size. The applicant proposes to subdivide the property to create a new parcel to the north. The newly created parcel will be dedicated to the County as a conservation easement fulfilling the remaining mitigation requirements. The new parcel will be approximately 30.54 acres in size with 19.73 acres of oak tree canopy, as determined through NIR analysis. The original parcel will be reduced in size to approximately 42.76 acres. The proposed subdivision showing the parcel and the survey boundary and corners is shown in Figure 5.



**Figure 3. Oak Canopy Assessment of Greenwood Property**

**Table 3. Typical Native Species Observed On-Site, Greenwood Property, July 15, 2013**

<b>Common Name</b>	<b>Botanical Name</b>
Interior or Canyon Live oak	<i>Quercus wislizeni</i>
Black Oak	<i>Quercus kelloggii</i>
Valley Oak	<i>Quercus lobata</i>
Blue Oak	<i>Quercus douglasii</i>
Ponderosa Pine	<i>Pinus ponderosa</i>
Gray Pine	<i>Pinus sabiniana</i>
Buck brush	<i>Ceanothus cuneatus</i>
Buckeye	<i>Aesculus californica</i>
Poison oak	<i>Toxicodendron diversilobum</i>
Manzanitas	<i>Arctostaphylos</i> spp.
Toyon	<i>Heteromeles arbutifolia</i>



**Figure 4 IBC Area Surrounding Greenwood Parcel**

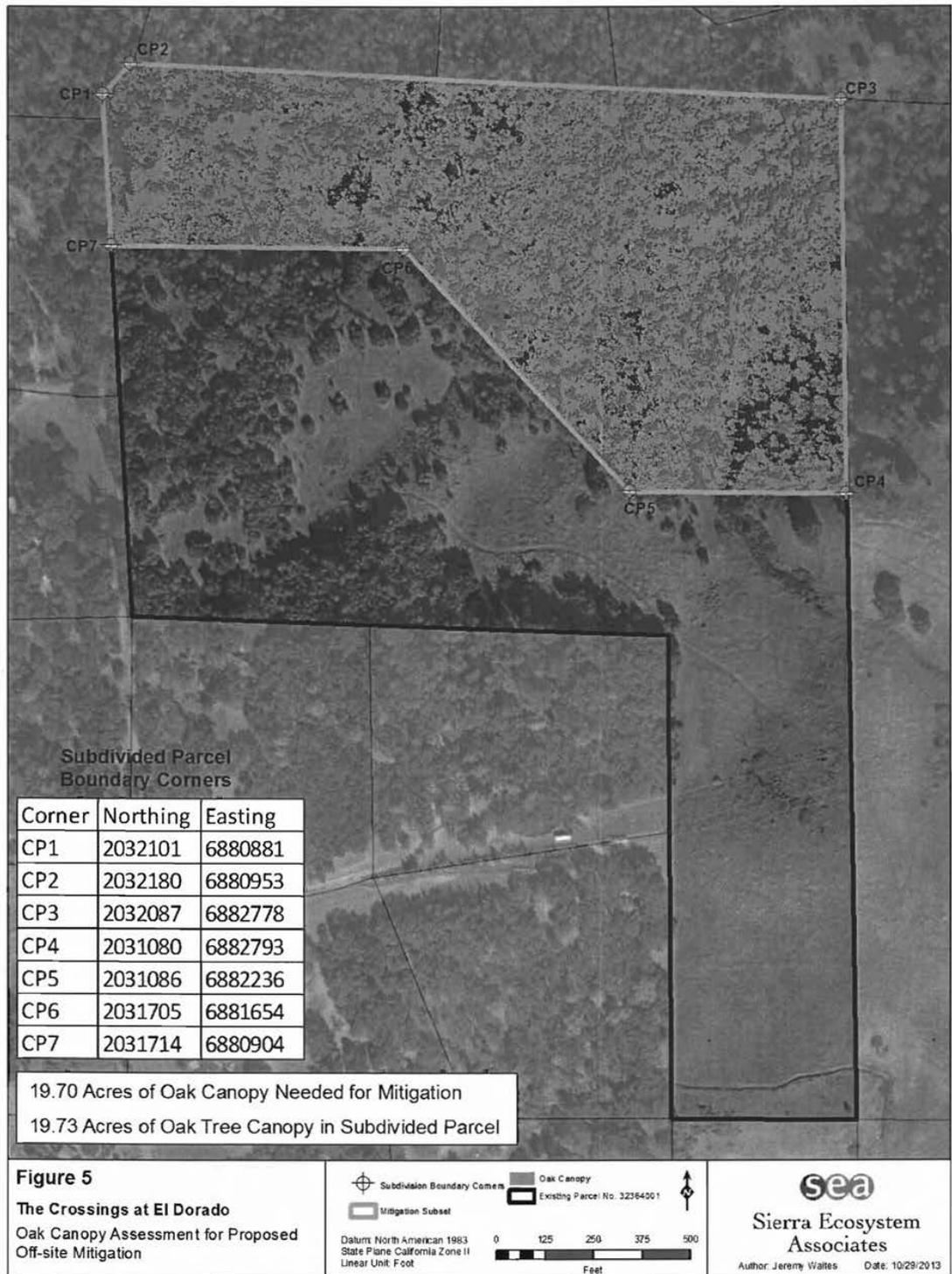


Figure 5 Subdivision of Greenwood Parcel for Off-site Mitigation

### **Mitigation Monitoring Plan**

DA98-01 requires that the mitigation plan achieve an 80% survival rate over a 5-year period. In this instance, the mitigation does not include planting oak trees or acorns. Therefore, monitoring and reporting typical attributes such as growth rate and survivorship do not provide an accurate evaluation of the success of the mitigation. In this case, it is more important to demonstrate the continued health and integrity of the oak woodland.

In order to show success of the mitigation, the applicant shall report to the County the results of a physical inspection of both the undisturbed acreage on The Crossings Project and of the Greenwood Property. This reporting will be done annually and for five consecutive years. The inspections will be conducted by a qualified biologist, arborist or forester. The physical inspection of the properties will include evaluating oak tree health, oak seedling recruitment and encroachment of non-native species. The report will include photos taken at established photo points on the properties and an analysis of the current year's aerial imagery, provided by Google Earth or an equivalent source, noting changes in the canopy cover at both sites. The mitigation shall be deemed successful if the woodland at each site is maintained at the 80% survival rate required, barring any force majeure.

### **Biologist Statement**

It is my opinion that the mitigation plan and associated monitoring plan described in this report meet all requirements relating to oak woodland retention or replacement and mitigation described in DA98-01. The applicant proposes to dedicate to the County a conservation easement on a parcel with a mature oak woodland which has attributes similar to those of the oak woodland being removed. These attributes include that the Greenwood property has a diverse mix of native oak species as well as a mix of other native plants commonly associated with native oak woodlands. The Crossings at El Dorado Project area is adjacent to an established retail center and is enclosed on all sides by various roadways, including Highway 50. The Crossings Project area is a functioning woodland but it shows signs of past human disturbance, seen at the abandoned residence and the cemetery site. In contrast, the Greenwood Property is a relatively undisturbed parcel surrounded by an IBC, which by definition is an area identified by the County as one with unique and important characteristics that promote and enhance vegetation and wildlife habitat values in the area. Granting an easement on the Greenwood Property preserves approximately 30.54 acres of oak woodland containing slightly more than 19.7 acres of oak tree canopy area.

## Summary

The Crossings at El Dorado is a mixed-retail development adjacent to an existing retail area in El Dorado County with approximately 37 acres of oak tree canopy covering the Project area. In accordance with requirements of the Development Agreement (DA98-01) and the County's General Plan Policy 7.4.4.4, 80% of this oak tree canopy, or 29.6 acres, must be retained or replaced as mitigation. Approximately 9.9 acres of mixed native oak tree canopy will be retained on-site in undisturbed areas. The applicant proposes to meet the remaining mitigation by dedicating to the County a conservation easement containing 19.73 acres of oak tree canopy on a parcel approximately 30.54 acres in size. The parcel offered as mitigation meets the oak tree canopy retention or replacement requirements of the development agreement signed in 1998, the terms of which are still applicable, as determined by the County.

Specific description of the parcel proposed for subdivision and conservation easement is given here:

Owner: GGV Greenwood  
APN: 32364001  
Size: 73.33 Acres  
Current zoning: AE  
Proposed zoning: RE-10  
Location: Approximately 3 miles northwest of Highway 50, off Mortara Lane.

## References

EDC, 1998. Sundance Plaza, Development Agreement. Approved by the El Dorado County Board of Supervisors, December, 1998.

EDC, 2006. Interim Interpretive Guidelines for El Dorado County General Plan Policy 7.4.4.4. Adopted November 9, 2006. Amended October 12, 2007.

Mount, Aaron. "Re: The Crossings Project." Email to Peter Maurer. June. 25 3013.

NAIP 2013. National Agriculture Imagery Program. United States Department of Agriculture's Farm Service Agency. Geospatial Data Gateway, Accessed June and July 2013.

**Certification**

We hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological survey, and that the facts, statements, and information presented herein are true and correct to the best of my knowledge and belief.

SIGNED: 

DATE: 10/30/2013

NAME: Kristine Kiehne

TITLE: Senior Biologist, Lead Author

SIGNED: 

DATE: 10/29/13

NAME: Jeremy Waites

TITLE: GIS Specialist, Co-Author

## Appendix A: Photos of The Crossings at El Dorado Project Site



**Photo 1. Valley oak woodland and grassland area.**



**Photo 2. Blue oak woodland**



**Photo 3. Multi-stemmed live oak, typical of Interior live oak woodland of property.**



**Photo 4. Road leading to abandoned home site.**



**Photo 5. Abandoned home site on property**



**Photo 6. Blue oak woodland near intermittent creek.**

## Appendix B: Photos of the Greenwood Property



**Photo 7. Canopy typical of Greenwood Property**



**Photo 8. Mix of vegetation on Property, including pine saplings**



**Photo 9. View along northern edge of property, looking east**



**Photo 10. View from grassland area, looking north**



**Photo 11. View of grassland and yellow star thistle encroaching**