



Memorandum

TO: Joe Decruyenaere, County Biologist
CC: Eddie Makabi
FROM: Daryl Koutnik, Principal Biologist, PCR Services
RE: **540 THRIFT ROAD BIOLOGICAL ASSESSMENT SUPPLEMENT - REVISED**
(County Project R2013-01846; RCUP201300093)

DATE: August 12, 2013
Revised September 26, 2013

This memorandum serves to supplement the May 14, 2009 540 Thrift Road Biological Assessment¹ (**Appendix 1**) and the 2012 Update² (**Appendix 2**) both prepared by Cooper Ecological Monitoring for a proposed single-family residence located at 540 Thrift Road on a 0.24 acre parcel (APN 4464-012-016 and 4464-012-039; "project site") located in unincorporated Malibu, Los Angeles County, California. PCR biologist Daryl Koutnik conducted a site visit on July 24, 2013 to evaluate the existing site conditions and determine if any changes to the previous conditions documented in the 2009 Biological Assessment have occurred.

The project site is located northeast of the intersection of Kanan Road and Latigo Canyon Road within an existing small-lot subdivision of the Santa Monica Mountains. Within the neighborhood, the project site is just east of the intersection of Thrift and Birdella Roads. The project site is fenced on three sides and is open only along the Thrift Road frontage (for approximately 75 feet). Two residential structures exist to the south and southwest of the project site. The two parcels to the east of the project site are partially developed with a swimming pool and water slide. The parcel to the west of the project site is currently undeveloped at the north end where the oak trees grow but contains a propane tank used by the residential structure on the south end of the property. **Figures 1 and 2, Site Photographs**, depict conditions at the project site. The project site is located within the Zuma Canyon Significant Ecological Area (SEA) Buffer.

The overall site conditions are as described in both the 2009 Biological Assessment and the 2012 Update memorandum. The majority of the project site is a stand of 18 oak trees within the flat northern roughly three-quarters of the project site. The oak trees on the project site contribute to an oak woodland extending a short distance in both the west and east directions. This on-site oak resource most closely fits the terminology of the May 2011 Los Angeles County Oak Woodlands Conservation Management Plan and the draft "Los Angeles County Oak Woodlands Conservation Management Plan Guide" described as severely degraded, since there is no evidence of natural regeneration, the natural condition has been drastically altered by the surrounding residential developments, and the understory consists

¹ Cooper Ecological Monitoring, Inc. May 19, 2009. Biological Assessment, 540 Thrift Road, Malibu, California. Prepared for Steven Paek.

² Cooper Ecological Monitoring, Inc. July 23, 2012. Update for 540 Thrift Rd. Memorandum to Jared Nygren, Department of Regional Planning.

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of sparse poison oak (*Toxicodendron diversilobum*) and a single cluster of canyon sunflower (*Venegasia carpesioides*). Herbaceous annual vegetation, especially grasses, is present during late winter and spring, as reported in the 2009 Biological Assessment. The sparse understory is assumed to be a consequence of poison oak control and fuel modification for the residences to the south. Many of the oak trees exhibit trunk damage caused by a fire that burned in 1982. The oak tree report prepared by Trees, Etc. assesses the health of the on-site trees as fair to poor.

The southern portion of the project site is a moderate slope with oaks on the western side and sparse chaparral on the eastern side. The southern property line separates the parcel from the two existing single-family residences to the south. The hillside immediately north of the project site (across the street from 540 Thrift Road) was recently cleared of all vegetation and was bare soil on July 24, 2013.

The oak resources are described in the 2009 Biological Assessment as being intact but disturbed, with “visible impacts including regular control (through spraying) of poison-oak *Toxicodendron diversilobum*” and “the removal of most downed wood, both on the site as well as on adjacent lots.”

Wildlife use of the project site is primarily confined to those species, chiefly avian, characteristic of oak resources found throughout the Santa Monica Mountains. As described in the 2009 Biological Assessment, “Many of the breeding bird species characteristic of lowland, non-riparian oak woodland in California were observed on or adjacent to the site,” and “Other animals were scarce, due both to the small size of the site and the fact that most of the understory growth beneath the oaks had been eliminated.” While the PCR site visit was not timed for floral and faunal inventory surveys, oak titmouse was heard within the oak resource canopies. On-site resources are described in the 2009 Biological Assessment (see **Appendix 1**).

Special-Status Resources

The project site is located within the Point Dume USGS topographic quadrangle. A search of the California Natural Diversity Database (CNDDDB) for a six-quadrangle area surrounding and including the Point Dume quadrangle was performed. The surrounding USGS topographic quadrangles include Calabasas, Malibu Beach, Newbury Park, Thousand Oaks and Triunfo Pass. A total of 28 sensitive plant species have been recorded within the vicinity of the project site (see **Table 1** - Special-status Plant Species). In addition, 29 sensitive wildlife species (excluding three fish species which would not occur) have been recorded within the vicinity of the project site (see **Table 2** - Special-status Wildlife Species). The oak titmouse (*Baeolophus inornatus*), an avian species commonly found in oak woodlands in southern California, is listed in the CNDDDB search but is a species for which data is not currently tracked. Oak titmouse is also included on both the United States WatchList of Birds of Conservation

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Concern and the U.S. Fish and Wildlife Service Birds of Conservation Concern³. Although not included in the CNDDDB search, the Los Angeles County Sensitive Bird Species⁴ greater roadrunner (*Geococcyx californianus*), the only species on the list with potential to occur on the project site, is included in the **Table 2** for completeness. Of the sensitive plant or wildlife species listed in the CNDDDB, only oak titmouse was observed during the Cooper Ecological Monitoring, Inc. surveys or the brief site visit by PCR; however, coastal whiptail (*Aspidoscelis tigris stejnegeri*), Cooper's hawk (*Accipiter cooperii*), pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillei*) and hoary bat (*L. cinereus*) might occasionally use the project site. The 2009 Biological Assessment (**Appendix 1**, pages 5-6) includes a discussion of the possible sensitive species that may make use of the project site. In addition to those species mentioned above, the San Bernardino ringneck snake could be expected on the site. The locally uncommon Santa Monica Mountains hairstreak (*Satyrium auretteum fumosum*), which is not included on the State or Federal sensitive species lists, is endemic to the northern slopes of the western section of the Santa Monica Mountains and the larval food source is coastal live oak (*Quercus agrifolia*).

Although not listed as a sensitive plant community or association of high priority by CDFW⁵, coast live oak woodland is an important resource in this area and is vulnerable to fragmentation and cumulative impacts arising from multiple small projects, such as single-family residences. Oak woodlands provide wildlife habitat, and assist in soil and water retention. Oak woodlands provide benefits in mitigating the effects of fire, flood, erosion, air pollution, and water pollution. As a resource considered important by the County of Los Angeles, protection is offered through implementation of Section 21083.4 of the California Environmental Quality Act (CEQA) during environmental review.

Table 1 - Special-status Plant Species

Scientific Name	Common Name	Suitable Habitat	Potential for Impact
<i>Astragalus brauntonii</i>	Braunton's milk-vetch	Absent; prefers carbonate soils (limestone outcrops), usually on recent burns or disturbed areas in chaparral, coastal sage scrub	No
<i>Atriplex coulteri</i>	Coulter's saltbush	Absent; prefers coastal bluff scrub, coastal dunes, or coastal scrub	No
<i>Baccharis malibuensis</i>	Malibu baccharis	Present; this species is mostly found in	No

³ U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 85 pp.

⁴ Los Angeles County Sensitive Bird Species Working Group. 2009. Los Angeles County's Sensitive Bird Species. Western Tanager. 75(3): 1-11.

⁵ California Department of Fish and Wildlife. 2010. List of Vegetation Alliances and Associations. Vegetation Classification and Mapping Program. California Department of Fish and Game. Sacramento, CA. September 2010.

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Scientific Name	Common Name	Suitable Habitat	Potential for Impact
		chaparral but also in the periphery of oak woodlands; the species was not found on-site	
<i>California macrophylla</i>	round-leaved filaree	Absent; usually prefers valley and foothill grassland communities	No
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa-lily	Absent; prefers shaded canyons, often on grassy slopes within chaparral and coastal scrub communities	No
<i>Calochortus plummerae</i>	Plummer's mariposa-lily	Absent; prefers coastal scrub, chaparral, and grassland communities	No
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant	Absent; prefers vernal mesic, often alkaline, habitats in valley and foothill grasslands	No
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	Absent; prefers sandy habitats in coastal bluff scrub and coastal dunes	No
<i>Chorizanthe parryi</i> var. <i>fernandina</i>	San Fernando Valley spineflower	Absent; prefers coastal scrub and grassland communities	No
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	Absent; prefers openings in chaparral, coastal scrub, and grassland communities	No
<i>Deinandra minthornii</i>	Santa Susana tarplant	Absent; prefers sandstone outcrops and crevices in chaparral and coastal scrub communities	No
<i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	dune larkspur	Absent; prefers maritime chaparral and coastal dunes	No
<i>Didymodon norrisii</i>	Norris' beard moss	Absent; mesic, rocky habitats within cismontane woodland	No
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Blochman's dudleya	Absent; prefers rocky or clay substrates in coastal bluff scrub, chaparral, coastal scrub, and grassland communities	No
<i>Dudleya cymosa</i> ssp. <i>agourensis</i>	Agoura Hills dudleya	Absent; prefers volcanic substrates in chaparral	No
<i>Dudleya cymosa</i> ssp. <i>marcescens</i>	marcescent dudleya	Absent; prefers volcanic substrates in chaparral, often adjacent to riparian vegetation	No
<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	Santa Monica dudleya	Absent; prefers rocky substrates in chaparral and coastal scrub communities	No
<i>Dudleya multicaulis</i>	many-stemmed dudleya	Absent; prefers clay soils in chaparral, coastal scrub, and grassland habitats	No
<i>Dudleya parva</i>	Conejo dudleya	Absent; prefers Clay or volcanic substrates in coastal scrub and grassland communities	No
<i>Dudleya verityi</i>	Verity's dudleya	Absent; prefers volcanic outcrops in chaparral and coastal scrub communities	No

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Scientific Name	Common Name	Suitable Habitat	Potential for Impact
<i>Eriogonum crocatum</i>	conejo buckwheat	Absent; prefers Conejo volcanic outcrops in chaparral, coastal scrub, and grassland communities	No
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	Absent; prefers soils in coastal salt marshes and swamps, playas, and vernal pools	No
<i>Navarretia ojaiensis</i>	Ojai navarretia	Absent; prefers openings in chaparral, coastal scrub, and grassland communities	No
<i>Nolina cismontana</i>	chaparral nolina	Absent; prefers chaparral and coastal scrub communities	No
<i>Orcuttia californica</i>	California Orcutt grass	Absent; prefers vernal pools	No
<i>Pentachaeta lyonii</i>	Lyon's pentachaeta	Absent; prefers openings in chaparral, coastal scrub, and grassland communities	No
<i>Senecio aphanactis</i>	chaparral ragwort	Absent; prefers dry alkaline flats in chaparral and coastal scrub habitats	No
<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Sonoran maiden fern	Absent; prefers meadows, seeps and streams	No

Table 2 - Special-status Wildlife Species

Scientific Name	Common Name	Suitable Habitat	Potential for Impact
Invertebrates			
<i>Coelus globosus</i>	Globose dune beetle	Absent; prefers coastal sand dune habitats	No
<i>Danaus plexippus</i>	Monarch butterfly	Absent; prefers wind-protected tree groves (especially eucalyptus and Monterey cypress)	No
<i>Socalchemmis gertschi</i>	Gertsch's socalchemmis spider	Known only from Brentwood and Topanga Canyon	No
<i>Trimerotropis occidentiloides</i>	Santa Monica grasshopper	Absent; found on bare hillsides and along dirt trails in chaparral	No
Amphibians			
<i>Anaxyrus californicus</i>	Arroyo toad	Absent; occurs in rivers, washes or intermittent streams with sandy banks	No
<i>Rana draytonii</i>	California red-legged frog	Absent; requires permanent water along riparian areas for larval development	No
Reptiles			

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Scientific Name	Common Name	Suitable Habitat	Potential for Impact
<i>Anniella pulchra pulchra</i> ⁶	Silvery legless lizard	Marginal; prefers leaf litter associated with sandy or loose loamy soil of high moisture content under sparse vegetation	No
<i>Aspidoscelis tigris stejnegeri</i>	Coastal whiptail	Marginal; occurs in various habitats with sandy or rocky soils within sparse vegetation, open areas, woodlands and riparian communities	Possible
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	Marginal; prefers surface litter or herbaceous vegetation in open, relatively rocky areas, often near intermittent streams	Possible
<i>Emys marmorata</i>	Western pond turtle	Absent; needs suitable nesting sites in permanent or near permanent bodies of water	No
<i>Lampropeltis zonata (pulchra)</i>	California mountain kingsnake (San Diego population)	Absent; common in the vicinity of rocks or boulders near streams or lake shores	No
<i>Phrynosoma blainvillii</i>	Coast horned lizard	Marginal; occurs in relatively open areas of coastal sage scrub, annual grassland, chaparral, and oak woodland	No
<i>Thamnophis hammondi</i>	Two-striped garter snake	Absent; found in perennial and intermittent streams having rocky or sandy beds	No
Birds			
<i>Accipiter cooperii</i>	Cooper's hawk (nesting)	Present; nests in open forests, woodlands, or trees; not observed on-site	Possible
<i>Agelaius tricolor</i>	Tricolored blackbird	Absent; requires open water and protected nesting substrate	No
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	Absent; prefers steep, often rocky hillsides of coastal scrub and chaparral with grass and forb patches	No
<i>Aquila chrysaetos</i>	Golden eagle (nesting)	Absent; prefers mainly cliffs for nesting but also in large trees (such as oaks)	No
<i>Athene cunicularia</i>	Burrowing owl	Absent; prefers pen, dry grassland or scrublands characterized by low-growing, widely spaced vegetation	No
<i>Baeolophus inornatus</i>	Oak titmouse (nesting)	Present; occurs in hardwood forests, valley and coastal oak woodlands, and foothill riparian habitats in cismontane	Yes

⁶ [The current name for this taxon is *Anniella stebbinsii* based on the recent publication of Theodore J. Papenfuss and James F. Parham in *Four New Species of California Legless Lizards \(Anniella\)*, *Breviora* 536: 1-17. September 16, 2013.](#)

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Scientific Name	Common Name	Suitable Habitat	Potential for Impact
		California	
<i>Geococcyx californianus</i>	Greater Roadrunner	Absent; prefers arid coastal sage scrub or chamise chaparral	No
<i>Polioptila californica californica</i>	Coastal California gnatcatcher	Absent; prefers coastal sage and alluvial scrub habitats	No
<i>Riparia riparia</i>	Bank swallow	Absent; nests primarily in riparian and other lowland habitats requiring vertical banks/cliffs near streams	No
<i>Vireo bellii pusillus</i>	Least Bell's vireo	Absent; prefers willows and other low, dense riparian habitat	No
Mammals			
<i>Antrozous pallidus</i>	Pallid bat	Marginal; roosts in caves, crevices, mines, and occasionally hollow trees	Possible
<i>Euderma maculatum</i>	Spotted bat	Absent; roosts in rock crevices and occasionally in caves and buildings	No
<i>Eumops perotis californicus</i>	Western mastiff bat	Marginal; roosts in crevices in cliff faces, high buildings, trees and tunnels	Possible
<i>Lasiurus blossevillii</i>	Western red bat	Marginal; roosts primarily in trees, less often in shrubs, sites often in edge habitats adjacent to streams, fields, or urban areas	Possible
<i>Lasiurus cinereus</i>	Hoary bat	Present; roosts in dense foliage of medium to large trees	Possible
<i>Macrotus californicus</i>	California leaf-nosed bat	Absent; roosts in rocky, rugged terrain with mines or caves	No
<i>Myotis ciliolabrum</i>	Western small-footed myotis	Absent; roosts in buildings, caves, and mines, frequently near water	No
<i>Myotis yumaensis</i>	Yuma myotis	Absent; roosts in buildings, mines, caves, crevices, and under bridges	No
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	Absent; prefers moderate to dense coastal scrub canopies	No
<i>Taxidea taxus</i>	American badger	Marginal; prefers open shrub, forest, and herbaceous habitats with friable soils	No

Project Impacts

The proposed project is a 2,661-square foot, two-story single-family residence with swimming pool. The project will require a total of 261 cubic yards of grading, including 234 cubic yards of fill to level the building pad for the house construction. Total ground disturbance will be about 0.15 acre (65%) of the 0.24 acre project area. The project proposes to remove 14 oak trees from the on-site oak resources and encroach upon the driplines of eight additional oak trees (three on-site and five off-site). The removal of the oak resources

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will create a canopy gap in the oak woodland between the property on the west and that on the east of the project site. There will be a narrow canopy connection along the southern property boundary, which will be amended by the applicant's proposal to include up to eight oak trees planted in the southern area. The loss of the oak habitat may be considered significant without appropriate mitigation. In addition, because a number of both common and sensitive wildlife species may utilize the on-site oak resources, precautionary action is recommended to avoid potentially significant impacts to wildlife species. Because the isolated oak woodland location is within a residential community of private parcels, the potential for restoration and restoration of connectivity is not considered high nor would such efforts have the potential for full restoration of oak woodland ecological function as a consequence of continual fuel modification requirements.

Mitigation Measures

The 2009 Biological Assessment includes the following measures designed to minimize impacts to sensitive wildlife species during and after constructions:

- Minimize the number of oak trees removed, and the loss or thinning of the oak canopy (for western red bat, oak woodland birds and invertebrates)
- Avoid irrigated landscape which could displace the native ant/invertebrate community and encourage the spread of non-native insects (especially the Argentine ant *Linepithema humile*) (for western whiptail)
- Leave fallen oak bark, limbs and leaves as they occur naturally, allowing for hiding/foraging places (for ringneck snake, foraging birds and mammals)
- Keep grading and soil disturbance (e.g., retaining walls, walkways) to an absolute minimum, except as required for essential construction (for native plants)

In addition, the 2009 Biological Assessment includes recommendations to lessen impacts on the oak resources, especially those remaining in the adjacent properties:

- Avoid watering oaks, or any part of the property, which may encourage oak pathogens. Use of native plants in landscaping may require some watering initially, but as this is a mesic, shady site, it shouldn't be hard to keep watering to an absolute minimum.
- Do not plant invasive non-native landscaping species like *Lantana*, *Nasturtium*, etc.
- Keep outdoor lighting to a minimum and direct lights narrowly and at the ground, preferably on landscaped or built surfaces. Light pollution interferes with hunting owls, foraging poorwills, etc.

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- Avoid use of bird feeders and nest boxes; instead rely on natural cavities in oaks and naturally-occurring plants.

In addition to the above recommendations, the following mitigation measures are recommended to reduce potential biological impacts to less than significant.

To avoid potential impacts to the roosting common and special status bat species, the applicant will retain a qualified biologist to conduct roosting bat surveys within the oak canopy prior to construction or site disturbance activities. Specifically, within 30 days of ground disturbance activities associated with construction or grading, a qualified biologist must conduct weekly surveys to determine if roosting bats are present in the construction zone or within 100 feet of the construction zone. Roosting bat surveys should be carried out from March through September. Surveys for special-status bat species may be conducted concurrently with nesting bird surveys. The surveys must continue on a weekly basis, with the last survey being conducted no more than three (3) days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys will be conducted such that no more than three days will have elapsed between the last survey and the commencement of ground disturbance activities. Surveys must include oak trees planned for removal, in which bat species are known to roost. Any bats found outside of the May through August breeding season should be relocated by having a qualified biologist remove the bat from the roost. If roosting female bats are found with young during the breeding season (May through August) clearing and construction activities within 100 feet of the roost must be postponed or halted until the roost is vacated and juveniles have been weaned, as determined by the biologist. Limits of construction to avoid an active roost site must be established in the field with flagging, fencing, or other appropriate barriers and construction personnel must be instructed on the sensitivity of nest areas. The biologist will serve as a construction monitor during those periods when construction activities will occur near active roost areas to ensure that no inadvertent impacts on these roosts will occur. The results of the survey, and any avoidance measures taken, must be submitted to the County within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of this bat species.

To avoid potential impacts to the nesting birds, the applicant will retain a qualified biologist to conduct nest surveys in potential nesting habitat within the project site prior to construction or disturbance activities. Specifically, within 30 days of ground disturbance activities associated with construction or grading, a qualified biologist must conduct weekly surveys to determine if active nests of bird species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Game Code are present in the construction zone or within 100 feet of the construction zone. Surveys for special-status bird species may be conducted concurrently with general nesting bird surveys. Because some birds known to use the project area (including Cooper's hawk) nest during the late winter, breeding bird surveys must be

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carried out both during the typical nesting/breeding season (mid-March through September) and in January and February. The surveys must continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys will be conducted such that no more than three days will have elapsed between the last survey and the commencement of ground disturbance activities. Surveys must include examination of trees, shrubs, and the ground within hillside for nesting birds.

To lessen potential impacts to the Southern California legless lizard⁷, the applicant will retain a qualified biologist to gently rake all oak leaf litter occurring within the project site prior to construction or disturbance activities in order to survey for the presence of legless lizard. Specifically, within 30 days of ground disturbance activities associated with construction or grading, a qualified biologist with the proper scientific collection and handling permits must conduct surveys to capture and relocate, if present, individual Southern California legless in order to avoid or minimize take of these special-status species. Any individuals found will be relocated to nearby undisturbed oak woodland to the east of the project site.

To replace the oak resources lost with removal of 14 oak trees, the applicant will plant 28 replacement oak trees on-site and within an off-site location adjacent to existing oak woodland habitat. The planting of replacement oak trees is required by the County oak tree ordinance but additional mitigation effort is needed to comply with Section 21083.4 of the California Environmental Quality Act (CEQA). Eight replacement oak trees will be planted on the project site on the southern slope of the property. The remaining replacement trees will be planted on property held in the public trust by the Mountains Restoration Trust or other public agency with whom the MRT partners such as the California Department of Parks and Recreation. The closest MRT property is the La Sierra Canyon Preserve (approximately 40 acres) about 0.6 miles north of the project site and within the Malibu Creek watershed. MRT also has an on-going oak tree planting program with the Malibu Creek State Park. The mitigation ratio for impacts to oak resources will be a minimum of 1:1 by area affected (0.15 acre) and final mitigation ratio is dependent on the habitat quality of the mitigation site. Because the replacement oak trees will be planted both on-site and off-site, the replacement mitigation habitat required will be increased to 0.18 acres since the habitat value of the on-site oak trees will be less than in an intact oak woodland. In addition to the planting of the replacement oak trees, understory plants will be ~~encouraged through natural recruitment~~ planted in the second year where oak ~~woodland habitat is nearby since~~ replacement trees are established. ~~the oak woodland canopy will be slow to develop~~ Appropriate understory species to be planted include canyon sunflower (*Venegasia carpesioides*), giant rye (*Elymus condensatus*), toyon (*Heteromeles arbutifolia*) and hummingbird sage (*Salvia spathacea*). The

⁷ Papenfuss, T. and J. Parham. 2013. *Four New Species of California Legless Lizards (Anniella)*. Breviora 536: 1-17. September 16, 2013.

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off-site mitigation location must be approved by the County and committed to by the applicant prior to issuance of any grading permit. Priority to off-site mitigation location should be given to the Zuma Canyon watershed or other nearby open space area such as within the Malibu Creek watershed. Should any oak tree authorized for encroachment succumb within five years of the encroachment, the applicant shall replace the trees at a 2:1 ratio. The location of their placement trees must acceptable by the County. The off-site location, schedule of mitigation activities, oak resource maintenance and mitigation documentation requirements must be approved by the County and agreed to by the project proponent prior to the removal of oak trees authorized by permit and the issuance of grading or building permits. The planting area will be deed restricted by conservation easement or other legal document preserving the trees and resultant habitat in perpetuity by assuring that the mitigation location will not be developed in the future. The planting of the oak resources will be undertaken with the supervision of an arborist, biologist or restoration ecologist acceptable to the County. In addition, the oak planting will incorporate all recommendations and provisions of the County Forester. The applicant will provide to the County documentation of the planting and enhancement measures implemented, which include, at a minimum, the following information: (1) the location of the planting areas (to be coordinated with the County Biologist); (2) planting procedures; (3) a schedule and action plan to maintain the plantings, including the control of weeds through the entire monitoring period; and (4) a list of criteria by which to measure success of the plantings, as well as contingency measures if the plantings are not successful. The replacement trees and their maintenance will be monitored for seven years and an annual report of the health and growth status of the replacement oak trees will be submitted to the County Biologist.

In order to protect oak trees during project construction, the applicant will install protective fencing a minimum of five feet in height and five feet beyond the end of the branches (dripline). Stakes shall be strong enough to secure the fence for the duration of the project. The fence is to remain in place at all times. No building materials or equipment are to be stored within the fenced area. The project consulting arborist should be present during all grading operations within tree protection zones. Work within the protected zones will be done using hand tools only.