NESTING SEASON SURVEY
BURROWING OWL
(Athene cunicularia hypugaea)

CONDITIONAL USE PERMIT 03545

ASSESSOR'S PARCEL NUMBER: 362-250-003

RECORDED LOT SIZE: 5.85-ACRES

AREA SURVEYED: ±22.0 ACRES

LOCATION:
Northeast corner of the intersection of Clinton Keith Road and George Avenue in the City of Wildomar, Riverside County, California. A portion of Section 31, Township 6 South and Range 3 West of the USGS Topographic Map, 7.5 Minute Series, Murrieta, California Quadrangle

PREPARED FOR:
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SURVEYS CONDUCTED BY PAUL A. PRINCIPE ON:
April 19, April 26, May 3, and May 14, 2013

REPORT DATE:
May 23, 2013

INFORMATION SUMMARY

REPORT DATE

May 23, 2013

REPORT TITLE

Nesting Season Survey for the Burrowing Owl

COUNTY CASE NUMBER

Conditional Use Permit 03545

ASSESSOR'S PARCEL NUMBER

362-250-003

SITE LOCATION

Northeast corner of the intersection of Clinton Keith Road and George Avenue in the City of Wildomar, Riverside County, California. A portion of Section 31, Township 6 South and Range 3 West of the USGS Topographic Map, 7.5 Minute Series, Murrieta, California Quadrangle **(Site Vicinity and USGS Location Maps)**.

SITE ACREAGE

5.85 acres (recorded lot size)

SURVEY ACREAGE

5.23 acres on the site
±16.5 acres in the buffer zone

APPLICANT

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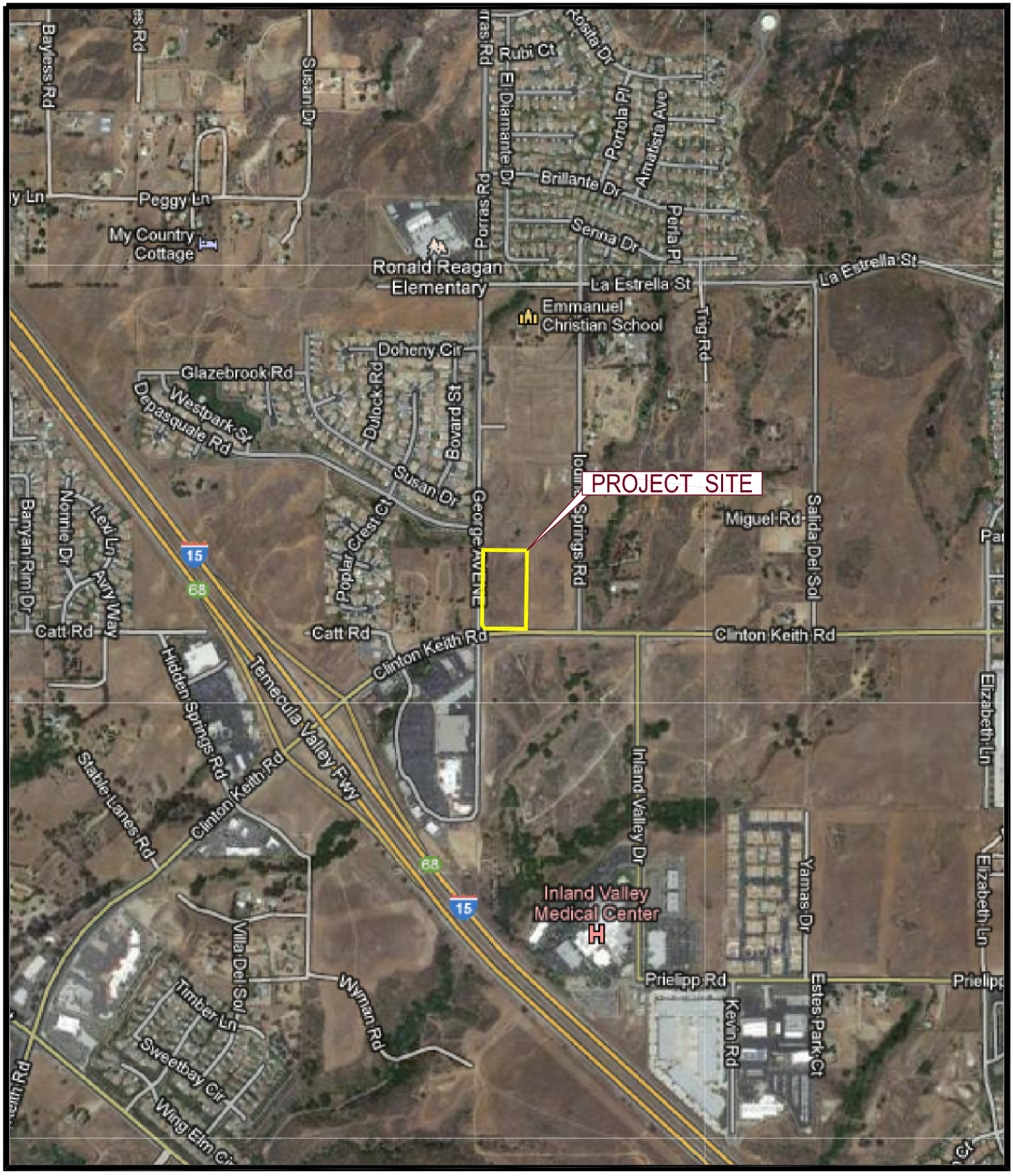

Survey area: 5.23 acres

Feet

0 1000 2000

SITE VICINITY MAP

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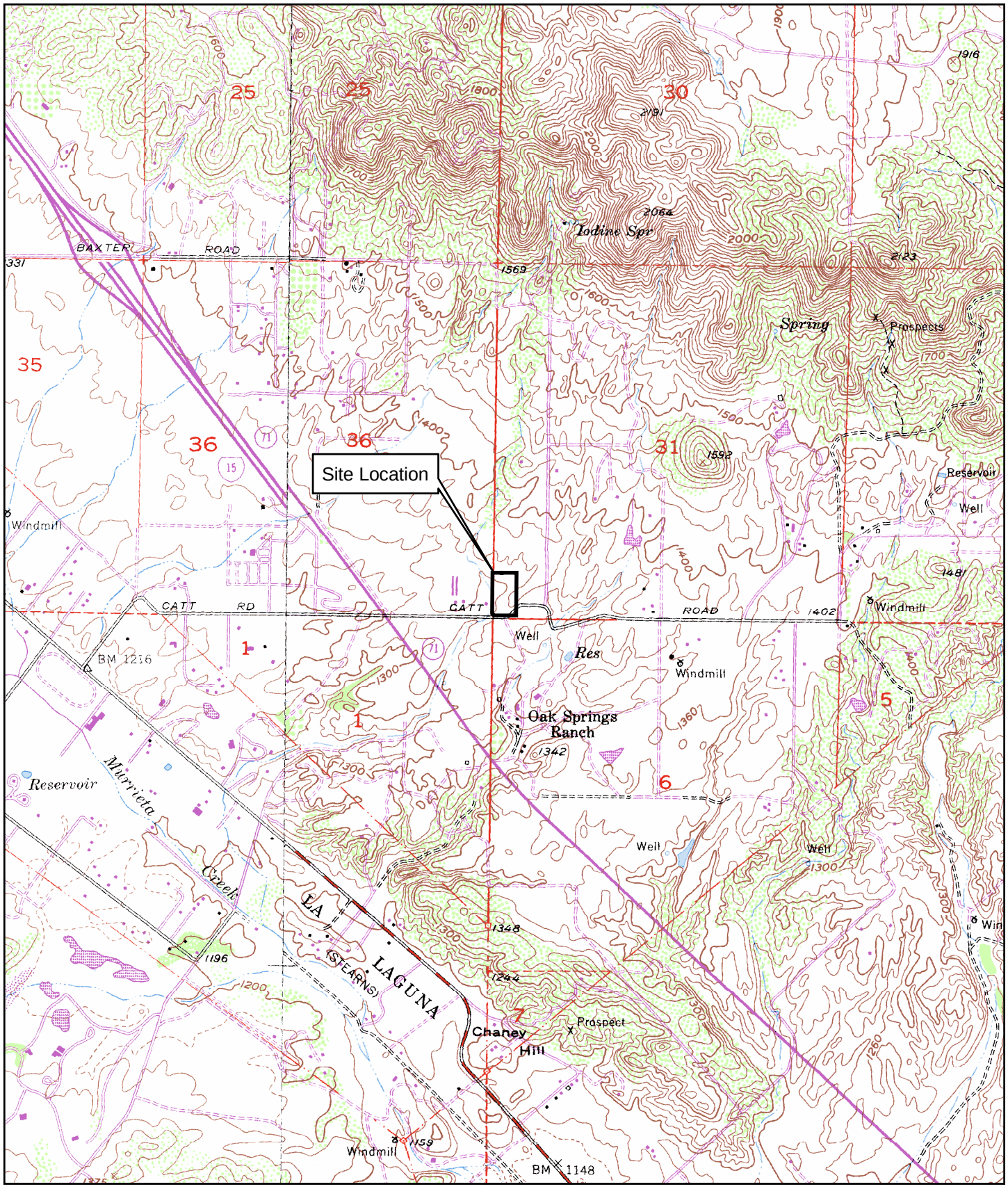

Base Map Source: USGS 7.5 Min.
Wildomar and Murrieta, CA Quads.

0 2,000 4,000 Feet

LOCATION MAP

CUP 03545

PRINCIPE AND ASSOCIATES

PRINCIPAL INVESTIGATOR

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SECTION 10(a)(1)(A) PERMIT NUMBER

TE 786497-7

CALIFORNIA RESIDENT SCIENTIFIC COLLECTING PERMIT

801108-02 (Permanent ID # SC-002215)

SURVEY SUMMARY

The site is located within the Burrowing Owl Survey Area, Figure 6-4 of the MSHCP. The initial assessment of habitat suitability for burrowing owls revealed that the site and buffer zone included suitable habitat consisting of open areas with sparsely vegetated annual grassland on gentle rolling terrain with active small mammal burrows. Critical habitat features were present, and included California ground squirrel burrows and burrow complexes.

As such, a Nesting Season Survey following the Burrowing Owl Survey Instructions for Western Riverside Multiple Species Habitat Conservation Plan Area (March 29, 2006) was undertaken. Four surveys were conducted between April 19 and May 14, 2013. All marginally suitable habitats were examined on the site and in the buffer zone.

During the field surveys, burrowing owls were not observed. Critical burrowing owl habitats capable of being used for roosting or nesting were not being used on the site (i.e., California ground squirrel burrows or burrow complexes). In addition, animal sign diagnostic of burrowing owls was not discovered anywhere on the site (i.e., molted feathers, cast pellets, prey remains, eggshell fragments, and/or excrement at or near a burrow entrance). There was no evidence of either active habitat presently being used by burrowing owls, or habitat abandoned within the last three years on the site.

ABSTRACT

Due to the presence of suitable habitat consisting of open areas with sparsely vegetated annual grassland on gentle rolling terrain with California ground squirrel burrows and active small mammal burrows, a **Nesting Season Survey for the Burrowing Owl *(Athene cunicularia hypugaea)*** was completed at the site. Four nesting season surveys were conducted between April 19 and May 14, 2013, and followed the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (March 29, 2006).

DESCRIPTION OF THE SITE, INCLUDING LOCATION, SIZE, TOPOGRAPHY, VEGETATION COMMUNITIES, AND ANIMALS OBSERVED DURING VISIT(S)

Location, Size and Topography, Hydrography, and Soils

The site is located within the Riverside Lowlands Bioregion. This Bioregion includes areas east of the Santa Ana Mountains Bioregion, south of the Riverside/San Bernardino County line, west of Diamond Valley Lake, Lake Skinner, and Gilman Hot Springs, and north of the Riverside/San Diego County line. This Bioregion encompasses Estelle Mountain, Lake Mathews, Reche Canyon/Badlands, the San Jacinto Valley, Gavilan Hills, Lakeview Mountains, and French Valley. The Riverside Lowlands Bioregion generally occurs at elevations below 600 meters (2,000 feet), and the dominant vegetation is characterized by Riversidian sage scrub and annual grasslands. The relatively arid climate is in part the result of the rain shadow cast by the Santa Ana Mountains. A high level of disturbance and urbanization are noted within this Bioregion.

The recorded size of the parcel is 5.85 acres.

Site topography exhibits two very different profiles. Extensive trenching for geological hazards (faults) has completely altered the northern half of the site. Four major open trenches are aligned northeast-to-southwest in this area. Excavated materials have been placed alongside the trenches. The remaining topography is rolling hills. The southern half of the site includes a large bench-like area that is flat-lying and featureless. This bench slopes downward in all directions, and appears to be manmade. A hilltop was probably removed by grading sometime in the past. It is elevated about 25 feet above the northern half (1340-1364 feet). There are no boulder or rock outcrops on the site surface.

Natural watercourses are no longer present on the site. Previous geotechnical trenching removed the channel of a natural watercourse that once dissected the northwest portion of the site. Drainage on the site is by gravity flow down hillsides that slope towards the center of the site. Storm water then flows in a westerly direction until it is carried offsite via a culvert placed beneath George Avenue.

Other kinds of seasonal aquatic features that could be classified as freshwater wetlands are not present on the site (i.e., open waters, perennial streams, marshes, vernal pools or swales, vernal pool-like ephemeral ponds, stock ponds or other human-modified depressions, etc.).

Review of the "Soil Survey of Western Riverside Area, California" revealed that the surficial soils at the site are included in the Hanford-Tujunga-Greenfield Association (Soils of the Southern California Coastal Plain). Within this association, three soil types have been mapped on the site **(Soils Map)**:

- HcC – Hanford coarse sandy loam, 2 to 8percent slopes.
- MnD2 – Monserate sandy loam, shallow, 5 to 15 percent slopes, eroded.
- PID – Placentia fine sandy loam, 5 to 15 percent slopes.

Vegetation Associations and Species Composition

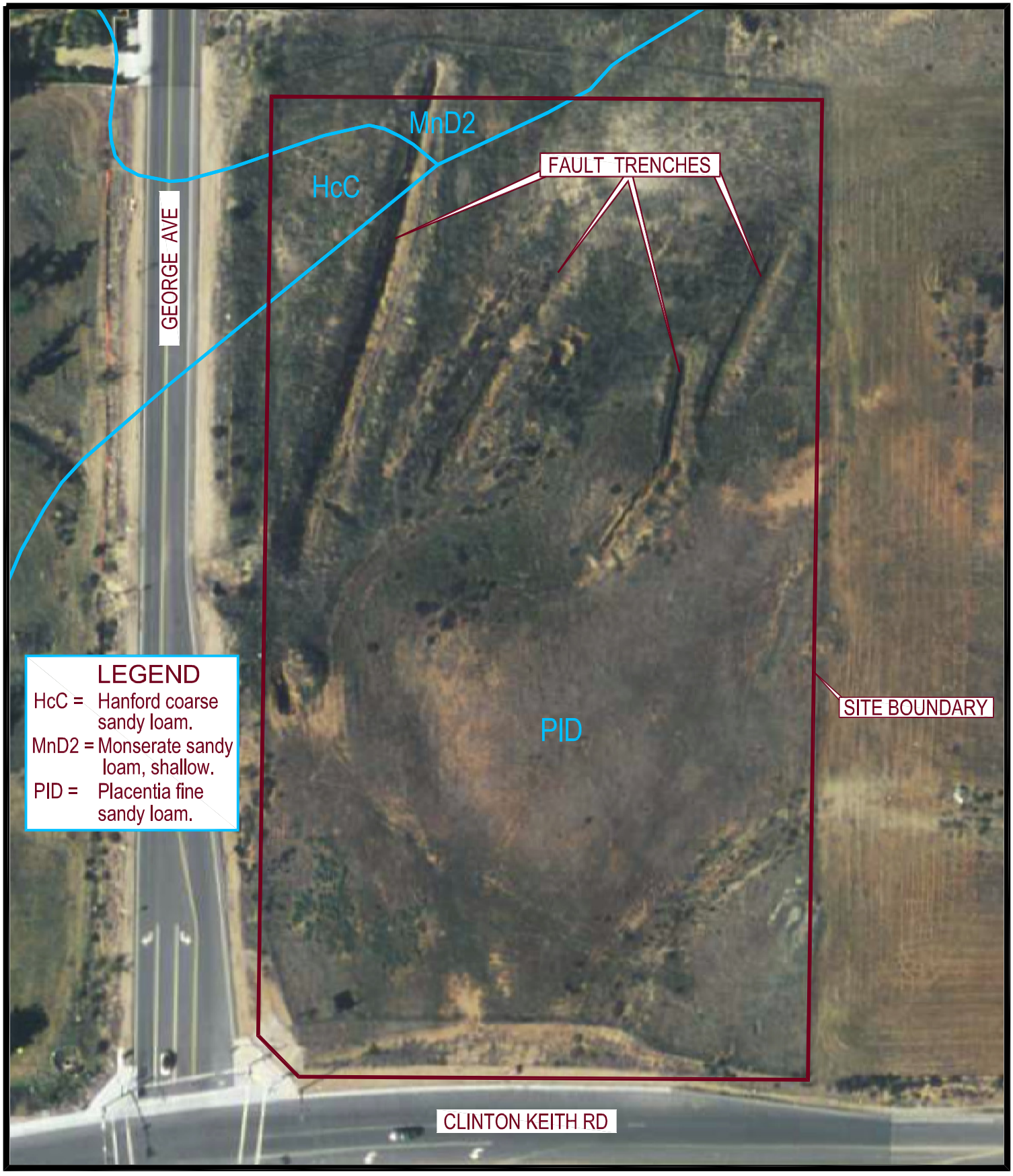
Based on the Habitat Accounts in Volume 2 of the MSHCP, the Vegetation Subassociation growing on the site has been described as Non-native grasslands (5.23 acres) **(Biological Resources Map)**.

Grasslands occur throughout most of Western Riverside County, and cover approximately 11.8% (154,421 acres) of the Plan Area. The Grasslands Vegetation Subassociation growing on the site is **Non-native grasslands**. Non-native grasslands occur throughout the majority of the Plan Area (11.6%), usually within close proximity to urbanized or agricultural land uses.

Non-native grasslands are primarily composed of annual grass species introduced from the Mediterranean basin and other Mediterranean-climate regions with variable presence of non-native and native herbaceous species. Species composition of Non-native grasslands may vary over time and place based on grazing or fire regimes, soil disturbance and annual precipitation patterns. Non-native grasslands typically produce deep layers of organic matter which is inversely related to the abundance of non-native and native forbs. Non-native grasslands also typically support an array of annual forbs from the Mediterranean-climate regions. Low abundances of native species are sometimes present within Non-native grasslands. These species usually include disturbance specialists with several different growth forms (i.e., subshrubs, succulents and herbaceous annuals).

Non-native grasslands still carpets the majority of site surface area. Areas that have long been mowed during annual weed abatement operations were previously succeeded by non-native grasses and weeds. The site now supports typical grassland dominated by non-native species, with a limited mix of native forb species. Species include common fiddleneck *(Amsinckia intermedia),* *oat grasses *(Avena barbata and A.*

*Denotes non-native species



Survey area: 5.23 acres

Feet

0 80 160

SOILS MAP

CUP 03545

PRINCIPE AND ASSOCIATES

Survey area: 5.23 acres

Feet

0 80 160

BIOLOGICAL RESOURCES MAP

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fatua), *shortpod mustard *(Brassica geniculata),* *brome grasses (*Bromus diandrus* and *B. madritensis* subsp. *rubens*), *tocalote *(Centaurea melitensis),* paniculate tarweed *(Deinandra paniculata),* *filarees *(Erodium botrys* and *B. cicutarium),* rattlesnake spurge *(Euphorbia albomarginata),* California fluffweed *(Filago californica),* valley lessingia *(Lessingia glandulifera* var. *glandulifera),* California plantain *(Plantago erecta),* *Russian thistle *(Salsola tragus),* and *rattail fescue *(Vulpia myuros* var. *myuros).*

Remnants of the Coastal Sage Scrub Vegetation Association are scattered throughout the site. The shrubs were previously mowed during annual weed abatement operations that occurred at the site. A 1996 aerial photograph shows that Coastal Sage Scrub vegetation had been removed from the site in the past. After the fault trenches were excavated in 2007, areas located in the north and central portions of the site were no longer mowed. Shrubs re-emerged in these areas, and are still growing on the site. Based on vegetation characteristics, physical environment and ecosystem processes, the sage scrub remnants do not comprise a separate Vegetation Association, but are included in the onsite Grasslands Vegetation Association. Remnant species include coastal sagebrush *(Artemisia californica),* sand pigmy-stonecrop *(Crassula connata),* pine goldenbush *(Ericameria pinifolia),* interior California buckwheat *(Eriogonum fasciculatum* subsp. *foliolosum),* and coastal deerweed *(Lotus scoparius* subsp. *scoparius).*

Animals Observed

Wildlife was neither abundant nor diverse at the site. Species included the side-blotched lizard *(Uta stansburiana),* red-tailed hawk *(Buteo jamaicensis),* American kestrel *(Falco sparverius),* mourning dove *(Zenaida macroura),* common raven *(Corvus corax),* Savannah sparrow *(Passerculus sandwichensis),* western meadowlark *(Sturnella neglecta),* California ground squirrel *(Spermophilus beecheyi),* and desert cottontail *(Sylvilagus audubonii).*

Diagnostic animal signs were discovered in the grasslands (i.e., mounds, burrows, scat, etc.), and indicated the presence of Botta's pocket gopher *(Thomomys bottae),* pocket mouse *(Perognathus* sp.*)* and deer mouse *(Peromyscus* sp.*).*

There is no foraging and nesting habitat for perching bird and raptor species governed by the Migratory Bird Treaty Act of 1918 (MBTA) on this site.

The site is not providing an urban wildlife movement corridor for migrations, foraging movements or for finding a mate through this portion of Wildomar. The site is completely enclosed by perimeter chain-link fencing, and is located at the corner of a busy intersection. It does not connect two or more larger core habitat areas that would otherwise be fragmented or isolated from one another.

ASSESSMENT OF HABITAT SUITABILITY FOR BURROWING OWLS

Based on the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (March 29, 2006), an independent assessment was made of the presence/absence of suitable burrowing owl habitat on the site and in a buffer zone around the project boundary **(Step I of the Burrowing Owl Survey Instructions)**.

Burrowing owl habitat can be found in shortgrass prairies, annual and perennial grasslands, lowland scrub, agricultural lands and rangelands, prairies, coastal dunes, deserts, scrublands characterized by low-growing vegetation, and some artificial areas (i.e., golf courses, cemeteries, irrigation ditches, etc.). Suitable owl habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface, and they may also occur in forb and open stages of pinyon-juniper and ponderosa pine habitats. They require large open expanses of sparsely vegetated areas on gentle rolling or level terrain with an abundance of active small mammal burrows. As a critical habitat feature, they require the use of rodent or other burrows for roosting and nesting. Burrows are the essential component of burrowing owl habitat. Natural and artificial burrows provide protection, shelter and nests for burrowing owls.

The assessment determined that the site and the buffer zone included suitable burrowing owl habitat consisting of open areas with sparsely vegetated annual grassland on gentle rolling terrain or level terrain with active small mammal burrows. Critical habitat features were present, and included California ground squirrel burrows and burrow complexes.

DATE AND TIME OF VISIT(S), INCLUDING NAME OF THE QUALIFIED BIOLOGIST CONDUCTING SURVEYS, WEATHER AND VISIBILITY CONDITIONS, AND SURVEY METHODOLOGY

All suitable habitats were carefully surveyed for the presence/absence of the burrowing owl. Thorough searches were conducted around either sunrise or sunset in an attempt to directly observe this species, and followed **Step II of the Burrowing Owl Survey Instructions**.

The **methodology** used to prepare this Nesting Season Survey involved conducting complete visual and walk-over field surveys to determine if the site or buffer zone was occupied. Surveys were conducted by walking through all marginally suitable habitats on the site and in a 150-meter (approximately 500 feet) buffer zone around the project boundary. Survey transects were spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines was no more than 15 meters (±50 feet) at this site.

Four surveys were conducted between April 19 and May 14, 2013. Visits to the site were made once per week on Fridays, weather permitting. Because of perimeter chain-link fencing, transects began along the site's west property line at the existing gate.

They then proceeded back and forth through the site and then ended back at the point of beginning **(Survey Transect Map)**. After leaving the site through the gate, areas located north, east and west of the site were surveyed. Developed/disturbed areas, eucalyptus stands, and dense Riversidean Sage Scrub present in the buffer zone were not surveyed. Surveys were not conducted south of Clinton Keith Road or east of Iodine Springs Road. All surveys were conducted during weather that was conducive to observing owls outside of their burrows, and avoided heavy rain, high winds or dense fog. The surveys were not conducted within five days of rain.

All surveys were conducted by Principe and Associates. Paul A. Principe holds a current Federal Fish and Wildlife Permit (TE 786497-7) and California Resident Scientific Collecting Permit (#801108-03 and Permanent ID #SC-002215). As a Consulting Biologist, Principe has been conducting biological surveys in Southern California since 1977.

Following are the number and dates of surveys, start and stop times of surveys and the weather conditions at the beginning and end of each survey (shaded temperature in degrees Fahrenheit includes the wind chill factor, and wind speed in miles per hour is given as the range measured over a few minutes with a Kestrel ® 2000):

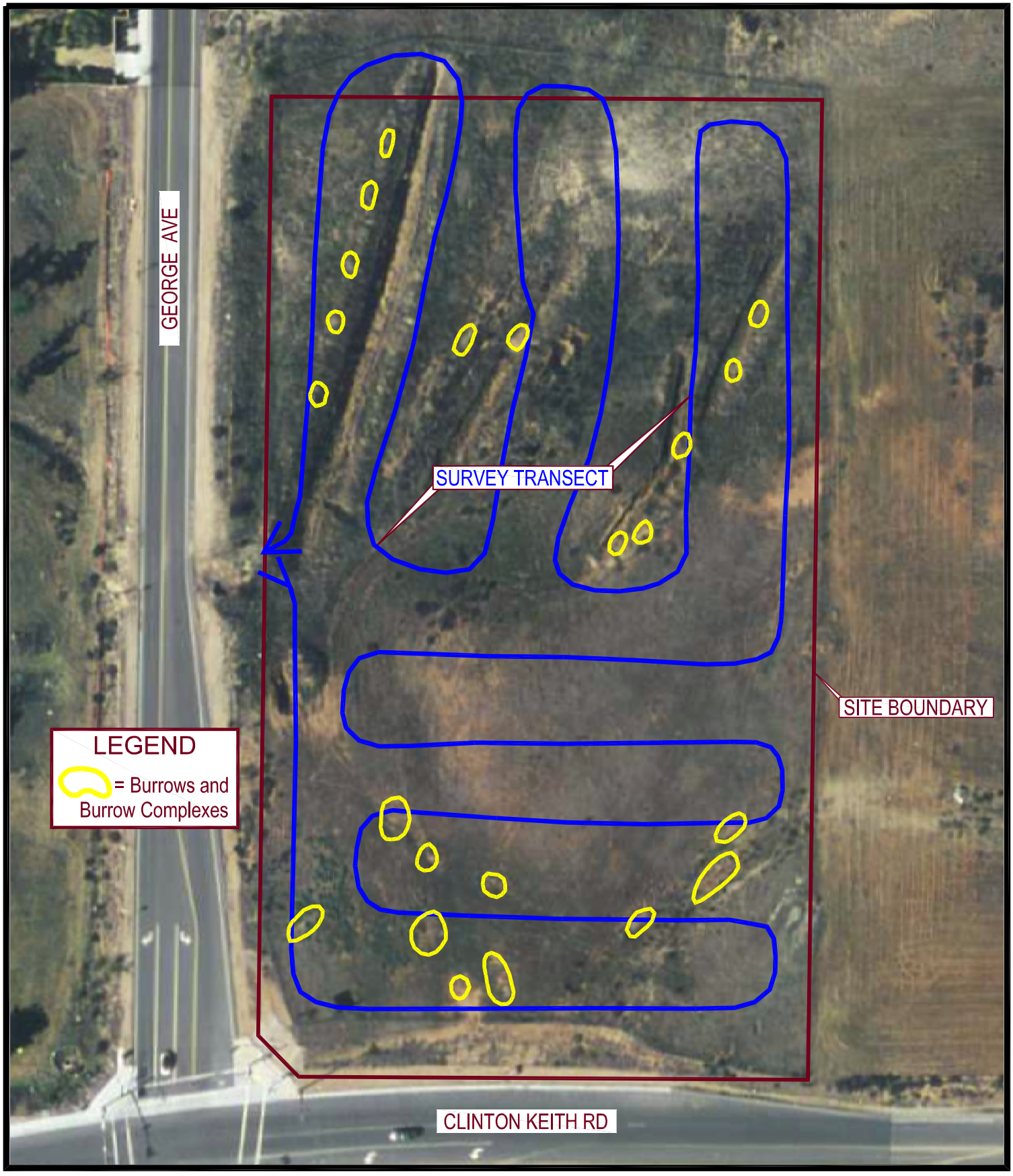
1. April 19, 2013: Clear, 78°F and 7-8 mph winds (1800 hours).
   Mostly clear, 73°F and 5-6 mph winds (1920 hours).
   Sunset at approximately 1920 hours.

2. April 26, 2013: Sunrise at approximately 0605 hours.
   Mostly clear, 53°F and 0-1 mph winds (0645 hours).
   Clear, 57°F and 1-2 mph winds (0805 hours).

3. May 3, 2013: Sunrise at approximately 0600 hours.
   Clear, 52°F and 1-2 mph winds (0630 hours).
   Clear, 64°F and 0-1 mph winds (0745 hours).

Rain Days - May 5 and May 6, 2013.

4. May 14, 2013: Sunrise at approximately 0550 hours.
   Clear, 61°F and 0-1 mph winds (0630 hours).
   Clear, 67°F and 1-2 mph winds (0745 hours).



Survey area: 5.23 acres

Feet

0 80 160

SURVEY TRANSECT MAP

CUP 03545

PRINCIPE AND ASSOCIATES

RESULTS OF TRANSECT SURVEYS, INCLUDING A MAP SHOWING THE LOCATION OF ALL BURROW(S) (NATURAL OR ARTIFICIAL) AND OWL(S), INCLUDING THE NUMBERS AT EACH BURROW, IF PRESENT, AND TRACKS, FEATHERS, PELLETS, OR OTHER ITEMS (PREY REMAINS, ANIMAL SCAT)

Burrowing owls were not observed during any of the surveys.

A map has been prepared showing the locations of the California ground squirrel burrows and burrow complexes present on the site. The burrow locations have been overlaid on an aerial photograph to show their relationship to the suitable habitat consisting of open areas with sparsely vegetated annual grassland on gentle rolling terrain or level terrain with active small mammal burrows **(Burrowing Owl Habitat Map)**. Photographs have been taken showing burrowing owl habitats at various locations on the site **(see Site Photographs attached)**.

BEHAVIOR OF OWLS DURING THE SURVEYS

Burrowing owls were not observed during any of the surveys.

SUMMARY OF BOTH WINTER AND NESTING SEASON SURVEYS INCLUDING ANY PRODUCTIVITY INFORMATION AND A MAP SHOWING TERRITORIAL BOUNDARIES AND HOME RANGES

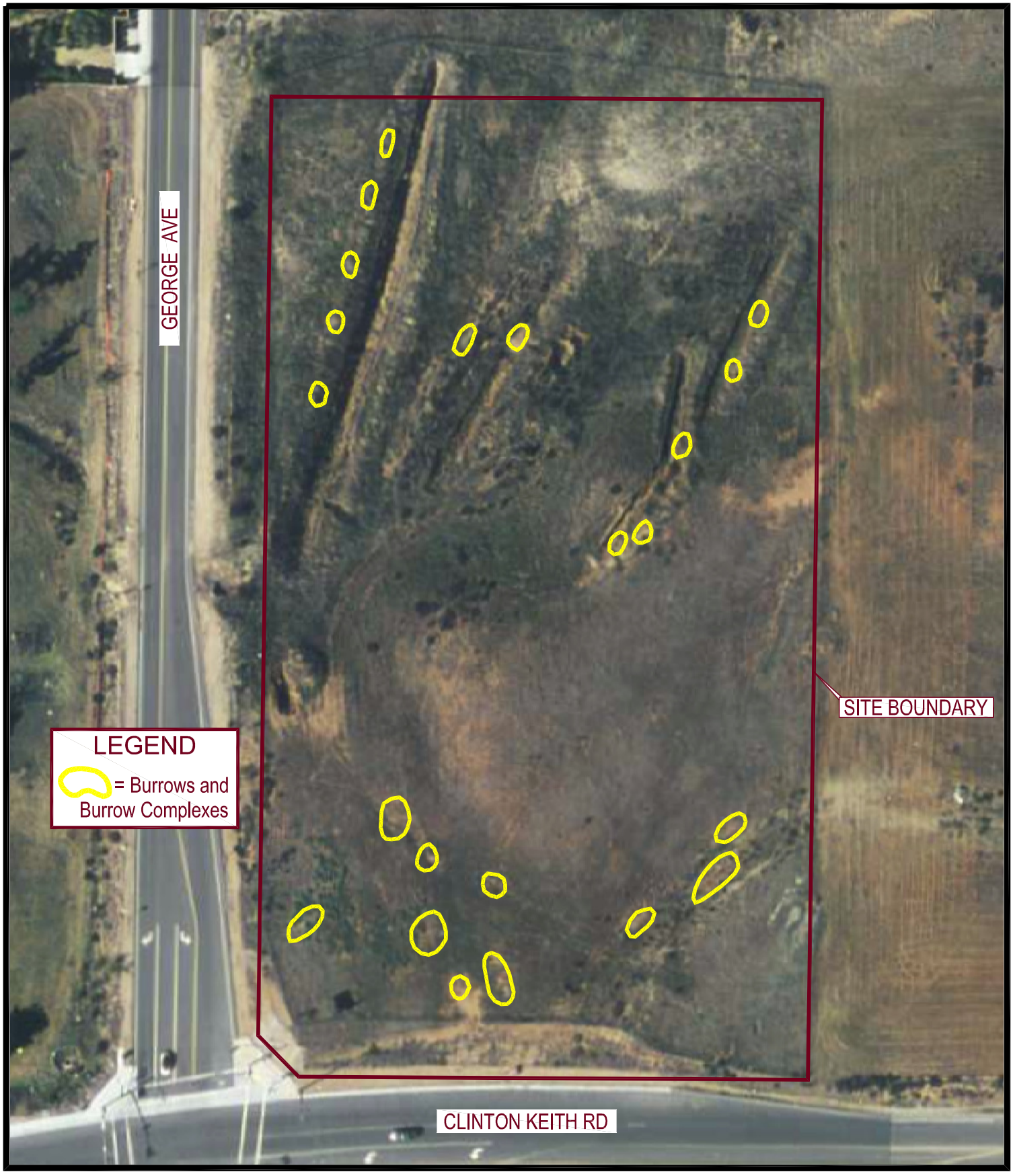
A Survey for Winter Residents was not completed at the site.

During the field surveys, burrowing owls were not observed. Critical burrowing owl habitats capable of being used for roosting or nesting were not being used on the site (i.e., California ground squirrel burrows and burrow complexes). In addition, animal sign diagnostic of burrowing owls was not discovered anywhere on the site (i.e., molted feathers, cast pellets, prey remains, eggshell fragments, and/or excrement at or near a burrow entrance). There was no evidence of either active habitat presently being used by burrowing owls, or habitat abandoned within the last three years on the site.

The site is completely enclosed by perimeter chain-link fencing, and is located at the corner of a busy intersection. It is that mowed each year for weed abatement purposes, and extensive fault trenching has occurred on the site. The buffer zone is also being impacted by infrastructure expansion at this time. These may be possible explanations for the absence of burrowing owls at the site.

MSHCP CONSIDERATIONS

Completion of this Nesting Season Survey is consistent with Species Conservation Objective 5 of the MSHCP that was developed for the burrowing owl. To ensure direct mortality of burrowing owls is avoided, a pre-construction presence/absence survey



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Feet

0 80 160

BURROWING OWL HABITAT MAP

CUP 03545

PRINCIPE AND ASSOCIATES

should be conducted within thirty (30) days prior to ground disturbance at the site. The proposed project site would then be consistent with Species Conservation Objective 6 of the MSHCP.

ANY HISTORICAL INFORMATION (NATURAL DIVERSITY DATABASE, DEPARTMENT REGIONAL FILES, BREEDING BIRD SURVEY DATA, AMERICAN BIRDS RECORDS, AUDUBON SOCIETY, LOCAL BIRD CLUB, OTHER BIOLOGISTS, ETC.) REGARDING THE PRESENCE OF BURROWING OWLS ON THE SITE

The burrowing owl occurs within the open lowlands of the central portion of Western Riverside County. It has a scattered distribution throughout the Western Riverside County Multiple Species Habitat Conservation Plan Area outside of montane areas. Breeding and burrow locations have not been identified within the University of California, Riverside (UCR) database, although most observations that have been recorded are probably located near a burrow due to the relatively sedentary nature of the species.

Habitat suitability for burrowing owls on the subject site was originally assessed during a field survey conducted in 2007 (Step I of the Survey Instructions). Annual grassland and sparsely vegetated areas on gentle rolling or level terrain were present on the site. It appeared that the site was providing suitable habitats for the burrowing owl. As the onsite habitats were contiguous with larger expanses of grassland in the buffer zone, it also appeared that the buffer zone was providing suitable habitats for this species.

Following the Survey Instructions, a burrow survey was conducted on the site on May 4, 2007. Under close inspection, critical burrowing owl habitats were not discovered on the site (Step II, Part A of the Survey Instructions). The burrow survey was negative. California ground squirrel burrows, other similarly-sized burrows or manmade structures capable of being used for roosting or nesting were not discovered on the site.

There are no occurrence records for the burrowing owl at the site or in the surrounding areas. Burrowing owls have been detected north of Wildomar in Alberhill, and south of Wildomar in Murrieta as documented in the UCR database and from other sources (USFWS 1996 unpublished data; California Science and Engineering Associates 1996). Historic burrowing owl populations are not known from the Wildomar area. Based on the information above, clusters of locations, and information from the USFWS (1996 unpublished data), the site is not located in close proximity to a Core Area.

CERTIFICATION STATEMENT

May 23, 2013

I hereby certify that the statements furnished herein and in the attached exhibits present the data and information required to complete this Nesting Season Survey for the Burrowing Owl to the best of my ability, and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

_____

PRINCIPE AND ASSOCIATES
Paul A. Principe
Principal

View of the suitable habitat consisting of open areas with sparsely vegetated annual grassland on gentle rolling terrain with active small mammal burrows. Critical habitat features were present, and included California ground squirrel burrows and burrow complexes.

SITE PHOTOGRAPH 1

CUP 03545

PRINCIPE AND ASSOCIATES

View of the suitable burrowing owl habitats present in the southwest corner of the site. Critical habitat features like California ground squirrel burrow complexes were found in this area. Raised and ground level burrow entrances can be seen in this photograph.

SITE PHOTOGRAPH 2

CUP 03545

PRINCIPE AND ASSOCIATES

View of one of the burrow complexes present on the site. Burrowing owls commonly nest in an abandoned burrow of a ground squirrel or other small mammal. The burrows are then modified and enlarged. Burrowing owls are often seen standing at the entrance to its nesting burrow.

SITE PHOTOGRAPH 3

CUP 03545

PRINCIPE AND ASSOCIATES

View of another burrow complex present on the site. One of the burrows is selected for use as the nest, or natal burrow, and other satellite burrows are usually found in the immediate vicinity within the defended territory of an individual burrowing owl.

SITE PHOTOGRAPH 4

CUP 03545

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