Attachment C:
Biological Resources

C.1 - Habitat Assessment for Delhi Sands Flower-loving Fly

GLENN LUKOS ASSOCIATES

Regulatory Services

September 2, 2014

Jay Ross
AMCAL Multi-Housing
30141 Agoura Road
Suite 100
Agoura Hills, California 91301-4332

SUBJECT: Results of Habitat Assessment for the Delhi Sands Flower-Loving Fly at Las Terrazas, a Proposed Residential Development at the Intersection of Valley Boulevard and Cypress Avenue, Located in Unincorporated San Bernardino County.

Dear Mr. Ross:

On July 30, 2014, Glenn Lukos Associates, Inc. (GLA) senior biologist Jeff Ahrens conducted a habitat assessment for the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) (DSF) at the above-referenced project site. Previously, Mr. Ahrens conducted a DSF habitat assessment at the above-reference site on January 31, 2013. GLA senior biologist Tony Bomkamp also conducted a DSF habitat assessment at the above-referenced project site (excluding the southeastern corner) on January 16, 2012. In addition, Michael Brandman Associates (MBA) conducted a DSF habitat assessment in 2006 (excluding the southeastern corner) and determined that that the site did not exhibit the potential to support this species and that protocol surveys would not be appropriate for the site.

In a letter dated August 26, 2006, the United States Fish and Wildlife Service (USFWS) concurred with MBA's conclusion and stated "we believe that the site is not currently occupied by the DSF, and the proposed project would have no effect on the DSF." The purpose of this most recent habitat assessment for the DSF is to verify that suitable habitat for the DSF does not occur within property (including the addition of the southeastern corner) and also that site conditions have not changed since the GLA 2013 survey, GLA 2012 survey, MBA 2006 survey and USFWS concurrence letter.

In addition, the USFWS in 2012 reviewed GLA's 2012 assessment and other information and concurred that site conditions have not changed since 2006 and the proposed project will not affect the DSF.

29 Orchard ▪ Lake Forest ▪ California 92630-8300
Telephone: (949) 837-0404 Facsimile: (949) 837-5834

1.0 INTRODUCTION

The DSF is designated as a federally endangered species and is restricted (endemic) to the Colton Dunes that once covered over approximately 40 square miles in northwestern Riverside and southwestern San Bernardino counties in southern California (USFWS 1997; USDA 1980) in irregular patches.

The fly is tied to fine, sandy soils, often with wholly or partly consolidated dunes referred to as the "Delhi" series (USFWS 1993). The fly is typically found in relatively intact, open, sparse, native habitats with less than 50 percent vegetative cover (USFWS 1997). The vegetation type, desert sand-verbena series includes *Eriogonum fasciculatum, Croton californicus, Lotus scoparius,* and *Oenothera californica* (Sawyer and Keeler-Wolf 1993). In some cases, *Eriogonum fasciculatum, Heterotheca grandiflora,* and *Croton californicus* are associated with the presence of Delhi sands flower-loving fly (Ballmer1989, USFWS 1997). In addition, *Ambrosia acanthocarpa, Amsinkia intermedia, Eriastrum sapphirinum, Eriogonum thurberi, Lessingia glandulifera* (USFWS 1993), and *Eriastrum filifolium* (Cazier 1985) have also been found in association with the fly.

Formerly widespread over the Colton Dunes, the Delhi Sands flower-loving fly now is restricted to 12 known populations, of which 11 are small and highly vulnerable to extinction. Virtually all populations occur in small, isolated habitat patches surrounded by incompatible land uses. Extensive surveys for *R. t. abdominalis* by Ballmer (1989) and others (USFWS 1993, 1997) indicate that it now occupies less than 2.5 percent of the total Delhi sands available because of conversion to other uses including dairy, agriculture, etc.

2.0 SITE LOCATION

The Project site is located immediately to the northwest of the intersection of corner Valley Boulevard and Cypress Avenue, within unincorporated San Bernardino County [Exhibit 1 – Regional Map and Exhibit 2 – Vicinity Map]. The surrounding area is comprised of a mixture of residential and commercial development. The Project site is surrounded by existing, long-standing development on all sides. Specifically, the southern boundary is Valley Boulevard and Interstate 10, the eastern boundary is largely single-family residences as is the northern boundary with the western boundary comprised of a large storage facility. As such, the site is not contiguous with any areas of native habitat and there are no areas of native habitat in close proximity to the site [Exhibit 3 – Site Map].

3.0 METHODOLOGY

GLA senior biologist Jeff Ahrens conducted the most recent DSF habitat assessment of the Project Site on July 30, 2014. As in previous assessments, all areas of the project site were traversed and inspected for areas of suitable habitat. Linear transects were walked to allow for comprehensive coverage of the site. The pedestrian surveys followed adequately spaced transects to allow 100 percent visual coverage of the ground surface. In addition, areas within 150 meters (500 feet) of the Project Site were scanned with binoculars. All representative plant species were documented during the habitat assessment. Table 1 summarizes weather related data during the habitat assessment.

Table 1. Weather related data for the burrowing owl habitat assessment.

Survey Date	Survey Times	Temp (^{o}F)	Cloud Cover (%)	Wind (Mph)
July 30, 2014	0555 - 0815	71 - 74	Clear	1-1

4.0 RESULTS

The site supports no native vegetation communities; rather is characterized by "ruderal" vegetation typical of disturbed ground such as vacant lots. It is evident that the site is disked to control weedy growth to protect against wild fire.

Vegetation on site is predominantly non-native and includes a mosaic of non-native forbs and grasses including Jimsonweed (*Datura wrightii*), puncture vine (*Tribulus terrestris*), Russian thistle (*Salsola tragus*), common sunflower (*Helianthus annuus*), Palmer's amaranth (*Amaranthus palmeri*), castor bean (*Ricinus communis*), Bermuda grass (*Cynodon dactylon*), Canadian horseweed (*Conyza canadensis*), prickly lettuce (*Lactuca serriola*), foxtail barley (*Hordeum murinum leporinum*), red-stem filaree (*Erodium cicutarium),* ripgut (*Bromus diandrus*), wild oats (*Avena fatua*), and other non-native grasses. The site also supports the foundation of former house and includes an assortment of ornamental trees. Representative site photographs are included in Exhibit 4.

Soils on the site are mix of sandy loams and loams with a few sandy areas. However, as noted, the site has been subject to regular disking to a depth of six inches or greater as reflected in the complete absence of any native shrubs and predominantly non-native cover. Typical components of habitat occupied by the DSF are entirely absent (e.g., California buckwheat, vinegar weed, etc.) The site also lacks telegraph weed, and as such, exhibits no species typically utilized by the DSF.

Based on the results of the most recent site visit, it is determined that the site conditions reported by GLA in 2013, 2012 and by MBA in 2006 (which in turn resulted in a determination by

USFWS that the site was not occupied by the DSF) have not changed and that the site exhibits no potential for supporting DSF and that surveys for this species do not need to be performed.

Finally, because the site is fully surrounded by development, supports a predominance of non-native weedy species, and supports no native habitat of any sort, the site exhibits no potential for supporting any other special-status species and development of the site exhibits no potential for adverse impacts on any sensitive biological resources.

Birds detected on the Project site including include the house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), and Anna's hummingbird (*Calypte anna*).

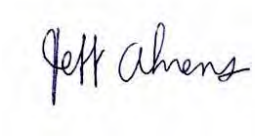
Mammal species detected by direct observation or sign include Botta's pocket gopher (*Thomomys bottae*).

No reptile or amphibian species were detected on site.

If you have any questions regarding this report, please call me at (949) 837-0404, ext. 40.

Sincerely,

GLENN LUKOS ASSOCIATES, INC.



Jeff Ahrens
Biologist

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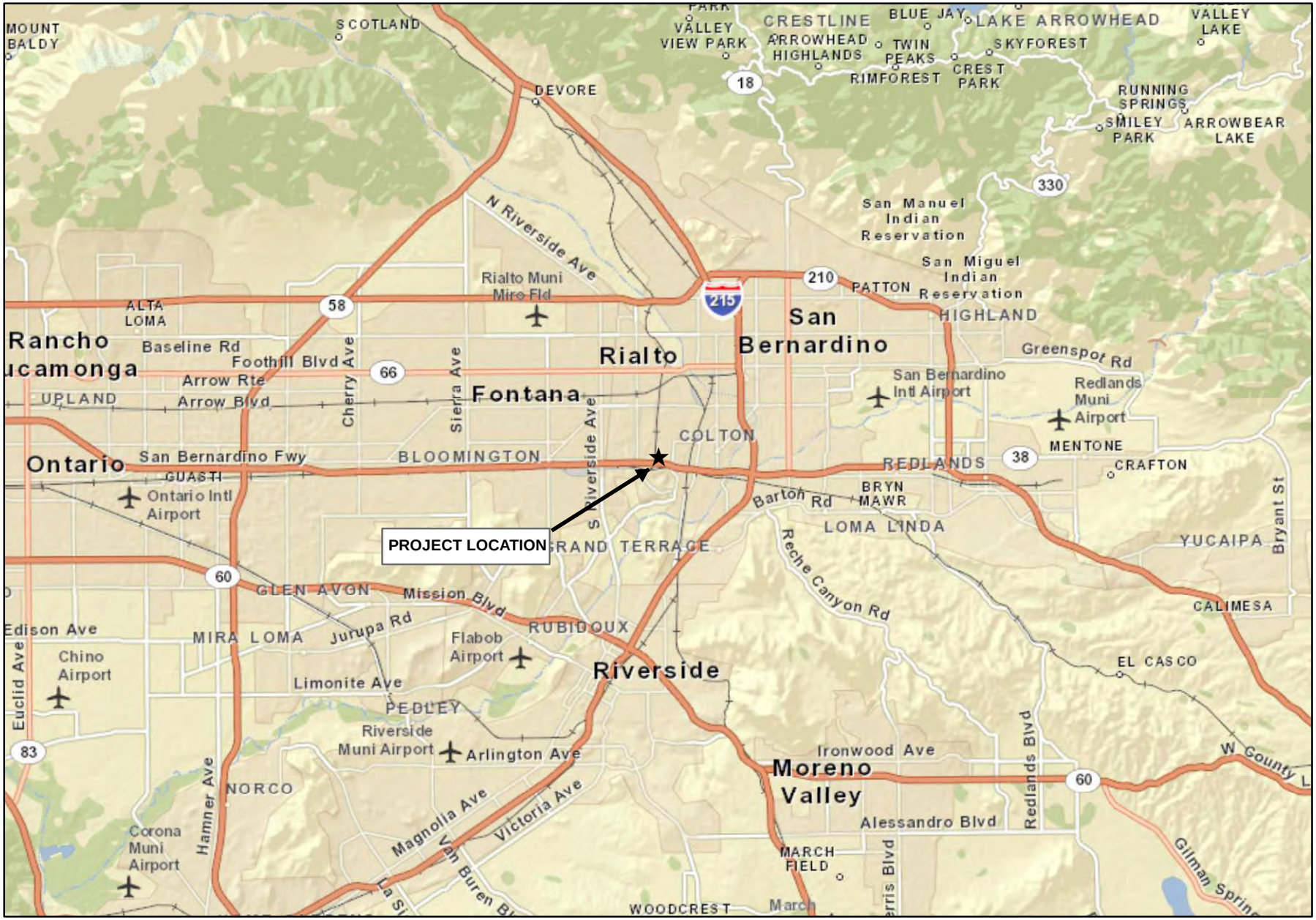


Source: ESRI World Street Map

N

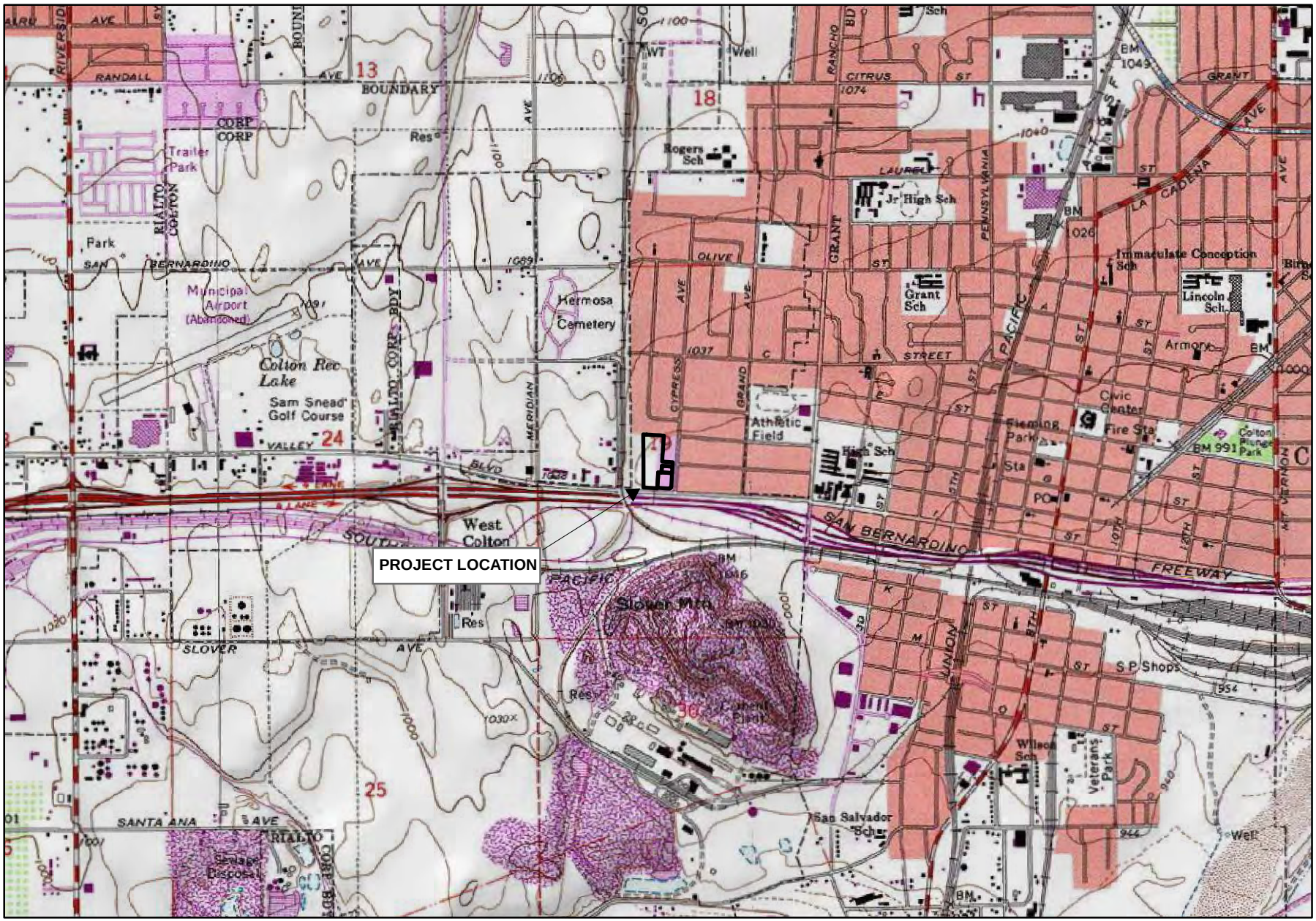
0 2 4 8 Miles

LAS TERRAZAS

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS San Bernardino South, CA quadrangle

N

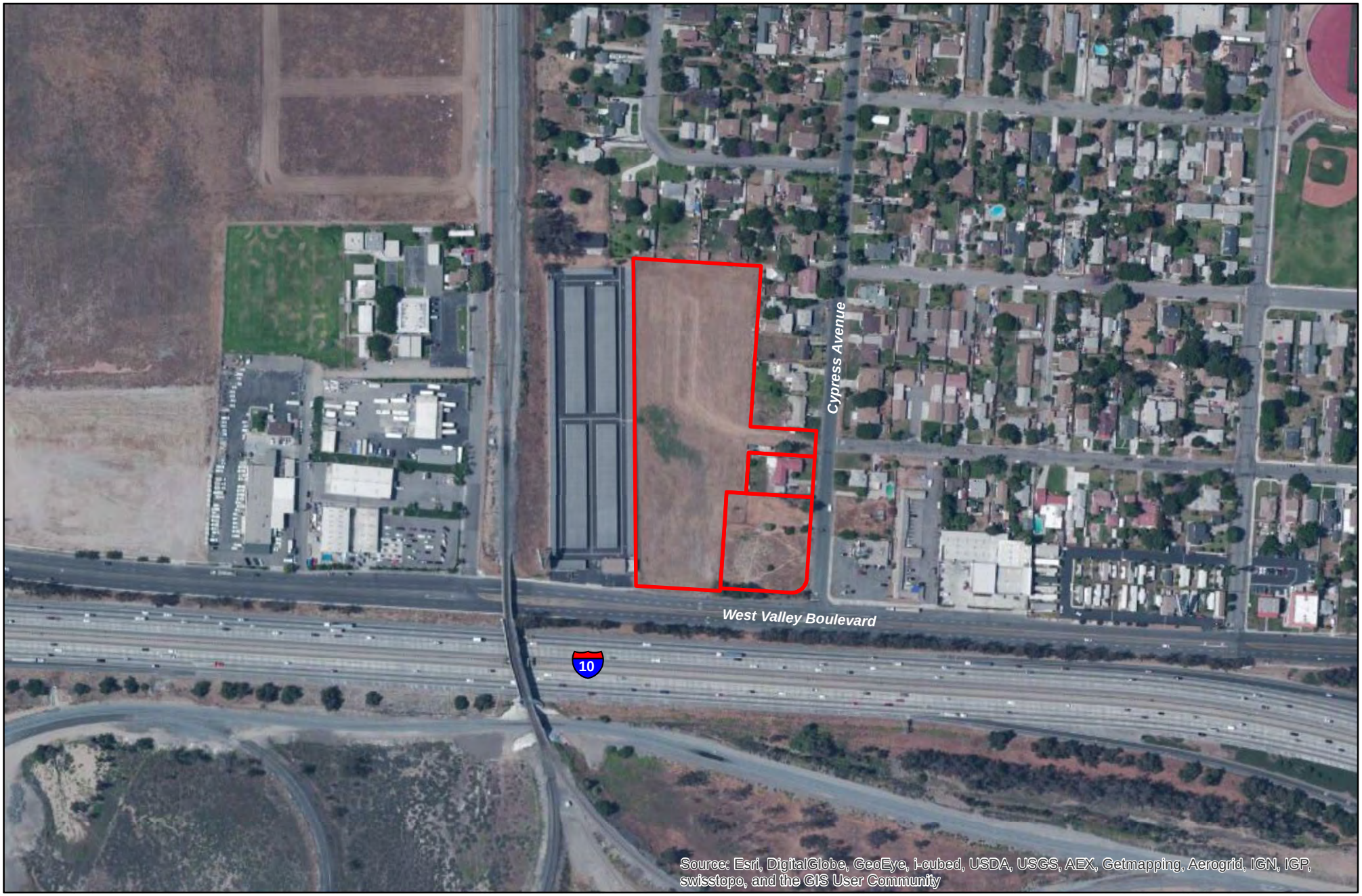
0 1,000 2,000 4,000 Feet

LAS TERRAZAS

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



LAS TERRAZAS

Site Map

N

0 150 300

Feet

GLENN LUKOS ASSOCIATES

Exhibit 3

Photograph 1: View looking north from the western portion of the property.

Photograph 2: View looking south from the northwestern corner of the property.

Photograph 3: View looking south from the northeastern portion of the property.

Photograph 4: View looking south from the southeastern corner of the property.

GLENN LUKOS ASSOCIATES

Exhibit 4

LAS TERRAZAS

Site Photographs

From: Geary_Hund@fws.gov
Sent: Tuesday, June 19, 2012 11:37 AM
To: Jay Ross
Subject: Re: FW: Colton project: Revised site
Attachments: Map COL Parcel 0274_182_43 & 46.pdf; Rpt COL Museum.pdf; Rpt COL Habitat USFW 12.pdf

In Reply Refer To: FWS-SB-12B0131-CPA0256

AMCAL Multi-Housing, Inc.
30141 Agoura Rd., Ste. #100
Agoura Hills, CA 91301-4332

Dear Mr. Ross,

Parcel #46, more specifically APN 0274-182-46, is not in mapped Delhi sands (potentially suitable Delhi Sands flower-loving fly habitat). Unless suitable habitat, Delhi sands, are present on the property, you do not need to take further action concerning the species before developing it (i.e., conducting two successive years of DSF surveys to demonstrate presumptive absence of the species, or providing us with an evaluation of the suitability of the habitat for our review to determine if surveys are necessary). If you have any questions, please give me a call.

Sincerely,

Geary

Geary W. Hund
Fish and Wildlife Biologist
760-322-2070 x209
U.S. Fish and Wildlife Service
Palm Springs Office
777 E. Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262

Jay Ross <Jay@AmcalHousing.com>

06/15/2012 01:57 PM

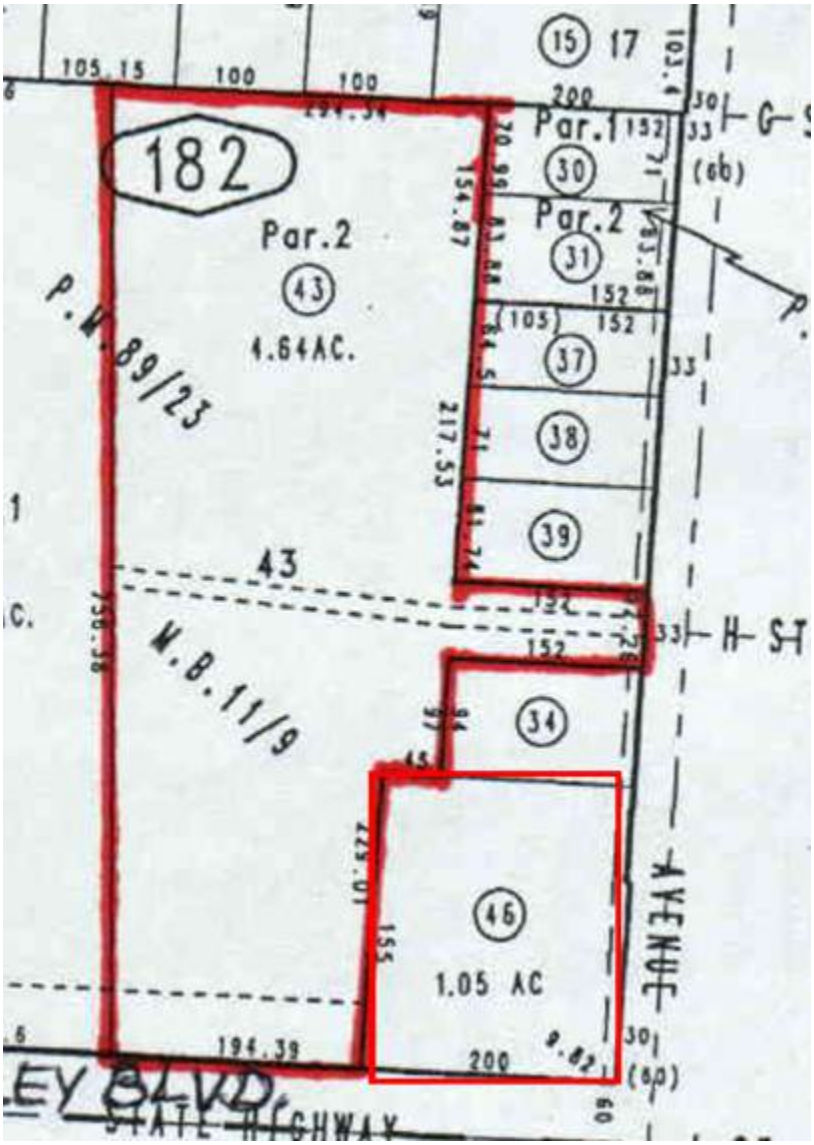
To "geary_hund@fws.gov" <geary_hund@fws.gov>
cc
Subject FW: Colton project: Revised site

Hi Geary,

We likely will buy another parcel for our Colton project and revise the site plan.

It is parcel #46 on the NW corner of Valley/Cypress, with a red box around it. It is vacant.

Do you need to update this letter with the additional parcel number?



Thank you,

Jay Ross
AMCAL Multi-Housing, Inc.
30141 Agoura Rd., Ste. #100
Agoura Hills, CA 91301-4332

P: (818) 706-0694 x128
F: (818) 706-3752
C: (310) 494-1115 (I rarely keep it on, only call it if I tell you to)
Jay@AmcalHousing.com

GLENN LUKOS ASSOCIATES

Regulatory Services

February 12, 2013

Jay Ross
AMCAL Multi-Housing
30141 Agoura Road
Suite 100
Agoura Hills, California 91301-4332

SUBJECT: Results of Habitat Assessment for the Delhi Sands Flower-Loving Fly at Las Terrazas, a Proposed Residential Development at the Intersection of Valley Boulevard and Cypress Avenue, Located in Unincorporated San Bernardino County

Dear Mr. Ross:

On January 31, 2013, Glenn Lukos Associates, Inc. (GLA) senior biologist Jeff Ahrens conducted a habitat assessment for the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) (DSFL) at the above-referenced project site. Previously, GLA senior biologist Tony Bomkamp conducted a habitat assessment for the DSFL at the above-referenced project site (excluding the southeastern corner) on January 16, 2012. In addition, Michael Brandman Associates (MBA) conducted a habitat assessment for the DSFL in 2006 (excluding the southeastern corner) and determined that that the site did not exhibit the potential to support this species and that protocol surveys would not be appropriate for the site. In a letter dated August 26, 2006, the United States Fish and Wildlife Service (USFWS) concurred with MBA's conclusion and stated "we believe that the site is not currently occupied by the DSFL, and the proposed project would have no affect on the DSFL." The purpose of this most recent habitat assessment for the DSFL is to verify that suitable habitat for the DSFL does not occur within property (including the addition of the southeastern corner) and also that site conditions have not changed since the GLA 2012 survey, MBA 2006 survey and USFWS concurrence letter.

INTRODUCTION

The DSFL is designated as a federally endangered species and is restricted (endemic) to the Colton Dunes that once covered over approximately 40 square miles in northwestern Riverside and southwestern San Bernardino counties in southern California (USFWS 1997; USDA 1980) in irregular patches.

The fly is tied to fine, sandy soils, often with wholly or partly consolidated dunes referred to as the "Delhi" series (USFWS 1993). The fly is typically found in relatively intact, open, sparse, native habitats with less than 50 percent vegetative cover (USFWS 1997). The vegetation type,

desert sand-verbena series includes *Eriogonum fasciculatum*, *Croton californicus*, *Lotus scoparius*, and *Oenothera californica* (Sawyer and Keeler-Wolf 1993). In some cases, *Eriogonum fasciculatum*, *Heterotheca grandiflora*, and *Croton californicus* are associated with the presence of Delhi sands flower-loving fly (Ballmer1989, USFWS 1997). In addition, *Ambrosia acanthocarpa*, *Amsinkia intermedia*, *Eriastrum sapphirinum*, *Eriogonum thurberi*, *Lessingia glandulifera* (USFWS 1993), and *Eriastrum filifolium* (Cazier 1985) have also been found in association with the fly.

Formerly widespread over the Colton Dunes, the Delhi Sands flower-loving fly now is restricted to 12 known populations, of which 11 are small and highly vulnerable to extinction. Virtually all populations occur in small, isolated habitat patches surrounded by incompatible land uses. Extensive surveys for *R. t. abdominalis* by Ballmer (1989) and others (USFWS 1993, 1997) indicate that it now occupies less than 2.5 percent of the total Delhi sands available because of conversion to other uses including dairy, agriculture, etc.

SITE LOCATION

As referenced above, the subject site is located immediately to the northwest of the intersection of corner Valley Boulevard and Cypress Avenue, within unincorporated San Bernardino County [Exhibits 1 and 2]. The surrounding area is a mix of residential and commercial development and the site is surrounded by existing, long-standing development on all sides. Specifically, the southern boundary is Valley Boulevard and Interstate 10, the eastern boundary is largely single-family residences as is the northern boundary with the western boundary comprised of a large storage facility. As such, the site is not contiguous with any areas of native habitat and there are no areas of native habitat in close proximity to the site [Exhibit 3].

METHODOLOGY

GLA senior biologist Jeff Ahrens conducted the most recent DSFL habitat assessment of the Project Site on January 31, 2013. As in previous assessments, all areas of the project site were traversed and inspected for areas of suitable habitat. Linear transects were walked to allow for comprehensive coverage of the site. The pedestrian surveys followed adequately spaced transects to allow 100 percent visual coverage of the ground surface. In addition, areas within 150 meters (500 feet) of the Project Site were scanned with binoculars. All representative plant species were documented during the habitat assessment. Table 1 summarizes weather related data during the habitat assessment.

Table 1. Weather related data for the Delhi Sands Fly habitat assessment.

Survey Date	Survey Times	Temp (F)	Cloud Cover (%)	Wind (Mph)
January 31, 2013	0855-1115	56-67	Clear-Clear	1-3

RESULTS

The site supports no native vegetation communities; rather is characterized by "ruderal" vegetation typical of disturbed ground such as vacant lots. It is evident that the site is disked to control weedy growth to protect against wild fire. Vegetation is essentially entirely non-native dominated by a mosaic of non-native grasses and forbs including red-stem filaree (*Erodium cicutarium*), London rocket (*Sisymbrium irio*), ripgut (*Bromus diandrus*), Russian thistle (*Salsola tragus*), black mustard (*Brassica nigra*), cheese weed (*Malva parviflora*), wild oats (*Avena fatua*), and foxtail barley (*Hordeum murinum leporinum*). The site also supports one vacant house including numerous ornamental trees. Representative site photographs are included in Exhibit 4.The site also supports one vacant house with a variety of ornamental trees. Representative site photographs are included in Exhibit 4.

Soils on the site are mix of sandy loams and loams with a few sandy areas. However, as noted, the site has been subject to regular disking to a depth of six inches or greater as reflected in the complete absence of any native shrubs and a mostly non-native cover. Typical components of habitat occupied by the DSFL are entirely absent (e.g., California buckwheat, vinegar weed, etc.) The site also lacks telegraph weed, and as such, exhibits no species typically utilized by the DSFL.

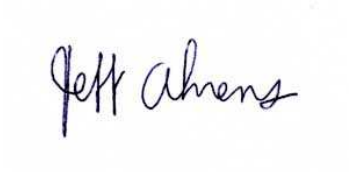
Based on the results of the most recent site visit, it is determined that the site conditions reported by GLA in 2012 and by MBA in 2006 (which in turn resulted in a determination by USFWS that the site was not occupied by the DSFL) have not changed and that the site exhibits no potential for supporting DSFL and that surveys for this species do not need to be performed.

Finally, because the site is fully surrounded by development, supports a predominance of non-native weedy species, and supports no native habitat of any sort, the site exhibits no potential for supporting any other special-status species and development of the site exhibits no potential for adverse impacts on any sensitive biological resources.

If you have any questions regarding the findings set forth in this report, please feel free to contact me at (949) 837-0404 ext. 40.

Sincerely,

GLENN LUKOS ASSOCIATES



Jeff Ahrens
Senior Biologist

s:0783-15_DSFL Assessment (2013)_b.docx

REFERENCES

Ballmer, G. 1989. A petition to the United States Fish and Wildlife Service (to list the Delhi Sands flower-loving fly as endangered). Riverside, California.
Cazier, M. A. 1985. A revision of the North American flies belonging to the genus Rhaphiomidas (Diptera: Apioceridae). Bull. Amer. Mus. Nat. Hist. 182(2):181-263.

Glenn Lukos Associates. 2012. Results of Habitat Assessment for the Delhi Sands Flower-Loving Fly at a Proposed Residential Development at the Intersection of Valley Boulevard and Cypress Avenue, Located in Unincorporated San Bernardino County.

Sawyer, J., and T. Keeler-Wolf. 1995. A manual of California vegetation. California Native Plant Society. Sacramento, California.

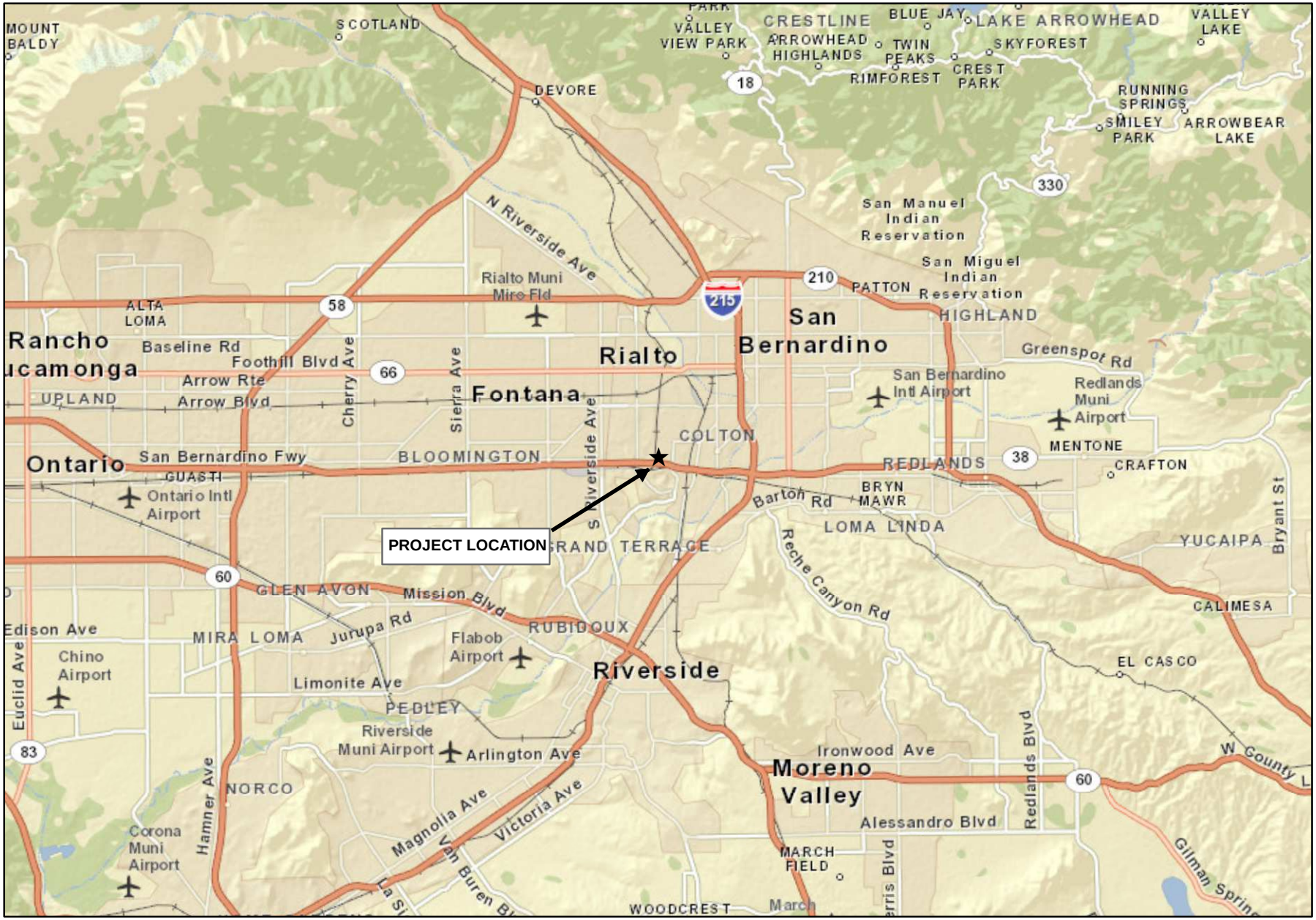
U. S. Fish and Wildlife Service. 1993. Endangered and threatened wildlife and plants; determination of endangered status for the Delhi Sands flower-loving fly. Federal Register 58 (183):49881-49887.

_____. 1997. Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) recovery plan. U.S. Fish and Wildlife Service, Portland, OR. 51pp.

_____. 2006. Re: Proposed residential development northwest of the intersection of Valley Boulevard and Cypress Avenue, Unincorporated San Bernardino County, California (Aug 28, 2006).

U. S. Soil Conservation Service. 1980. Soil survey of San Bernardino County southwestern part, California. U.S. Gov. Printing Office, Washington, D.C.

Source: ESRI World Street Map



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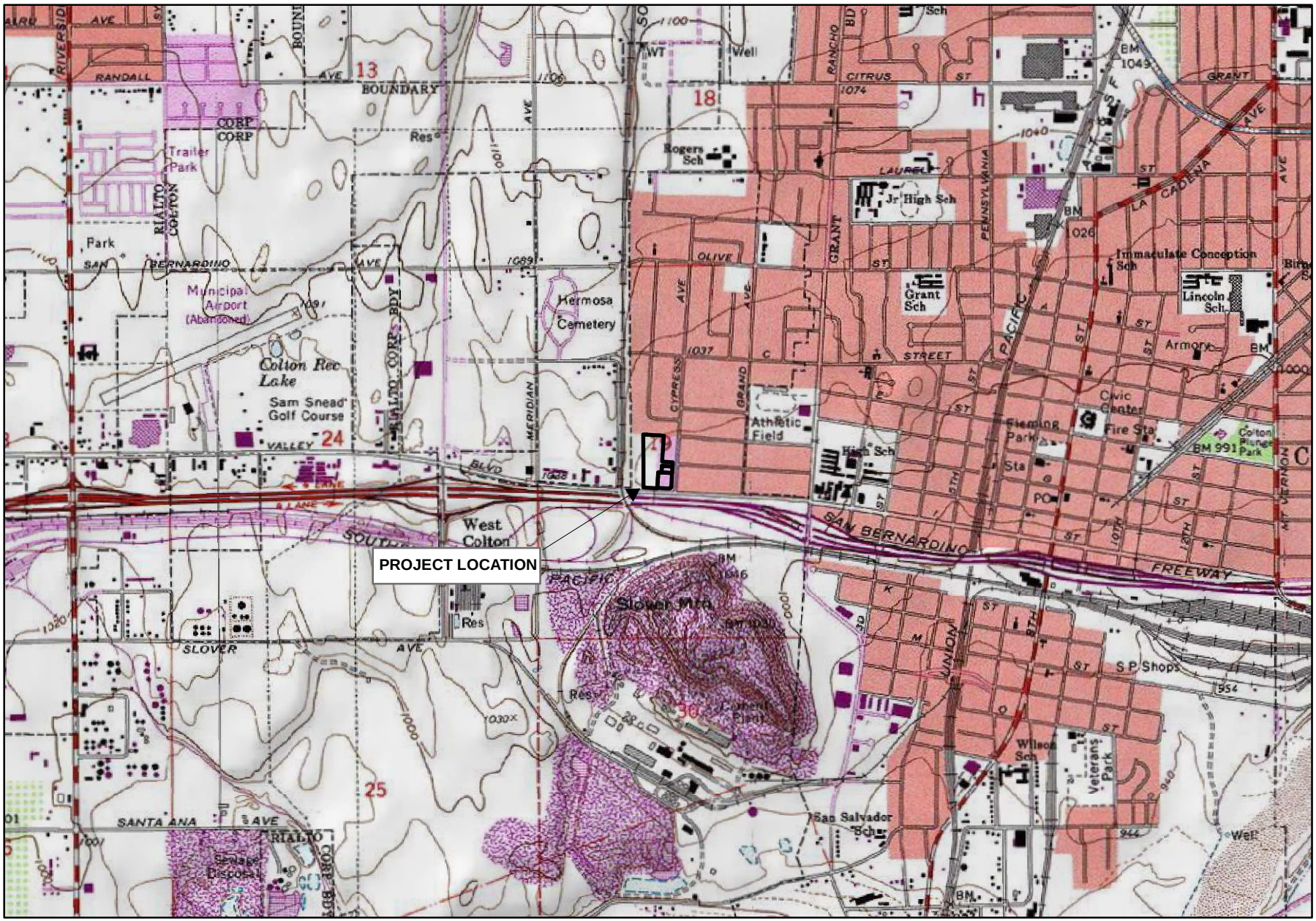
0 2 4 8 Miles

LAS TERRAZAS

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1

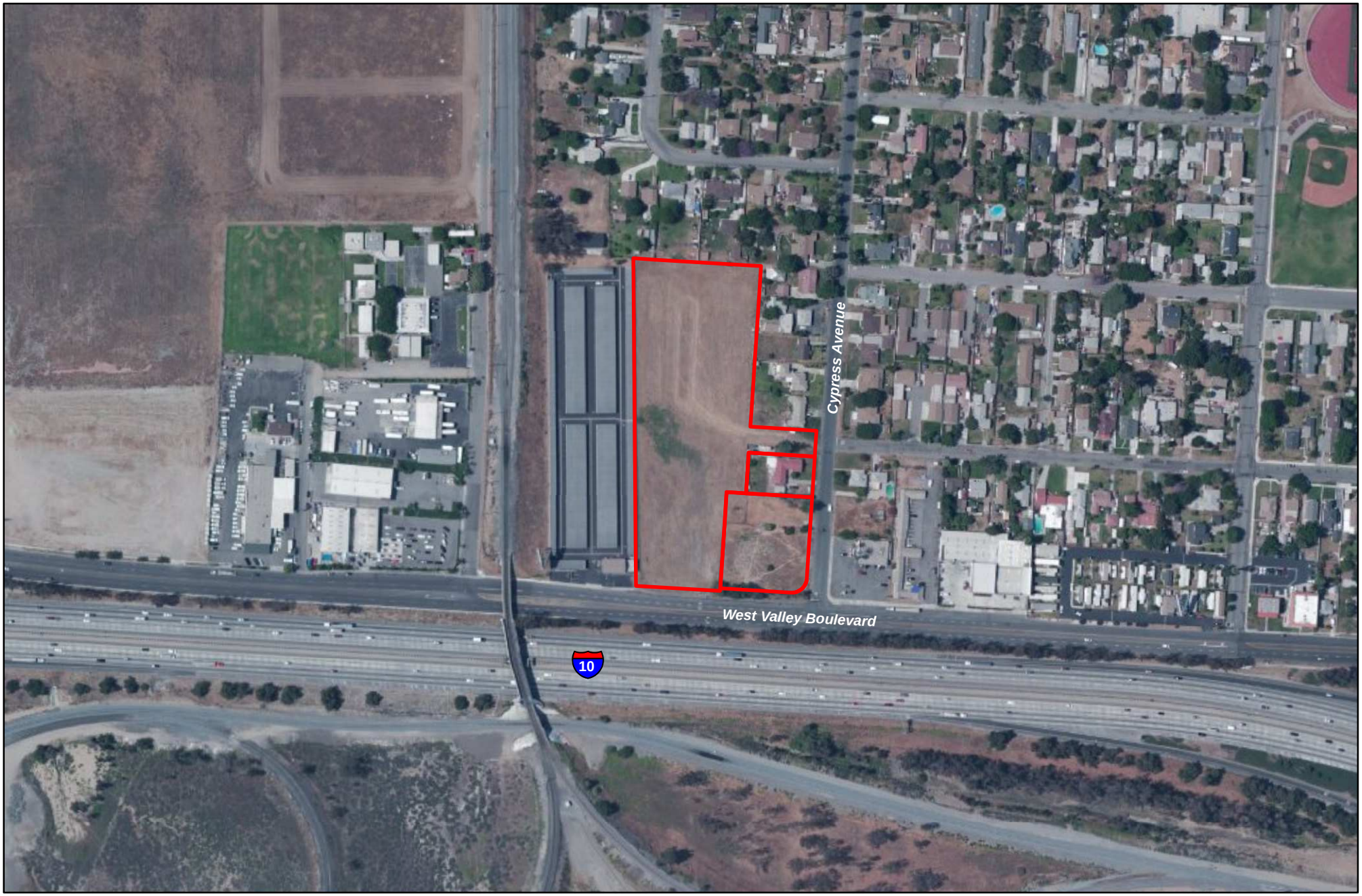


LAS TERRAZAS

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



LAS TERRAZAS

Aerial Photo

N

0 150 300

Feet

GLENN LUKOS ASSOCIATES

Exhibit 3

Photograph 1: View looking northwest from the southeastern corner of property.

Photograph 2: View looking northeast from the southwestern corner of property.

GLENN LUKOS ASSOCIATES

Exhibit 4

Photograph 3: View looking east from the western half of property.

Photograph 4: View looking east from the southwestern corner of property.

LAS TERRAZAS

Site Photographs

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Palm Springs Fish and Wildlife Office
777 East Tahquitz Canyon Way, Suite 208
Palm Springs, California 92262

In Reply Refer To:
FWS-SB-12B0131-CPA0105

Jay Ross
AMCAL Multi-Housing
30141 Agoura Road, Suite 100
Agoura Hills, California 91301-4332

Subject: Habitat Assessment for the Delhi Sands Flower-loving Fly for Assessor Parcel Number 0274-182-43, Unincorporated San Bernardino County, California

Dear Mr. Ross:

We received your letter on February 2, 2012, requesting our review of an enclosed habitat assessment for the federally endangered Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*, "DSF"), on San Bernardino County Assessor Parcel Number 0274-182-43, located adjacent to the City of Colton in unincorporated San Bernardino County, California. The assessment, dated January 17, 2012, was conducted by Glenn Lukos and Associates. You indicated in your letter that the proposed project is an apartment complex and asked that we convey any concerns we might have about DSF, or if we have none, that we affirm the findings in the assessment. You also provided us with a copy of a letter from the Carlsbad Fish and Wildlife Office dated August 28, 2006, indicating that the U.S. Fish and Wildlife Service (Service) did not believe the site was currently occupied by DSF.

Based on our review of the assessment you provided and of digital imagery and other information in our files, we concur with the determination in the assessment that site conditions have not changed since 2006 and the proposed project will not affect the DSF. If you have any further questions, please contact Geary Hund at (760) 322-2070 ext. 209.

Sincerely,

Kennon A. Corey
Assistant Field Supervisor

C.2 - Habitat Assessment for Burrowing Owl

GLENN LUKOS ASSOCIATES

Regulatory Services

August 29, 2014

Jay Ross
AMCAL Multi-Housing
30141 Agoura Road
Suite 100
Agoura Hills, California 91301-4332

SUBJECT: Results of a Burrowing Owl Habitat Assessment at Las Terrazas, a Proposed Residential Development at the Intersection of Valley Boulevard and Cypress Avenue, Located in Unincorporated San Bernardino County.

Dear Mr. Ross:

This letter report documents the results of a habitat assessment conducted for the burrowing owl (*Athene cunicularia*) at the above-referenced project site, located in Unincorporated San Bernardino County. Previously, GLA senior biologist Jeff Ahrens conducted a habitat assessment for the burrowing owl at the above-referenced project site on January 31, 2013 and also on January 26, 2012 (excluding the southeastern corner). Suitable habitat including the presence of burrows for the burrowing owl was not detected on site. GLA conducted an updated burrowing owl habitat assessment on July 30, 2014 in accordance with the California Department of Fish and Wildlife (CDFW, formerly referred to as California Department of Fish and Game) Staff Report on Burrowing Owl Mitigation (March 2012).

1.0 INTRODUCTION

The burrowing owl (*Athene cunicularia*) is designated as a Federal species of concern and is also designated as a State species of concern by the California Department of Fish and Wildlife. The burrowing owl has a broad distribution, breeding from southern Canada (nearly extirpated in some areas), and south through eastern Washington, central Oregon, and California to Baja California, east to western Minnesota, northwestern Iowa, eastern Nebraska, central Kansas, Oklahoma, eastern Texas, Louisiana, and south to central Mexico (AOU 1998). The winter range is much the same as the breeding range, except that most burrowing owls apparently vacate the northern areas of the Great Plains and Great Basin (Haug et al. 1993).

In California, the burrowing owl is a yearlong resident formerly common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains (Zeiner

29 Orchard ▪ Lake Forest ▪ California 92630-8300
Telephone: (949) 837-0404 Facsimile: (949) 837-5834

et al. 1990). It is present on the larger offshore islands and is found as high as 5,300 feet in Lassen County. Generally, burrowing owls occur in the Central Valley extending from Redding south to the Grapevine, east through the Mojave desert and west to San Jose, the San Francisco Bay area, the outer coastal foothills area which extend from Monterey south to San Francisco, and also in the Sonoran desert (Grinnell and Miller 1944). The owl is also a resident in the open areas of the lowlands over much of the southern California region (Garrett and Dunn 1981).

Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrubland characterized by low-growing vegetation (Zarn 1974). Suitable habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface. Burrows are the essential component of burrowing owl habitat: both natural and artificial burrows provide protection, shelter, and nests for burrowing owls (Henny and Blus 1981). Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also may use man-made structures, such as cement culverts; debris piles of cement, asphalt, or wood; or openings beneath cement or asphalt pavement. Burrowing owls may also use a variety of developed areas including golf courses, cemeteries, airports, vacant lots, abandoned buildings, and irrigation ditches (Haug et al 1993). Occasionally owls may dig their own burrow in soft, friable soil (Robertson 1929). Owls will modify and enlarge the mammal burrows for their use. One burrow is typically selected for use as a nest, however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl. Burrowing owls exhibit high site fidelity, reusing burrows year after year (Rich 1984, Feeney 1992).

Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers. Occupancy of suitable burrowing owl habitat can be verified at a site by an observation of at least one burrowing owl, or alternatively, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement (whitewash) at or near a burrow entrance.

The burrowing owl is a crepuscular hunter (active during the dawn and dusk hours) with a prey base including invertebrates and small vertebrates (Thomsen 1971). They may hunt by using short flights, running along the ground, hovering or by using an elevated perch from where prey is spotted. Burrowing owls are relatively opportunistic foragers (Haug et al. 1993). Their diet is composed of a variety of foods, mainly including insects and small mammals, although they may also take reptiles, other birds, and carrion.

2.0 SITE LOCATION

The Project site is located immediately to the northwest of the intersection of corner Valley Boulevard and Cypress Avenue, within unincorporated San Bernardino County [Exhibit 1 –

Regional Map and Exhibit 2 – Vicinity Map]. The surrounding area is comprised of a mixture of residential and commercial development. The Project site is surrounded by existing, long-standing development on all sides. Specifically, the southern boundary is Valley Boulevard and Interstate 10, the eastern boundary is largely single-family residences as is the northern boundary with the western boundary comprised of a large storage facility. As such, the site is not contiguous with any areas of native habitat and there are no areas of native habitat in close proximity to the site [Exhibit 3 – Site Map].

3.0 METHODOLOGY

Burrowing Owl Habitat Assessment

GLA senior biologist Jeff Ahrens conducted the burrowing owl habitat assessment of the Project Site on July 30, 2014. As previously mentioned, the habitat assessment was conducted following the CDFW Staff Report on Burrowing Owl Mitigation (March 2012).

All areas of the project site were traversed and inspected for areas of suitable habitat. Linear transects were walked to allow for comprehensive coverage of the site. The pedestrian surveys followed adequately spaced transects to allow 100 percent visual coverage of the ground surface. In addition, areas within 150 meters (500 feet) of the Project Site were scanned with binoculars. The Project Site was searched for any evidence of burrowing owl occupation, including burrowing owls, cast pellets, whitewash, feathers, nesting material or prey remains at a burrow entrance. All burrows detected on site (if any) were mapped. All fauna and representative plant species were documented during the habitat assessment. Table 1 summarizes weather related data during the habitat assessment.

Table 1. Weather related data for the burrowing owl habitat assessment.

Survey Date	Survey Times	Temp (^{o}F)	Cloud Cover (%)	Wind (Mph)
July 30, 2014	0555 - 0815	71 - 74	Clear	1-1

4.0 RESULTS

The Project Site does not currently support suitable habitat for the burrowing owl as no burrows or man-made structures capable of supporting burrowing owls were detected on site. The Project Site supports no native vegetation communities. The Project site exhibited evidence of being disked to control weedy growth. Vegetation on site can be characterized as “ruderal” which is typical of disturbed ground such as vacant lots.

Vegetation on site is predominantly non-native and includes a mosaic of non-native forbs and grasses including Jimsonweed (*Datura wrightii*), puncture vine (*Tribulus terrestris*), Russian thistle (*Salsola tragus*), common sunflower (*Helianthus annuus*), Palmer's amaranth (*Amaranthus palmeri*), castor bean (*Ricinus communis*), Bermuda grass (*Cynodon dactylon*), Canadian horseweed (*Conyza canadensis*), prickly lettuce (*Lactuca serriola*), foxtail barley (*Hordeum murinum leporinum*), red-stem filaree (*Erodium cicutarium),* ripgut (*Bromus diandrus*), wild oats (*Avena fatua*), and other non-native grasses. The site also supports the foundation of former house and includes an assortment of ornamental trees. Representative site photographs are included in Exhibit 4.

Therefore, because suitable habitat for the burrowing owl does not presently occur at the Project Site, focused surveys including pre-construction surveys for the burrowing owl are not required.

Birds detected on the Project site including include the house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), and Anna's hummingbird (*Calypte anna*).

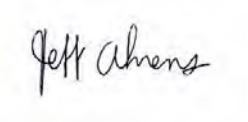
Mammal species detected by direct observation or sign include Botta's pocket gopher (*Thomomys bottae*).

No reptile or amphibian species were detected on site.

If you have any questions regarding this report, please call me at (949) 837-0404, ext. 40.

Sincerely,

GLENN LUKOS ASSOCIATES, INC.



Jeff Ahrens
Biologist

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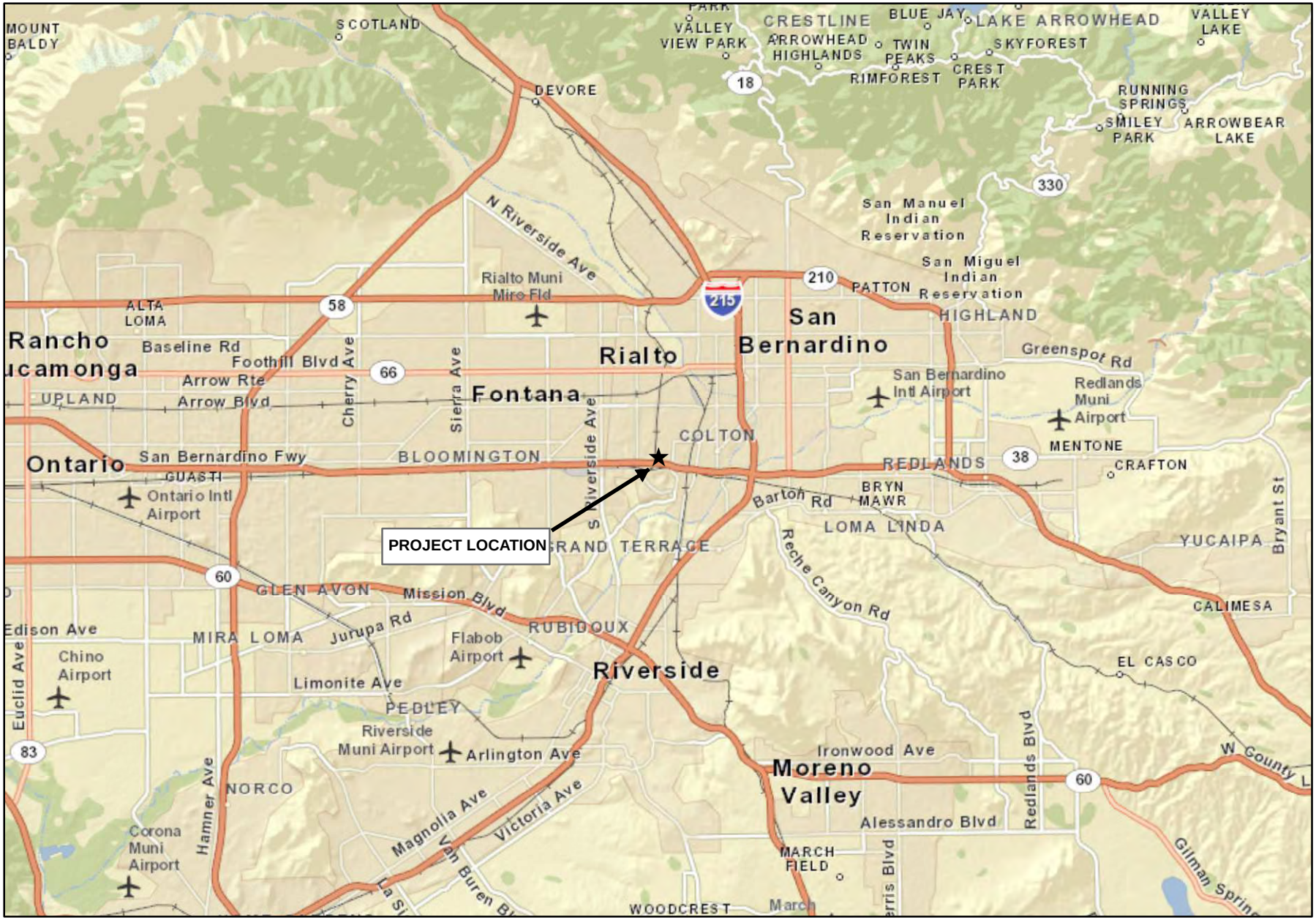


Source: ESRI World Street Map

N

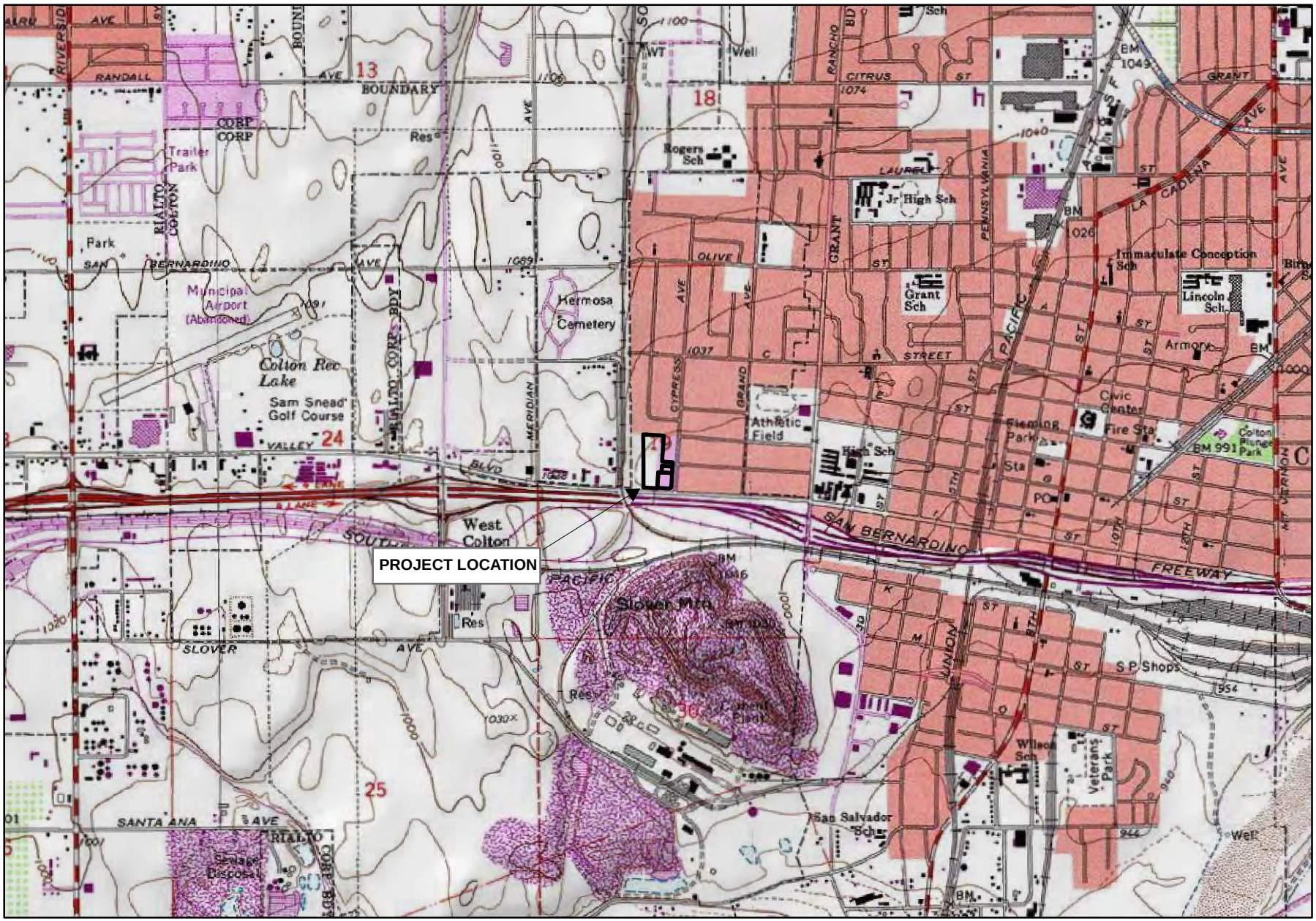
0 2 4 8 Miles

LAS TERRAZAS

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1



Adapted from USGS San Bernardino South, CA quadrangle

N

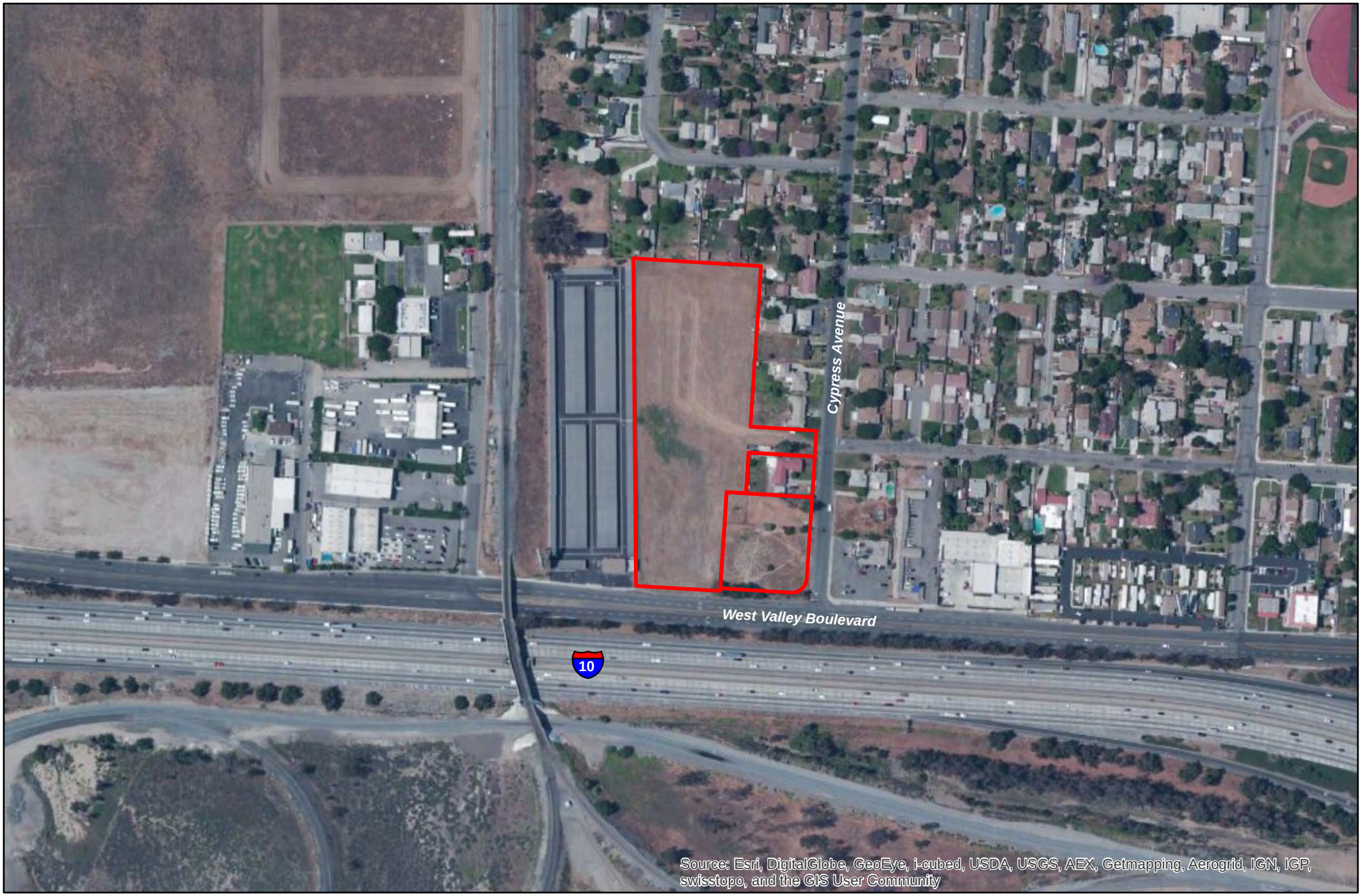
0 1,000 2,000 4,000 Feet

LAS TERRAZAS

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



LAS TERRAZAS

Site Map

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0 150 300

Feet

GLENN LUKOS ASSOCIATES

Exhibit 3

Photograph 1: View looking north from the western portion of the property.

Photograph 2: View looking south from the northwestern corner of the property.

Photograph 3: View looking south from the northeastern portion of the property.

Photograph 4: View looking south from the southeastern corner of the property.

GLENN LUKOS ASSOCIATES

Exhibit 4

LAS TERRAZAS

Site Photographs

GLENN LUKOS ASSOCIATES

Regulatory Services

February 12, 2013

Jay Ross
AMCAL Multi-Housing
30141 Agoura Road
Suite 100
Agoura Hills, California 91301-4332

SUBJECT: Results of a Burrowing Owl Habitat Assessment at Las Terrazas, a Proposed Residential Development at the Intersection of Valley Boulevard and Cypress Avenue, Located in Unincorporated San Bernardino County

Dear Mr. Ross:

This letter report documents the results of a habitat assessment conducted for the burrowing owl (*Athene cunicularia*) at the above-referenced project site, located in Unincorporated San Bernardino County. Previously, GLA senior biologist Jeff Ahrens conducted a habitat assessment for the burrowing owl at the above-referenced project site (excluding the southeastern corner) on January 26, 2012. Suitable habitat for the burrowing owl was not detected on site. The most recent burrowing owl habitat assessment was conducted in accordance with the California Department of Fish and Wildlife (CDFW, formerly referred to as California Department of Fish and Game) Staff Report on Burrowing Owl Mitigation (March 2012).

INTRODUCTION

The burrowing owl (*Athene cunicularia*) is designated as a Federal species of concern and is also designated as a State species of concern by the California Department of Fish and Wildlife. The burrowing owl has a broad distribution, breeding from southern Canada (nearly extirpated in some areas), and south through eastern Washington, central Oregon, and California to Baja California, east to western Minnesota, northwestern Iowa, eastern Nebraska, central Kansas, Oklahoma, eastern Texas, Louisiana, and south to central Mexico (AOU 1998). The winter range is much the same as the breeding range, except that most burrowing owls apparently vacate the northern areas of the Great Plains and Great Basin (Haug et al. 1993).

In California, the burrowing owl is a yearlong resident formerly common in appropriate habitats throughout the state, excluding the humid northwest coastal forests and high mountains (Zeiner et al. 1990). It is present on the larger offshore islands and is found as high as 5,300 feet in Lassen County. Generally, burrowing owls occur in the Central Valley extending from Redding

29 Orchard ■ Lake Forest ■ California 92630-8300
Telephone: (949) 837-0404 Facsimile: (949) 837-5834

south to the Grapevine, east through the Mojave desert and west to San Jose, the San Francisco Bay area, the outer coastal foothills area which extend from Monterey south to San Francisco, and also in the Sonoran desert (Grinnell and Miller 1944). The owl is also a resident in the open areas of the lowlands over much of the southern California region (Garrett and Dunn 1981).

Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrubland characterized by low-growing vegetation (Zarn 1974). Suitable habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface. Burrows are the essential component of burrowing owl habitat: both natural and artificial burrows provide protection, shelter, and nests for burrowing owls (Henny and Blus 1981). Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also may use man-made structures, such as cement culverts; debris piles of cement, asphalt, or wood; or openings beneath cement or asphalt pavement. Burrowing owls may also use a variety of developed areas including golf courses, cemeteries, airports, vacant lots, abandoned buildings, and irrigation ditches (Haug et al 1993). Occasionally owls may dig their own burrow in soft, friable soil (Robertson 1929). Owls will modify and enlarge the mammal burrows for their use. One burrow is typically selected for use as a nest, however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl. Burrowing owls exhibit high site fidelity, reusing burrows year after year (Rich 1984, Feeney 1992).

Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers. Occupancy of suitable burrowing owl habitat can be verified at a site by an observation of at least one burrowing owl, or alternatively, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement (whitewash) at or near a burrow entrance.

The burrowing owl is a crepuscular hunter (active during the dawn and dusk hours) with a prey base including invertebrates and small vertebrates (Thomsen 1971). They may hunt by using short flights, running along the ground, hovering or by using an elevated perch from where prey is spotted. Burrowing owls are relatively opportunistic foragers (Haug et al. 1993). Their diet is composed of a variety of foods, mainly including insects and small mammals, although they may also take reptiles, other birds, and carrion.

SITE LOCATION

As referenced above, the subject site is located immediately to the northwest of the intersection of corner Valley Boulevard and Cypress Avenue, within unincorporated San Bernardino County [Exhibits 1 and 2]. The surrounding area is a mix of residential and commercial development and the site is surrounded by existing, long-standing development on all sides. Specifically, the southern boundary is Valley Boulevard and Interstate 10, the eastern boundary is largely single-family residences as is the northern boundary with the western boundary comprised of a large storage facility. As such, the site is not contiguous with any areas of native habitat and there are no areas of native habitat in close proximity to the site [Exhibit 3].

METHODOLOGY

Burrowing Owl Habitat Assessment

GLA senior biologist Jeff Ahrens conducted the burrowing owl habitat assessment of the Project Site on January 31, 2013. As previously mentioned, the habitat assessment was conducted following the CDFW Staff Report on Burrowing Owl Mitigation (March 2012).

All areas of the project site were traversed and inspected for areas of suitable habitat. Linear transects were walked to allow for comprehensive coverage of the site. The pedestrian surveys followed adequately spaced transects to allow 100 percent visual coverage of the ground surface. In addition, areas within 150 meters (500 feet) of the Project Site were scanned with binoculars. The Project Site was searched for any evidence of burrowing owl occupation, including burrowing owls, cast pellets, whitewash, feathers, nesting material or prey remains at a burrow entrance. All burrows detected on site (if any) were mapped. All fauna and representative plant species were documented during the habitat assessment. Table 1 summarizes weather related data during the habitat assessment.

Table 1. Weather related data for the burrowing owl habitat assessment.

Survey Date	Survey Times	Temp (^{o}F)	Cloud Cover (%)	Wind (Mph)
January 31, 2013	0855 - 1115	56 - 67	Clear - Clear	1- 3

RESULTS

The Project Site does not currently support suitable habitat for the burrowing owl as no burrows or man-made structures capable of supporting burrowing owls were detected on site. The Project Site supports no native vegetation communities; rather is characterized by "ruderal" vegetation typical of disturbed ground such as vacant lots. It is evident that the site is disked to control weedy growth to protect against wild fire.

Vegetation is essentially entirely non-native dominated by a mosaic of non-native grasses and forbs including red-stem filaree (*Erodium cicutarium*), London rocket (*Sisymbrium irio*), ripgut (*Bromus diandrus*), Russian thistle (*Salsola tragus*), black mustard (*Brassica nigra*), cheese weed (*Malva parviflora*), wild oats (*Avena fatua*), and foxtail barley (*Hordeum murinum leporinum*). The site also supports one vacant house including numerous ornamental trees. Representative site photographs are included in Exhibit 4.

Therefore, because suitable habitat for the burrowing owl does not presently occur at the Project Site, focused surveys and pre-construction surveys for the burrowing owl are not required.

Birds detected on the Project site including include the house finch (*Carpodacus mexicanus*), lesser goldfinch (*Carduelis psaltria*) and house sparrow (*Passer domesticus*).

Mammal species detected by direct observation or sign include Botta's pocket gopher (*Thomomys bottae*).

No reptile or amphibian species were detected on site.

If you have any questions regarding this letter, please call me at (949) 837-0404, ext. 40.

Sincerely,

GLENN LUKOS ASSOCIATES, INC.

Jeff Ahrens

Jeff Ahrens
Biologist

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REFERENCES

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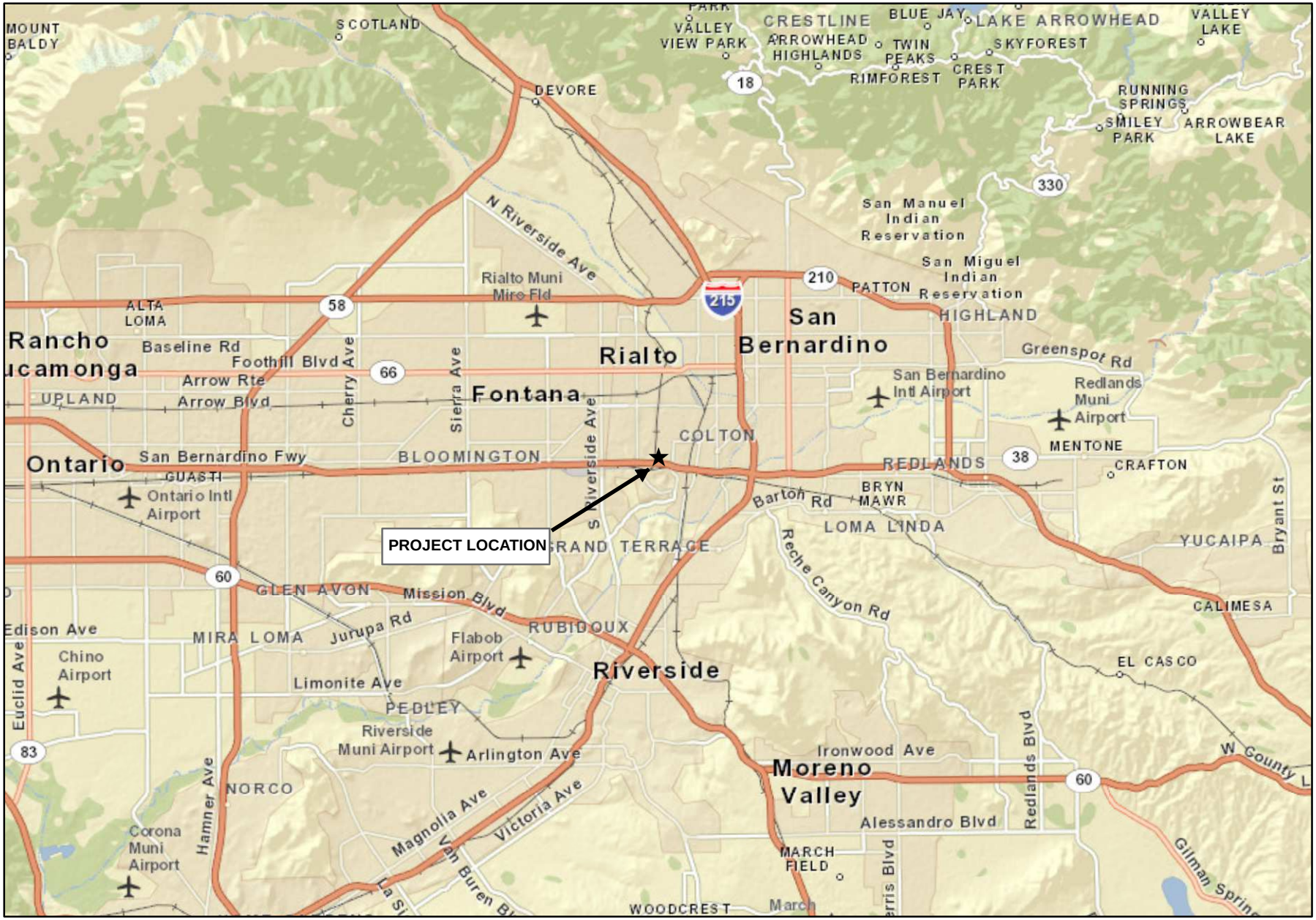
Source: ESRI World Street Map



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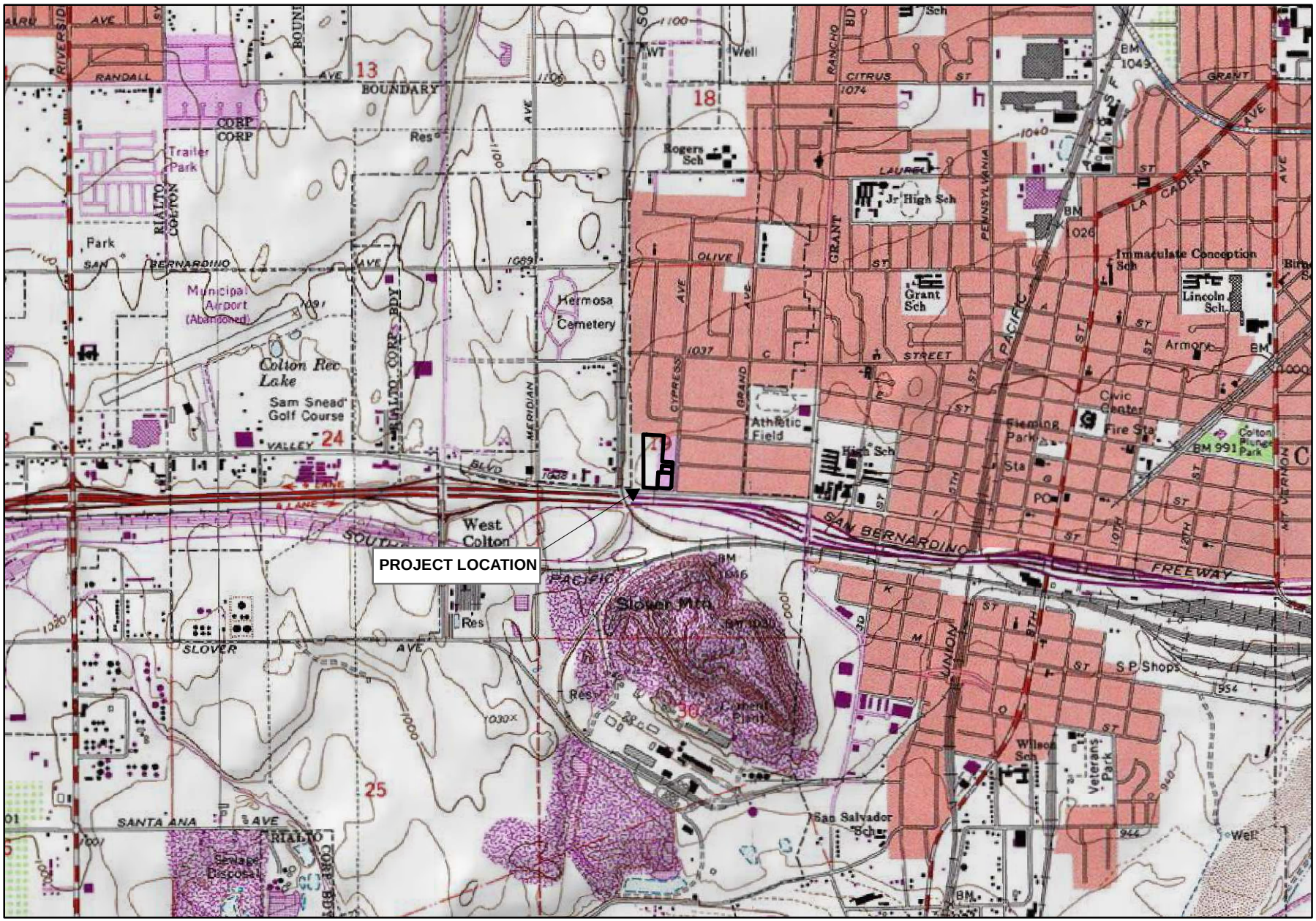
0 2 4 8 Miles

LAS TERRAZAS

Regional Map

GLENN LUKOS ASSOCIATES

Exhibit 1

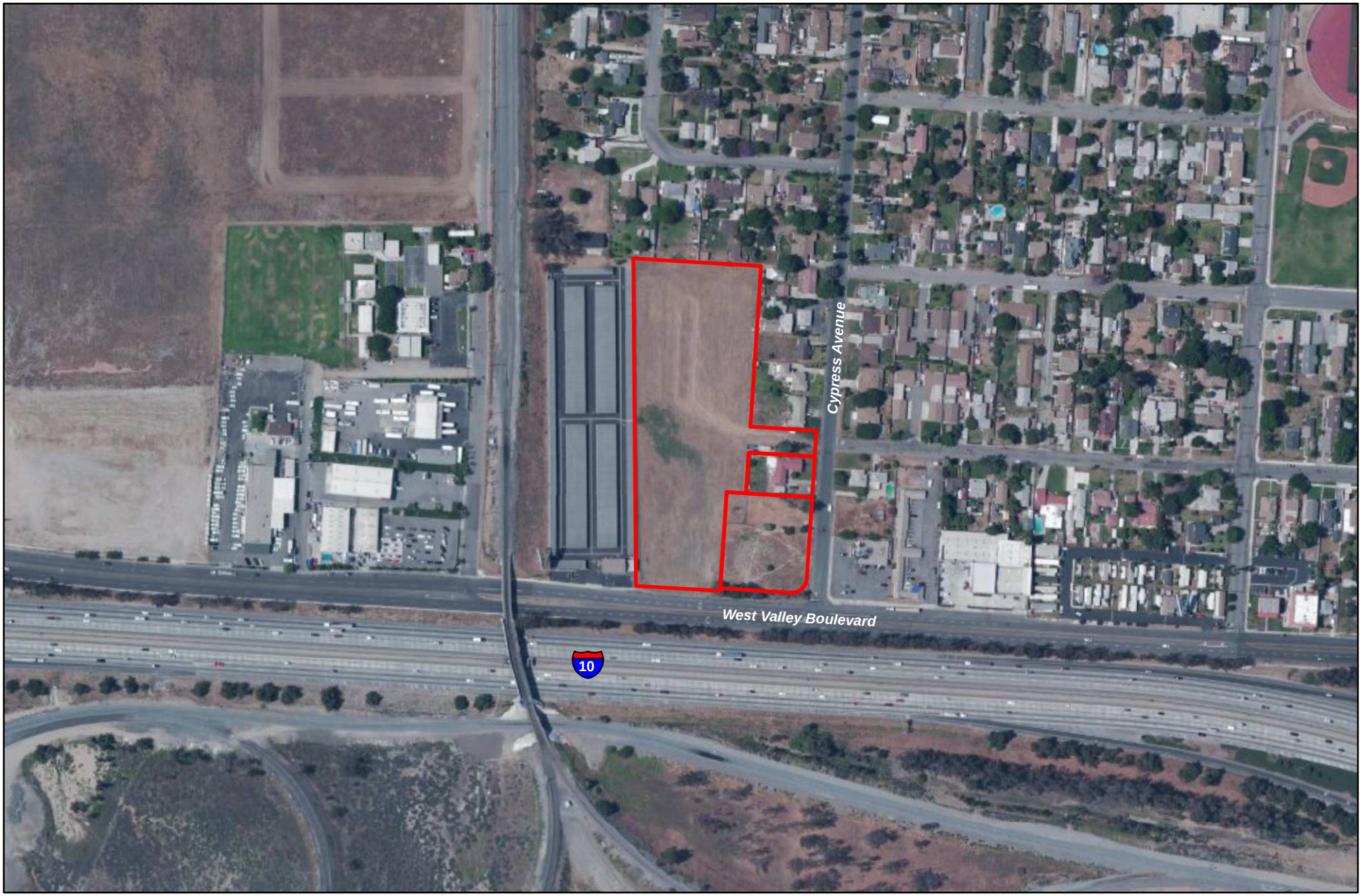


LAS TERRAZAS

Vicinity Map

GLENN LUKOS ASSOCIATES

Exhibit 2



LAS TERRAZAS

Aerial Photo

N

0 150 300

Feet

GLENN LUKOS ASSOCIATES

Exhibit 3

Photograph 1: View looking northwest from the southeastern corner of property.

Photograph 2: View looking northeast from the southwestern corner of property.

GLENN LUKOS ASSOCIATES

Exhibit 4

Photograph 3: View looking east from the western half of property.

Photograph 4: View looking east from the southwestern corner of property.

LAS TERRAZAS

Site Photographs