

July 29, 2019

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**Subject:** *Focused Survey Results Letter Report for the Desert Trails Preparatory Academy Project, City of Victorville, San Bernardino County, California*

Dear Mr. Estrada:

Dudek conducted focused surveys for special-status plants and Mojave desert tortoise (*Gopherus agassizii*), and a focused habitat assessment for Mohave ground squirrel (MGS) (*Spermophilus [Xerospermophilus] mohavensis*) for the proposed Desert Trails Preparatory Academy Project (project). The approximately 8.9-acre project site is located in the City of Victorville, San Bernardino County (Figure 1, Project Location; figures are provided in Attachment A). The survey area consisted of the project site plus a 100-foot buffer for the focused special-status plant survey, and 200-foot buffer for the Mojave desert tortoise survey. The MGS habitat assessment was conducted within the proposed project disturbance footprint, totaling approximately 4.31 acres.

Dudek prepared a Biological Resources Letter Report for the project in 2019, which included measures to avoid and minimize potential impacts to biological resources. The letter report concluded that focused surveys were required for non-listed rare plants Mojave milkweed (*Asclepias nyctaginifolia*), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), and sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*) regulated under the California Environmental Quality Act; a pre-project survey was required for Mojave desert tortoise, protected under the state and federal Endangered Species Acts; and a habitat assessment was required for MGS, a species protected under the state Endangered Species Act (Dudek 2019). This letter report provides the methods and results of the focused special-status surveys and MGS habitat assessment.

## 1 Introduction

The approximate 8.9-acre project site is composed of two parcels (Assessor's Parcel Numbers 309-613-6707 and 309-613-6706) located north of Forest Park Lane, east of Mesa View Drive, south of Olivera Road, and west of Bella Pine Street in the City of Victorville, San Bernardino County (Figure 1). The project site occurs within Township 5 North, Range 5 West, Section 28 of the U.S. Geological Survey 7.5-minute Baldy Mesa quadrangle map.

The proposed project would involve construction of a new campus for the Desert Trails Preparatory Academy charter school (Figure 2, Site Plan). It would involve relocation of the charter school's existing middle school, which currently operates from the combined elementary/middle school campus at 14350 Bellflower Street in the City of Adelanto. The campus would include a building for classrooms, a multipurpose room building, and a building for administration offices. The new campus would also include playfields, hard courts, landscaping, access and circulation improvements, infrastructure improvements, and a parking lot (see Figure 2). The City of Victorville's General Plan land use designation for the project site is Low Density Residential. The project site is zoned Single-Family Residential (R-1) (City of Victorville

2008). As proposed, the charter school is permitted under the City of Victorville's General Plan land use designation of the project site, and under the R-1 zoning district via City of Victorville approval of a Conditional Use Permit.

## 2 Site Description

The project site is characterized as a vacant lot bound by a dirt road to the north (i.e., Olivera Road), vacant lands to the east, residential development to the south, and Mesa View Drive and residential development to the west. Surrounding land uses include a mix of residential development and vacant lands to the north; a mix of vacant land, residential development, and State Route 395 to the east; vacant lands and residential development to the south; and vacant lands to the west. Elevations range from approximately 3,220 to 3,260 feet above mean sea level (amsl).

One soil type is mapped within the project site and within the associated focused survey area buffers: Cajon sand (0% to 2% slopes). The Cajon Series consists of somewhat excessively drained soils formed in allium derived from granite sources. These soils typically occur on alluvial fans and river terraces (USDA 2019a).

One vegetation community and one land cover type are classified for the project site: creosote bush scrub and disturbed habitat. One vegetation community and two land cover types are classified within the focused survey area buffers: creosote bush scrub, disturbed habitat, and urban/developed (Figure 3, Focused Survey Areas).

## 3 Special-Status Species

### 3.1 Special-Status Plants

Based on the initial review and results of the reconnaissance survey conducted on April 11, 2019, three non-listed special-status plant species with a potential to occur were identified: Mojave milkweed, white-bracted spineflower, and sagebrush loeflingia. These species are further discussed below.

#### **Mojave Milkweed**

Mojave milkweed is California Rare Plant Rank (CRPR) 2B.1 species, indicating that it is seriously endangered in California. This perennial herb's blooming period is May through June. The species is known to occur in Mojavean desert scrub and pinyon and juniper woodland at an elevation range of 2,870 to 5,575 feet amsl (CNPS 2019). The project site is located within this species' known elevation range and contains suitable desert scrub to support the species. The nearest known occurrence is approximately 10 miles south of the project site (CDFW 2019); therefore, this species has a moderate potential to occur.

#### **White-Bracted Spineflower**

White-bracted spineflower is a CRPR 1B.1 species, indicating that it is fairly endangered in California. This annual herb's blooming period is April through June. The species is known to occur within coastal scrub on alluvial fans, Mojavean desert scrub, and pinyon and juniper woodland on sandy or gravelly soils at an elevation range of 980 to 3,935 feet amsl (CNPS 2019). The project site is located within this species' known elevation range and contains suitable desert scrub and soils to support the species. The nearest known occurrence is approximately 10.4 miles south of the project site (CDFW 2019); therefore, this species has a moderate potential to occur.

## Sagebrush Loefflingia

Sagebrush loefflingia is a CRPR 2B.2 species, indicating that it is fairly endangered in California. This annual herb's blooming period is April through May. The species is known to occur on sandy soils within desert dunes, Great Basin scrub, and Sonoran desert scrub at an elevation range of 2,295 to 5,300 feet amsl (CNPS 2019). The project site is located within this species' known elevation range and contains suitable desert scrub and soils to support the species. The nearest known occurrence is less than 1 mile south of the project site (CDFW 2019); therefore, this species has a moderate potential to occur.

## 3.2 Desert Tortoise

Mojave desert tortoise is a federally threatened and state endangered species. Desert tortoise inhabit the Mojave, Colorado, Sonoran, and Sinaloan Deserts in the southwestern United States and adjacent Mexico. The desert tortoise has two distinct populations that have been separated for millions of years, with the Sonoran population east and south of the Colorado River, and the Mojave population west and north of the Colorado River. The range of the Mojave population of the desert tortoise includes portions of the Mojave Desert and the Colorado Desert in Southern California (parts of Inyo, Kern, Los Angeles, San Bernardino, and Riverside Counties), southern Nevada (Clark, Esmeralda, Nye, and Lincoln Counties), northwestern Arizona (Mohave County), and southwestern Utah (Washington County). DNA analysis of the Mojave population shows a gradation in traits from east to west, and the Mojave population may be further divided into western and eastern subpopulations. The eastern Mojave subpopulation includes tortoises in eastern California, southern Nevada, northwestern Arizona, and Utah, and the western Mojave subpopulation extends west of the low sink that runs southward from Death Valley (USFWS 1990).

Typical habitat for this species within the Mojave Desert is creosote bush scrub with a relatively high diversity of perennial plants. This species typically occurs on gently sloping terrain with sandy gravel soils in locations with sparse cover of low-growing shrubs. Soils must be friable enough for digging burrows, but firm enough to prevent burrow collapse (USFWS 2011).

The project site contains suitable desert scrub habitat dominated by creosote bush scrub. Suitable sandy gravel soils are present, and numerous ground squirrel and rodent burrows were observed during the initial biological survey (Dudek 2019). There are three documented occurrences approximately 3 miles northeast of the survey area from 1990. The next closest occurrence is from 2000 and located approximately 6.2 miles south of the project site (CDFW 2019). The project site is within the U.S. Fish and Wildlife Service's designated Western Mojave Recovery Unit (USFWS 2011) for desert tortoise. Due to the project being located within the range of desert tortoise and the presence of suitable habitat, soils, and potential burrows, there is moderate potential for Mojave desert tortoise to occur within the project site. Mojave desert tortoise critical habitat is approximately 13.5 miles north of the project site.

## 3.3 Mohave Ground Squirrel

MGS is a California threatened species in the western Mojave Desert, where it occurs in open habitats, including Mojave creosote scrub, Joshua tree woodland, desert saltbush scrub, and others. MGS forage on leaves and forbs, including creosote bush (*Larrea tridentata*), winterfat (*Krascheninnikovia lanata*), spiny hop sage (*Grayia spinosa*), saltbush (*Atriplex* spp.), golden linanthus (*Leptosiphon aureus*), Anderson's boxthorn (*Lycium andersonii*), and several other plant species and various grasses (Best 1995).

MGS digs burrows in sandy and gravelly soils on flat to moderately sloping terrain. The burrows are used to avoid predators and high temperatures, and for aestivating during winter months. MGS is active only during the spring and summer months, and spends most of the year (approximately 7 months) below ground (Best 1995).

The project site is located in the southern part of the species' historical range. Numerous protocol surveys for MGS have been carried out in the Victorville area from 1998 through 2007, and from 2008 through 2012, with all but one yielding no MGS (Leitner 2008, 2015), which indicates that MGS is rare in the project area. The California Natural Diversity Database (CNDDDB) (CDFW 2019) contains one recent MGS record in the project vicinity: in 2005, a juvenile MGS was captured "WNW of Mesa St at Caliente Rd, 1.5 mi. SSW Duncan Corners." This MGS capture site is approximately 2.75 miles south of the project site.<sup>1</sup>

## 4 Methods

### 4.1 Focused Special-Status Plant Survey

Dudek biologist Britney Strittmater conducted a focused special-status plant survey for the target species within the project site and a 100-foot buffer where suitable habitat is present on June 28, 2019. Ms. Strittmater was on site from 9:30 a.m. to 2:30 p.m. under suitable weather conditions (77°F–84°F, 3- to 10-mile-per-hour winds, and clear skies). Ten-meter (approximately 30-foot)-wide transects were conducted on foot throughout the survey area providing 100% coverage (Figure 3). Focused special-status plant surveys conformed to California Native Plant Society's Botanical Survey Guidelines (CNPS 2001), Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFG 2009), and U.S. Fish and Wildlife Service's General Rare Plant Survey Guidelines (Cypher 2002).

All plant species encountered during the field surveys were identified to subspecies or variety, if applicable, to determine sensitivity status. Moreover, all plant species encountered in the field were recorded. Latin and common names for plant species with a CRPR follow the California Native Plant Society's Online Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2019). For plant species without a CRPR, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2019), and common names follow the California Natural Community List (CDFW 2018) or the U.S. Department of Agriculture Natural Resources Conservation Service Plants Database (USDA 2019b).

### 4.2 Focused Desert Tortoise Survey

Ms. Strittmater conducted a pre-project presence/absence survey for Mojave Desert tortoise within the project site and a 200-foot buffer (action area) on June 28, 2019 (Figure 3). Ms. Strittmater conducted the survey concurrently with the focused special-status plant survey; survey times and conditions are listed in Section 4.1 of this report. The survey was conducted in accordance with the latest U.S. Fish and Wildlife Service protocol (USFWS 2018) and followed the methods for small project survey for presence (USFWS 2018). Ten-meter (approximately 30-foot)-wide transects were conducted on foot throughout the action area providing 100% coverage, and live tortoise or potential

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<sup>1</sup> CNDDDB occurrences: Occurrence #11 (1977) at UTM 11 3815595 466100 and Occurrence 318 (2005) at UTM 11 3812082 462666.

tortoise sign (e.g., burrows, scat, carcasses, courtship rings, drinking depressions) were recorded using the U.S. Fish and Wildlife Service's 2010 Desert Tortoise Pre-Project Survey Data Sheet, if detected (USFWS 2010).

### 4.3 Mohave Ground Squirrel Habitat Assessment

A field-based habitat assessment that examined soil, vegetation, and topographic and disturbance features was conducted to assess the suitability of habitat for MGS on the project site. The survey was conducted on foot within the approximately 4.31-acre proposed project disturbance footprint (Figure 4, MGS Habitat Assessment Survey Area). Phil Brylski, PhD, who holds a California Department of Fish Wildlife Memorandum of Understanding to trap and handle MGS, carried out the habitat assessment on July 5, 2019, from 12 noon to 2 p.m. under suitable weather conditions (94°F–99°F, 2- to 5-mile-per-hour winds, and clear skies).

### 4.4 Survey Limitations

The focused special-status plant survey was conducted during the summer season, which resulted in detection and identification of most annual and perennial plant species that occur in the area; however, earlier-blooming spring annuals may not have been identifiable, which contributed to the low diversity of plant species observed. The survey was conducted during daylight hours under weather conditions that did not preclude observation of special-status plant species (e.g., surveys were not conducted during heavy fog or rain).

The focused special-status plant survey was conducted on June 28, 2019, near the end of the known blooming period for Mojave milkweed and white-bracted spineflower. Within San Bernardino County, CNDDDB occurrences for Mojave milkweed have been documented in late June, and the species has been documented outside of its known blooming period in September, November, and October (CDFW 2019), suggesting that this species would have been identified even at the end of its known blooming period. A reference population check for white-bracted spineflower was conducted in San Bernardino off Keenbrook Road on May 10, 2019, confirming that this species was in bloom. Furthermore, within San Bernardino County, there have been documented CNDDDB occurrences for white-bracted spineflower in late June and into July (CDFW 2019), suggesting that this species would have been observed if present, even at the end of its known blooming period.

The focused special-status survey was conducted outside of the known blooming period (April through May) for sagebrush loeflingia.

There were no survey limitations that would preclude the results of the focused desert tortoise presence/absence survey or the MGS habitat assessment.

## 5 Results of Survey

### 5.1 Special-Status Plants

#### 5.1.1 Floral Diversity

A total of 13 species of native or naturalized plants—six native (46%) and seven non-native (54%)—were recorded within the focused special-status plant survey area (Attachment B, Plant Compendium). This low plant diversity reflects the study area's small size and the timing of the survey (i.e., earlier-blooming spring annuals would not have been identifiable).

### 5.1.2 Special-Status Plant Species

The focused special-status survey for Mojave milkweed, white-bracted spineflower, and sagebrush loeflingia was negative. However, sagebrush loeglingia would not have been identifiable, since the focused survey was conducted outside of the species' known blooming period. Additionally, no federally or state listed or non-listed CRPR 1-4s were incidentally observed during the focused survey on June 28, 2019.

## 5.2 Desert Tortoise

The creosote bush scrub community within the survey area provides suitable cover and sandy gravel soils for Mojave desert tortoise. Numerous California ground squirrel (*Spermophilus [Otospermophilus] beecheyi*) complexes and rodent burrows, such as for kangaroo rat (*Dipodomys* ssp.), are present within the survey area. No live desert tortoises or desert tortoise sign (e.g., suitable burrows, scat, carcasses, courtship rings, drinking depressions) were observed within the survey area during the focused survey conducted on June 28, 2019. Additionally, no burrows suitable for Mojave desert tortoise were observed within the survey area.

## 5.3 Mohave Ground Squirrel

The project site is flat with Cajon sandy soils. The plant community on site is creosote bush scrub; creosote bush is the dominant overstory plant with a few scattered Joshua trees (*Yucca brevifolia*). Other shrubs include Nevada joint fir (*Ephedra nevadensis*) and white bursage (*Ambrosia dumosa*), with rubber rabbitbrush (*Ericameria nauseosa*) in disturbed parts of the site. Common understory plants include bristly fiddleneck (*Amsinckia tessellata*), redstem stork's bill (*Erodium cicutarium*), and tall tumble mustard (*Sisymbrium altissimum*). Grasses recorded on site include ripgut brome (*Bromus diandrus*), compact brome (*Bromus madritensis*), cheatgrass (*Bromus tectorum*), mouse barley (*Hordeum murinum*), and common Mediterranean grass (*Schismus barbatus*). The project site is located in a suburban area of Victorville, bordered by high-density residential land uses on three sides, and therefore is a fragmented habitat patch.

The creosote bush scrub community on the project site provides suitable habitat for MGS. However, the confirmed presence of MGS by only a single survey (in 2005) as compared to numerous surveys with no MGS records from 1998 through 2012, and the fragmented condition of the habitat, support the conclusion that there is low potential for MGS to occur on the project site.

# 6 Discussion and Recommendations

## 6.1 Special-Status Plants

The focused special-status plant survey for Mojave milkweed and white-bracted spineflower was negative; therefore, no further action or mitigation is required for these species.

The June 28, 2019, focused survey was conducted outside of the known blooming period for sagebrush loeflingia. Therefore, it is recommended to conduct a focused special-status plant survey during the species' known blooming period (April through May) the year prior to construction to confirm species presence or absence. If surveys for sagebrush loeflingia are positive, further action or mitigation may be required.



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## 6.2 Desert Tortoise

No live desert tortoises or desert tortoise sign (e.g., suitable burrows, scat, carcasses, courtship rings, drinking depressions) were observed within the survey area. Therefore, no further action is recommended; however, a worker environmental awareness training should be conducted with construction personnel to educate them on desert tortoise, protective status, and avoidance measures to be implemented by all personnel, including looking under vehicles and equipment prior to moving. The training should include steps to be taken if Mojave desert tortoise is observed on the construction site, including ceasing construction activities and coordination with the City of Victorville and the resource agencies.


## 6.3 Mohave Ground Squirrel

To mitigate impacts to MGS, the applicant can choose one of two options:

1. **Protocol survey.** The protocol survey would consist of three separate 5-day live trapping surveys (15 days total). If the survey demonstrates the absence of MGS, no further action or mitigation would be required.
2. **Assume presence.** Assume the presence of MGS on the project site and obtain an Incidental Take Permit from the California Department of Fish Wildlife. The Incidental Take Permit would require mitigation through purchase of credits at an off-site mitigation bank, or purchase of lands to replace potential MGS habitat on site. Based on the low habitat quality for MGS on the project site, Dudek anticipates that the replacement ratio would be 1:1, and 4.31 acres of off-site MGS habitat would need to be purchased. However, the California Department of Fish Wildlife would need to be consulted to determine if the assumption of presence would be an accepted approach and to determine the final off-site replacement ratio.

If you have any questions regarding this report, please contact me at bstrittmater@dudek.com or 760.601.3416.

Sincerely,



Britney Strittmater  
Biologist

Att.: Attachment A: Figures 1–4  
Attachment B: Plant Compendium  
cc: Veronika Archer, Dudek

## References

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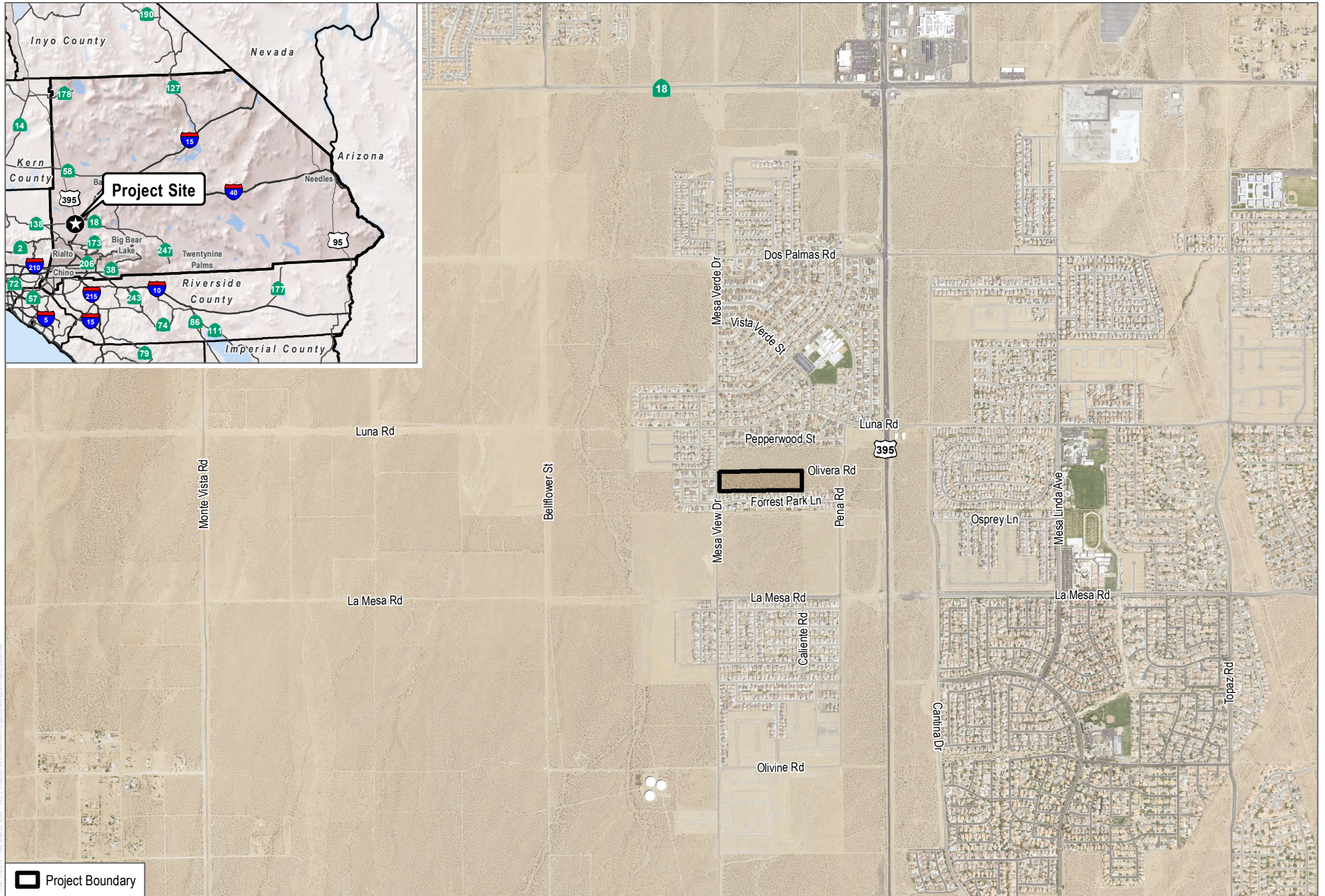
# Attachment A

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Figures

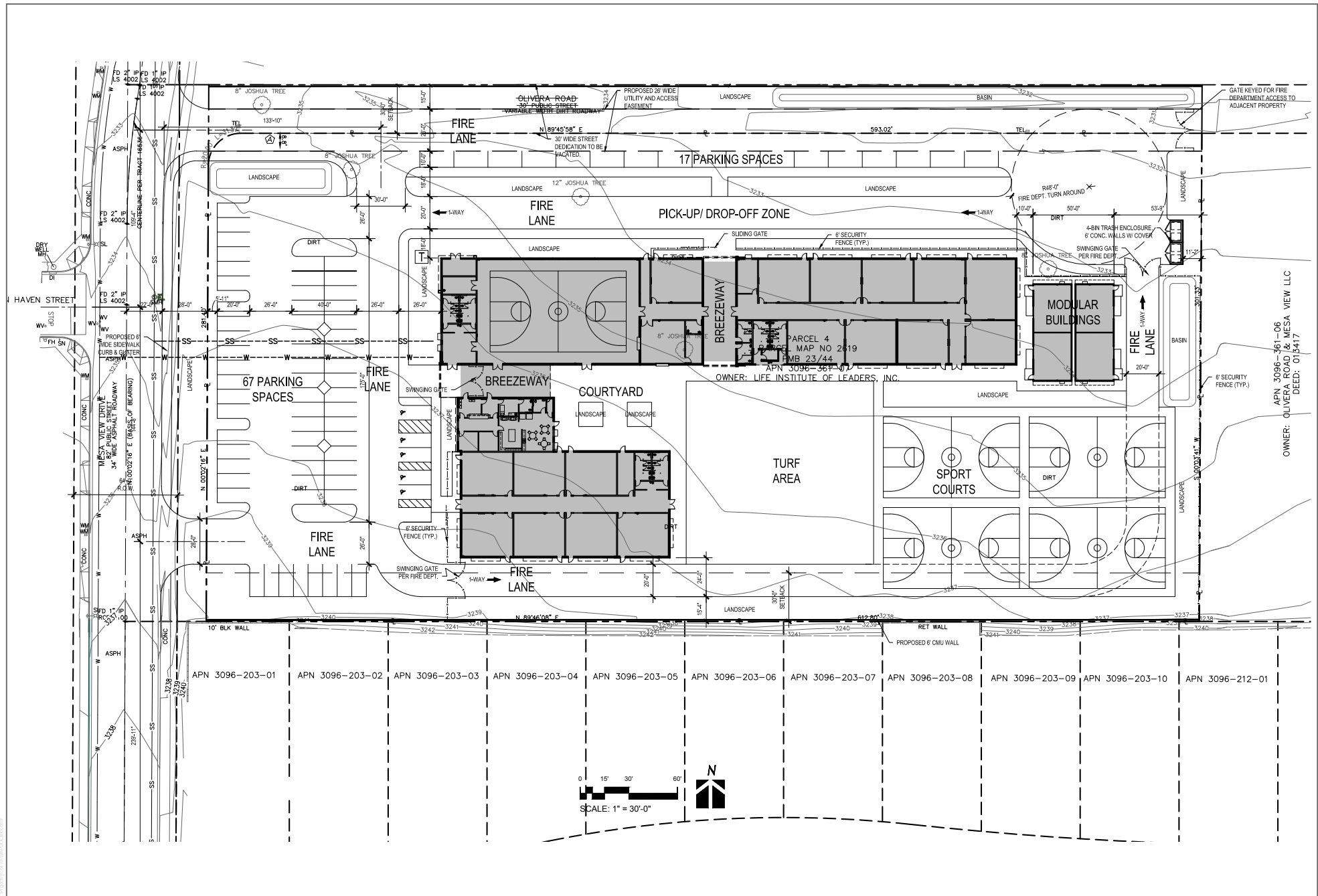






SOURCE: Riverside County 2019; USDA 2016



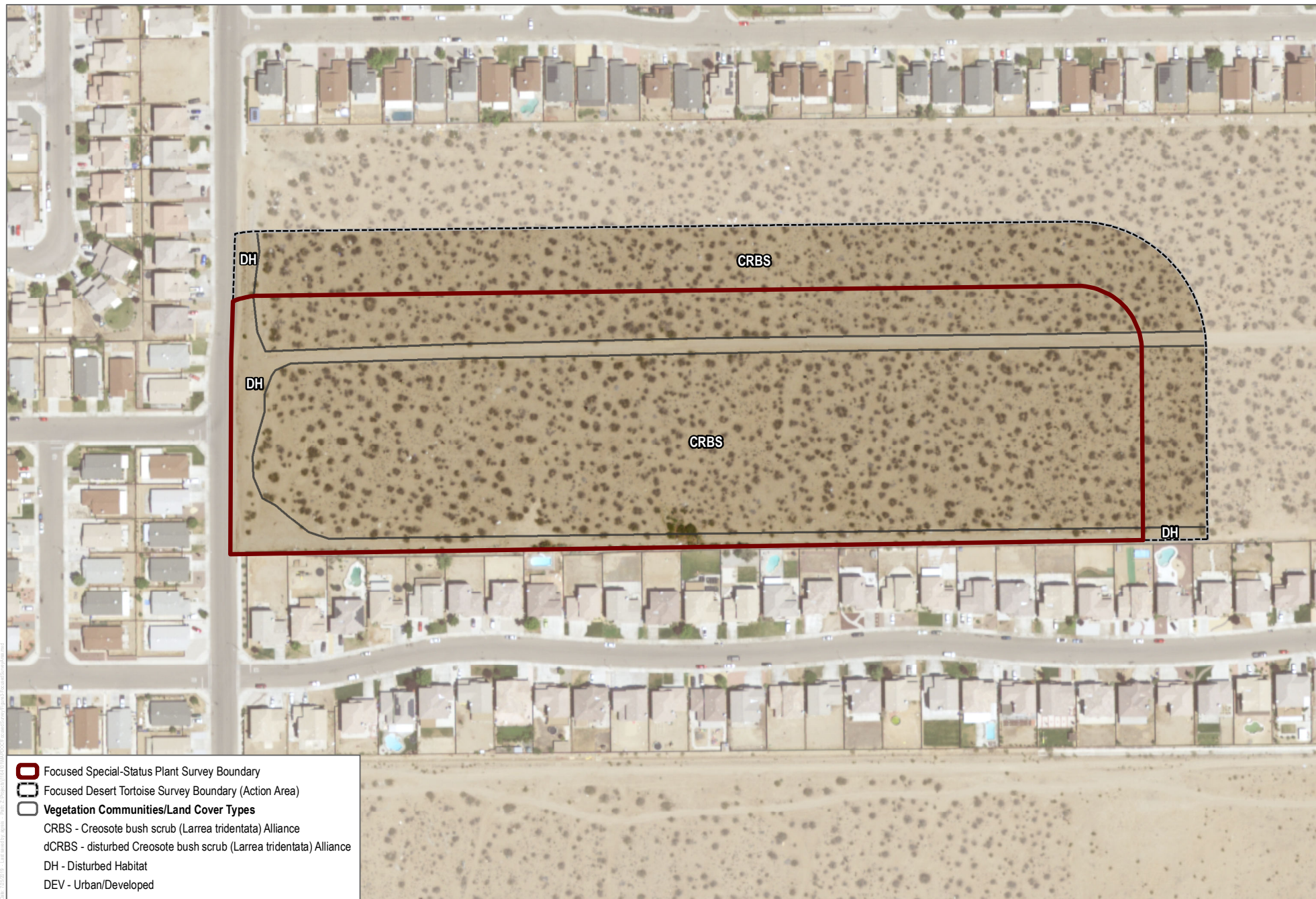


SOURCE: MMA Architects, 2019

**DUDEK**

**FIGURE 2**  
**Site Plan**

Focused Survey Results Letter Report for the Desert Trails Preparatory Academy Project



SOURCE: Riverside County 2019; USDA 2016

**FIGURE 3**

## Focused Survey Areas





**FIGURE 4**

## MGS Habitat Assessment Survey Area

Focused Survey Results Letter Report for the Desert Trails Preparatory Academy Project



# Attachment B

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Plant Compendium



## EUDICOTS

### VASCULAR SPECIES

#### ASTERACEAE—SUNFLOWER FAMILY

*Ambrosia acanthicarpa*—flatspine bur ragweed

*Ambrosia dumosa*—white bursage

*Ericameria nauseosa*—rubber rabbitbrush

#### BRASSICACEAE—MUSTARD FAMILY

*Sisymbrium altissimum*—tall tumbled mustard\*

#### GERANIACEAE—GERANIUM FAMILY

*Erodium cicutarium*—redstem stork's bill\*

#### ZYGOPHYLLACEAE—CALTROP FAMILY

*Larrea tridentata*—creosote bush

## GYMNOSPERMS AND GNETOPHYTES

### VASCULAR SPECIES

#### EPHEDRACEAE—EPHEDRA FAMILY

*Ephedra nevadensis*—Nevada joint fir

## MONOCOTS

### VASCULAR SPECIES

#### AGAVACEAE—AGAVE FAMILY

*Yucca brevifolia*—Joshua tree

#### POACEAE—GRASS FAMILY

*Bromus diandrus*—ripgut brome\*

*Bromus madritensis*—compact brome\*

*Bromus tectorum*—cheatgrass\*

*Hordeum murinum*—mouse barley\*

*Schismus barbatus*—common Mediterranean grass\*

\* signifies introduced (non-native) species

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