

Appendix D

Biological Resources

D-1 Biological Assessment Report

VETERANS INDUSTRIAL PARK 215

RIVERSIDE COUNTY, CALIFORNIA

Biological Assessment Report

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VETERANS INDUSTRIAL PARK 215

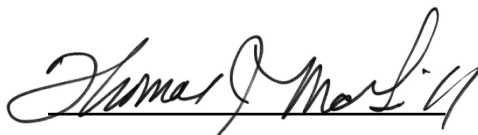
RIVERSIDE COUNTY, CALIFORNIA

Biological Assessment Report

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.



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Director



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April 2016
Revised July 2018
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Executive Summary

This report contains the findings of ELMT Consulting's (ELMT) Biological Assessment for the Veterans Industrial Park 215 (project site or site) located on the March Air Reserve Base (MARB) adjacent to the Cities of Riverside, Perris, and Moreno Valley, Riverside County, California. In addition, this report also summarizes the findings of a habitat assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis for offsite street improvements for the Veterans Industrial Park 215 Project prepared under separate cover and appended to this report. Offsite street improvements include the extension of Van Buren Boulevard north of the project site, and the extension of Western Way south of the project site to Nandina Avenue, and the installation of a new 18-inch water line along the existing right-of-way of Western Way between Nandina Avenue and Harley Knox Boulevard.

The majority of the project site consists of a heavily disturbed undeveloped field west of the MARB's runway. Historic aerial imagery shows evidences of site-wide vegetation mowing, as well as the construction and maintenance of an underground pipeline between 2009 and 2011. The project site and two offsite street improvement areas are either develop or heavily disturbed and no longer consists of undeveloped, native plant communities. One (1) plant community was observed on the project site and continued off the site into the southern offsite street improvement area and western portion of the interim channel, a dense, non-native grassland. In addition, there are two (2) on-site land cover types that would be classified as disturbed and developed.

Based on the lack of availability of native habitats quality of the on-site habitats, it was determined that only two special-status¹ plant species have the potential to occur within the onsite project area or the offsite road improvement areas: smooth tarplant (*Centromadia pungens* ssp. *laevis*); and paniculate tarplant (*Deinandra paniculata*). These special-status plant species are adapted to disturbed habitats. Smooth tarplant was determined to have a moderate potential to occur while paniculate tarplant was determined to have a low potential to occur within the project site and offsite road improvement areas. All other special-status plant species or are presumed absent.

Four (4) special-status wildlife species were observed on the project site during the field investigations: burrowing owl (*Athene cunicularia*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and Oregon vesper sparrow (*Pooecetes gramineus affinis*), all of which

¹ As used in this report, "special-status" refers to plant and wildlife species that are listed within the California Department of Fish and Wildlife's California Natural Diversity Database or within the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California.

are California species of special concern, as well as prairie falcon (*Falco mexicanus*), a California watch list species. No special-status wildlife species were observed within the two offsite road improvements areas. Based on habitat requirements for specific species along with the availability and quality of habitats needed by each special-status wildlife species, it was determined that the project site also has a moderate potential to support four (4) additional special-status wildlife species: Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), coast horned lizard (*Phrynosoma blainvillii*), and Lawrence's goldfinch (*Spinus lawrencei*). All other special-status wildlife species are presumed absent.

It should be noted that a burrowing owl flushed from the southeast corner of the project site onto the adjacent airfield during the initial field investigation. Another owl was seen during the last of the four subsequent focused surveys foraging over the southeast corner of the project site that also flushed onto the adjacent airfield property. Burrowing owls were also occasionally observed perched on the chain link fence along the site's eastern boundary. These owls flushed back onto the airfield when approached. It is presumed that the burrowing owl observed within the project site, as well as perched on the boundary fence, are nesting on the airfield property but occasionally forage on the project site.

Five drainage features were observed on the project site that will fall under the jurisdiction of the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), and California Department of Fish and Wildlife (CDFW). No drainage features were observed within the two offsite road improvement areas. Activities impacting these drainage features will require a Clean Water Act (CWA) Section 404 permit from the Corps, CWA Section 401 Water Quality Certification from the Regional Board, and a Section 1602 Streambed Alteration Agreement from CDFW.

Pursuant to the Migratory Bird Treaty Act and California Fish and Game Code, future construction activities and/or the removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season. The nesting season generally extends from February 1 through August 31, but can vary slightly from year to year based upon seasonal weather conditions. If construction or vegetation clearing activities occur during the avian nesting season a pre-construction nesting bird clearance survey will be required and should specifically focus on the presence/absence of burrowing owl, if determined to no longer occupy the project site or offsite street improvement areas.

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LIST OF ACRONYMS

CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	United States Army Corp of Engineers
CWA	Clean Water Act
°F	Degrees Fahrenheit
GIS	Geographic Information System
Hillwood	Hillwood Investment Properties
I	Interstate
MARB	March Air Reserve Base
MBTA	Migratory Bird Treaty Act
MJPA	March Joint Powers Authority
NRCS	Natural Resources Conservation Service
Regional Board	Regional Water Quality Control Board
SKR	Stephens' Kangaroo Rat
SKR HCP	Stephens' Kangaroo Rat Habitat Conservation Plan
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

Section 1 Introduction

This report contains the findings of ELMT Consulting's (ELMT) Biological Assessment for the Veterans Industrial Park 215 (project site or site) located on the March Air Reserve Base (MARB) adjacent to the Cities of Riverside, Perris, and Moreno Valley, Riverside County, California. In addition, this report also summarizes the findings of the habitat assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis for offsite street improvements for the Veterans Industrial Park 215 Project prepared under separate cover (Appendix D).

A field investigation was originally conducted by Michael Baker International biologists on October 21, 2015 to characterize existing site conditions and assess the probability of occurrence for special-status plant and wildlife species that could pose a constraint to development of the proposed project. Subsequent surveys were conducted by ELMT biologists Thomas J. McGill, Ph.D. and Travis J. McGill on June 19, 2018 and September 11, 2019 to update the survey of the project site as well as to conduct a survey of offsite street improvement areas along Western Way and Van Buren Boulevard and the interim channel, respectively. Special attention was given to the suitability of the on-site habitat to support burrowing owl (*Athene cunicularia*) and several other special-status species identified by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) and other electronic databases as potentially occurring on or within the general vicinity of the project site. It should be noted that a formal delineation of State and federal jurisdictional waters was prepared under separate cover for the proposed project.

1.1 PROJECT LOCATION AND EXISTING CONDITIONS

The Veterans Industrial Park 215 project site encompasses 142.5 acres located within the boundaries of the March Inland Port Airport in unincorporated Riverside County, and an approximately 3-acre extension of Western Way south of the property. The project site is presently owned by the March Joint Powers Authority (MJPA) and would be developed under a ground lease. The project site is located on the MARB along Interstate 215, adjacent to the Cities of Riverside, Perris, and Moreno Valley, Riverside County, California (Exhibit 1, *Regional Vicinity*). In addition, offsite street improvements will be needed within 0.5 acres north of the project site along Van Buren Boulevard and 1.9 acres south of the site along Western Way. The project site and offsite street improvements are depicted on the Riverside East and Steele Peak quadrangles of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Sections 25, 26, 35, and 36 of Township 3 south, Range 4 west (Exhibit 2, *Site Vicinity*). The project site is located directly east of the Interstate 215 freeway off-ramp at Van Buren Boulevard, south of the existing March Field Air Museum, and southwest of the existing MARB runways (Exhibit 3, *Project Site*). The Interstate 215 Freeway

off-ramp provides no access to the runway, any taxiways or other airport flying facilities. The Assessor Parcel Numbers (APNs) for the property are: 294-150-009, 294-170-005, 295-300-008, and 294-180-038. The project site is presently vacant and surrounded by the following uses:

- North:** Immediately to the north of the project site is the existing March Field Air Museum.
- East:** The area east of the project site consists of the existing runways, a mowed buffer area and airport facilities associated with the MARB.
- South:** Immediately south of the project site is the corporate boundary of the City of Perris, and business and industrial uses that are part of the Perris Valley Commerce Center Specific Plan.
- West:** West of the project site is the Interstate 215, with the Riverside National Cemetery and the Meridian Business Park beyond.

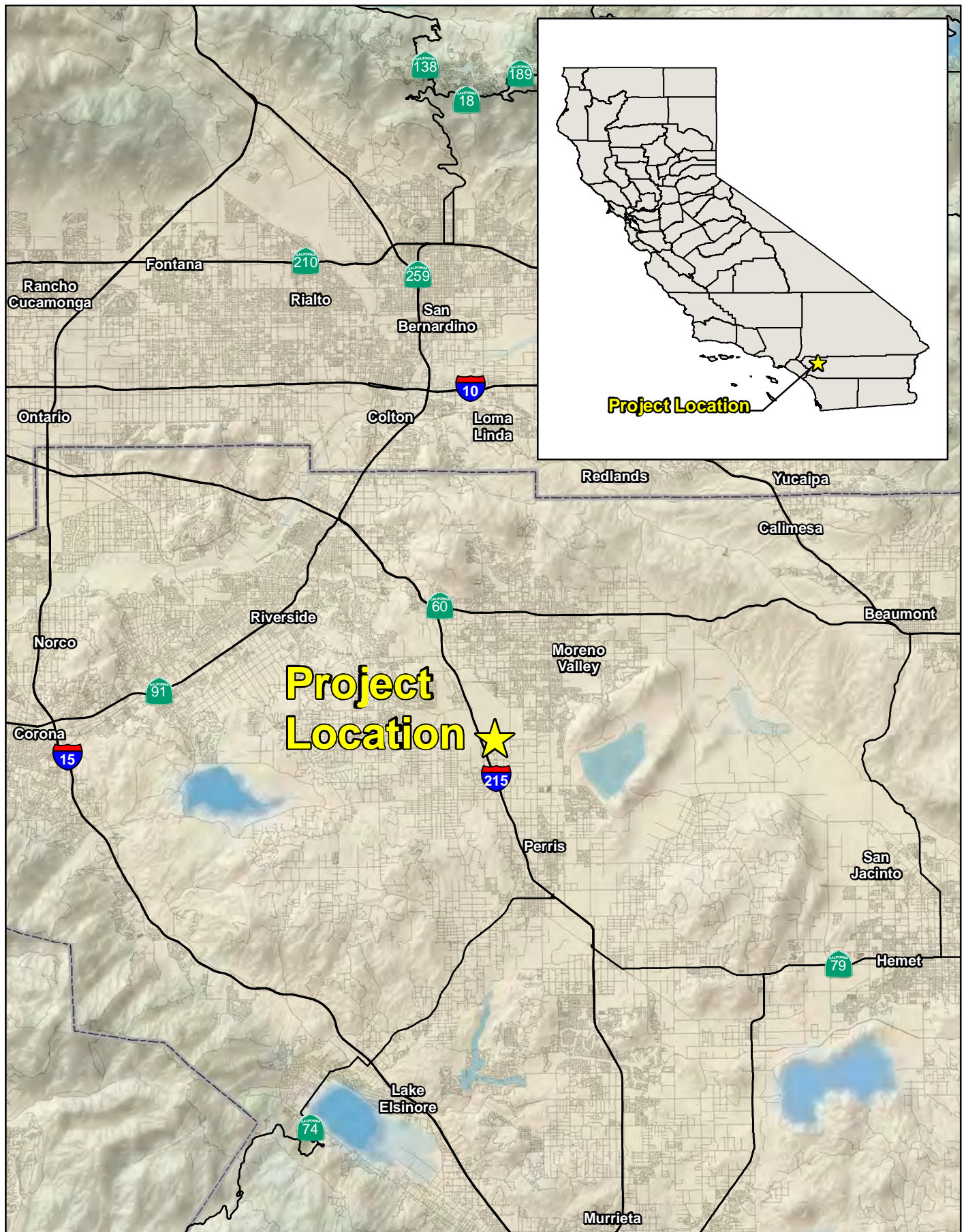
The project site, as well as area required for construction of new roadways and utilities, is currently vacant, unimproved land.

1.2 PROJECT DESCRIPTION

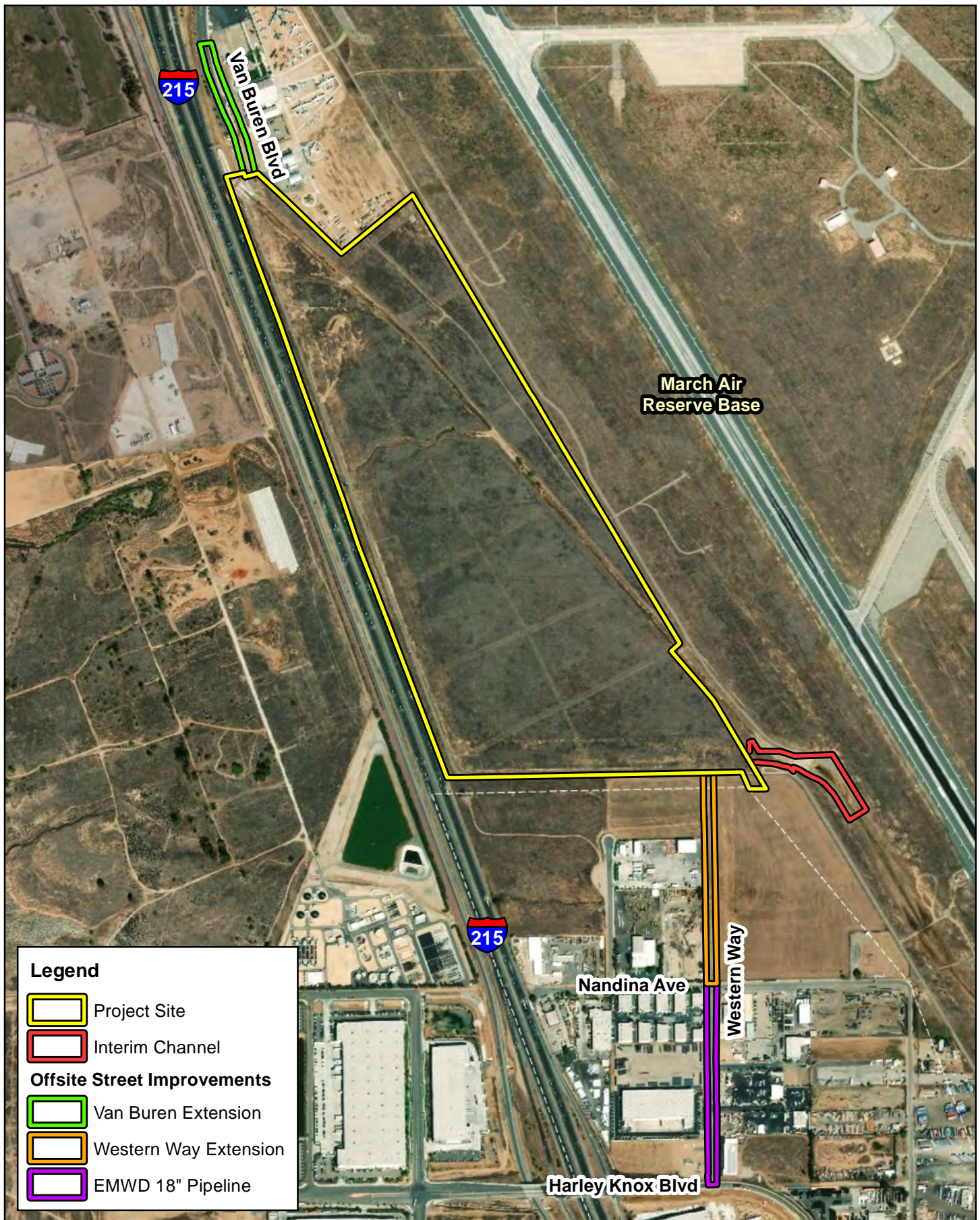
The proposed project includes two land use components: 1) a Specific Plan allowing for construction of up to 2,219,852 square feet of industrial/logistics uses, and 2) the construction of two industrial buildings for high-cube warehouse uses. Both buildings will primarily be used for the storage and/or consolidation of manufactured goods prior to their distribution to retail locations or other warehouses. The project site also includes an extension of Van Buren Boulevard, west and south of the project site. The conceptual site plan is provided in Appendix E.

Specific offsite improvements associated with the project include the following:

- Approximately 3 acres of new roadway improvements for the extension of Western Way between the project site and Nandina Avenue;
- Expansion of an approximately 720-foot-long section of Van Buren Boulevard from an existing two-lane to four-lane roadway immediately north of the project site;
- Installation of a new 18-inch water line within the existing right-of-way of Western Way between Nandina Avenue and Harley Knox Boulevard; and
- An interim channel structure and associated access road encompassing approximately 1.7 acres will also be constructed onto MARB property.







VETERANS INDUSTRIAL PARK 215
BIOLOGICAL ASSESSMENT

Project Site

Exhibit 3

Section 2 Methodology

A thorough literature review and records search was conducted to determine which special-status biological resources have the potential to occur on or within the general vicinity of the project site. In addition, a general biological assessment and field investigation of the project site was conducted and provided information about the existing conditions on the project site and the potential for special-status biological resources to occur.

2.1 LITERATURE REVIEW

Prior to conducting the field visit, a literature review and records search was conducted for special-status biological resources potentially occurring on or within the vicinity of the project site. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the project site were determined through a query of the CDFW's CNDDDB Rarefind 5, the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, and the United States Fish and Wildlife Service (USFWS) species listings.

Literature detailing biological resources previously observed in the vicinity of the project site and historical land uses were reviewed to understand the extent of disturbances to the habitats on-site. Standard field guides and texts on special-status and non-special-status biological resources were reviewed for habitat requirements, as well as the following resources:

- Google Earth Pro historic aerial imagery;
- CDFW 2012 Staff Report on Burrowing Owl Mitigation;
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey; and
- USFWS Critical Habitat designations for Threatened and Endangered Species.

The literature review provided a baseline to guide the inventory the biological resources potentially occurring on the project site. Additional recorded occurrences of these species found on or near the project site were derived from database queries. The CNDDDB ArcGIS database was used, in conjunction with ArcGIS software, to locate the nearest occurrence and determine the distance from the project site.

2.2 BIOLOGICAL ASSESSMENT AND FIELD INVESTIGATION

Michael Baker biologists Ashley M. Barton, Ryan S. Winkleman, Thomas C. Millington, and Travis J. McGill initially inventoried and evaluated the extent and conditions of the plant

communities found within the boundaries of the project site on October 21, 2015. A subsequent survey was conducted to update the onsite biological assessment and to include a new assessment of offsite road improvement areas along Western Way and Van Buren Boulevard by ELMT biologists Thomas J. McGill, Ph.D. and Travis J. McGill on June 19, 2018, and the interim channel on September 11, 2019.

Plant communities identified on aerial photographs during the literature review were verified by walking meandering transects through the plant communities and along boundaries between plant communities. The plant communities were evaluated for their potential to support special-status plant and wildlife species. In addition, field staff identified any jurisdictional features, riparian/riverine habitat, and any natural corridors and linkages that may support the movement of wildlife through the area.

Special attention was given to special-status habitats and/or undeveloped areas, which have higher potentials to support special-status plant and wildlife species. Areas providing suitable habitat for burrowing owl were closely surveyed for suitable burrows during the biological assessment. Methods to detect the presence of burrowing owl included direct observation, aural detection, and signs of presence including pellets, whitewash, feathers, or prey remains.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

2.3 SOIL SERIES ASSESSMENT

On-site and adjoining soils were researched prior to the field visit using the USDA NRCS Soil Survey for Western Riverside County, California. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes the project site has undergone.

2.4 PLANT COMMUNITIES

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were classified in accordance with Sawyer, Keeler-Wolf and Evens (2009), CDFW (2003), and Holland (1986), delineated on an aerial photograph, and then digitized into GIS Arcview. The Arcview application was used to compute the area of each plant community in acres.

2.5 PLANTS

Common plant species observed during the field survey were identified by visual characteristics and morphology in the field, and recorded in a field notebook. Unusual and less familiar plants were photographed in the field and identified in the laboratory using taxonomical guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Hickman 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only).

2.6 WILDLIFE

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides were used to assist with identification of species during surveys included The Sibley Field Guide to the Birds of Western North America (Sibley 2003) for birds, A Field Guide to Western Reptiles and Amphibians (Stebbins 2003) for herpetofauna, and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are fairly well standardized, scientific names are provided immediately following common names in this report (first reference only).

2.7 JURISDICTIONAL AREAS

Aerial photography was reviewed prior to conducting the biological assessment. The aerials were used to locate and inspect any potential natural drainage features and water bodies that may fall under the jurisdiction of the Corps, Regional Board, or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential jurisdictional areas and are also subject to State and federal regulatory authorities. A formal jurisdictional assessment is available under separate cover.

Section 3 Existing Conditions

3.1 LOCAL CLIMATE

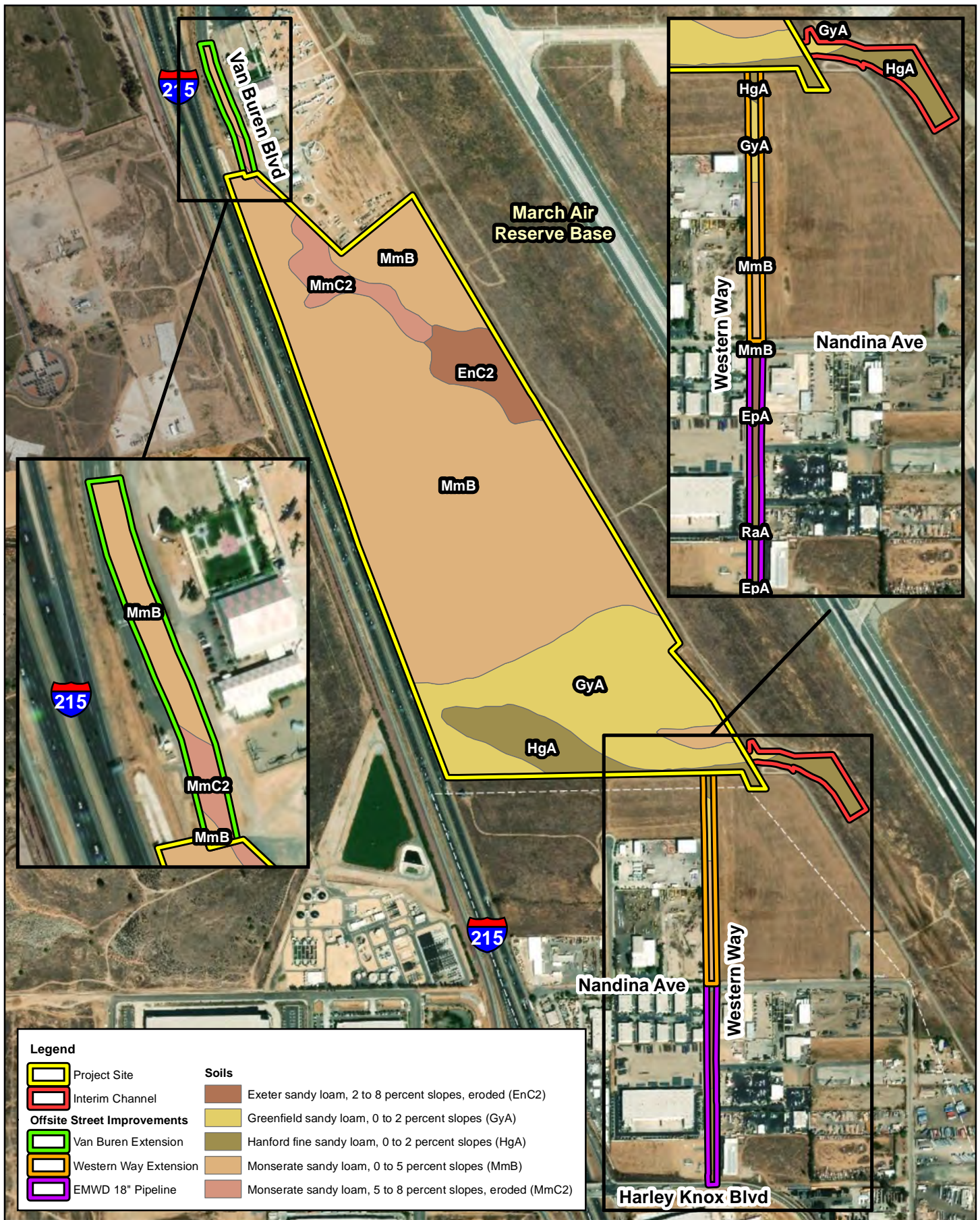
Riverside County features a somewhat cooler version of a Mediterranean climate, or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Relative to other areas in southern California, winters are colder with frost and with chilly to cold morning temperatures common. Climatological data obtained for the City of Perris, directly adjacent to MARB, indicates the annual precipitation averages 11.4 inches per year. Almost all of the precipitation occurs in the months between December and March, with hardly any occurring between the months of April and November. The wettest month is February, with a monthly average total precipitation of 2.86 inches. The average maximum and minimum temperatures for the City of Perris are 80.9 and 46.8 degrees Fahrenheit (°F) respectively with July and August being the hottest months (monthly average high 98.0°F) and December being the coldest (monthly average low 34.0°F). Temperatures during the site visit were in the mid-to high 70s °F.

3.2 TOPOGRAPHY AND SOILS

On-site surface elevation ranges from approximately 1,500 to 1,522 feet above mean sea level and generally slopes from northwest to southeast with areas of topographic relief along the site's southwestern boundary associated with the drainage feature that traverse the project site. Based on the USDA NRCS Soil Survey, the project site, including the interim channel, and adjacent road improvement areas are underlain by the following soil units: Exeter sandy loam, 0 to 2 percent slopes (EnA); Exeter sandy loam, 2 to 8 percent slopes, eroded (EnC2); Greenfield sandy loam, 0 to 2 percent slopes (GyA); Hanford fine sandy loam, 0 to 2 percent (HgA); Monserate sandy loam, 0 to 5 percent slopes (MmB); and Monserate sandy loam, 5 to 8 percent slopes, eroded (MmC2) (Exhibit 4, *Soils*).

3.3 SURROUNDING LAND USES

The proposed project site is located in an area that is undergoing conversion into industrial, commercial, and recreational developments, exhibiting a mosaic of developed and undeveloped parcels. Land uses in the vicinity of the project site consist of various base-related structures as well as the runway and associated buffers to the northeast, the March Field Air Museum immediately to the north, commercial development and vacant land to the south, and the Riverside National Cemetery and Lieutenant General Archie J. Old, Jr. Golf Course to the west, west of Interstate 215.



VETERANS INDUSTRIAL PARK 215
BIOLOGICAL ASSESSMENT

Soils

Exhibit 4

Section 4 Discussion

4.1 SITE CONDITIONS

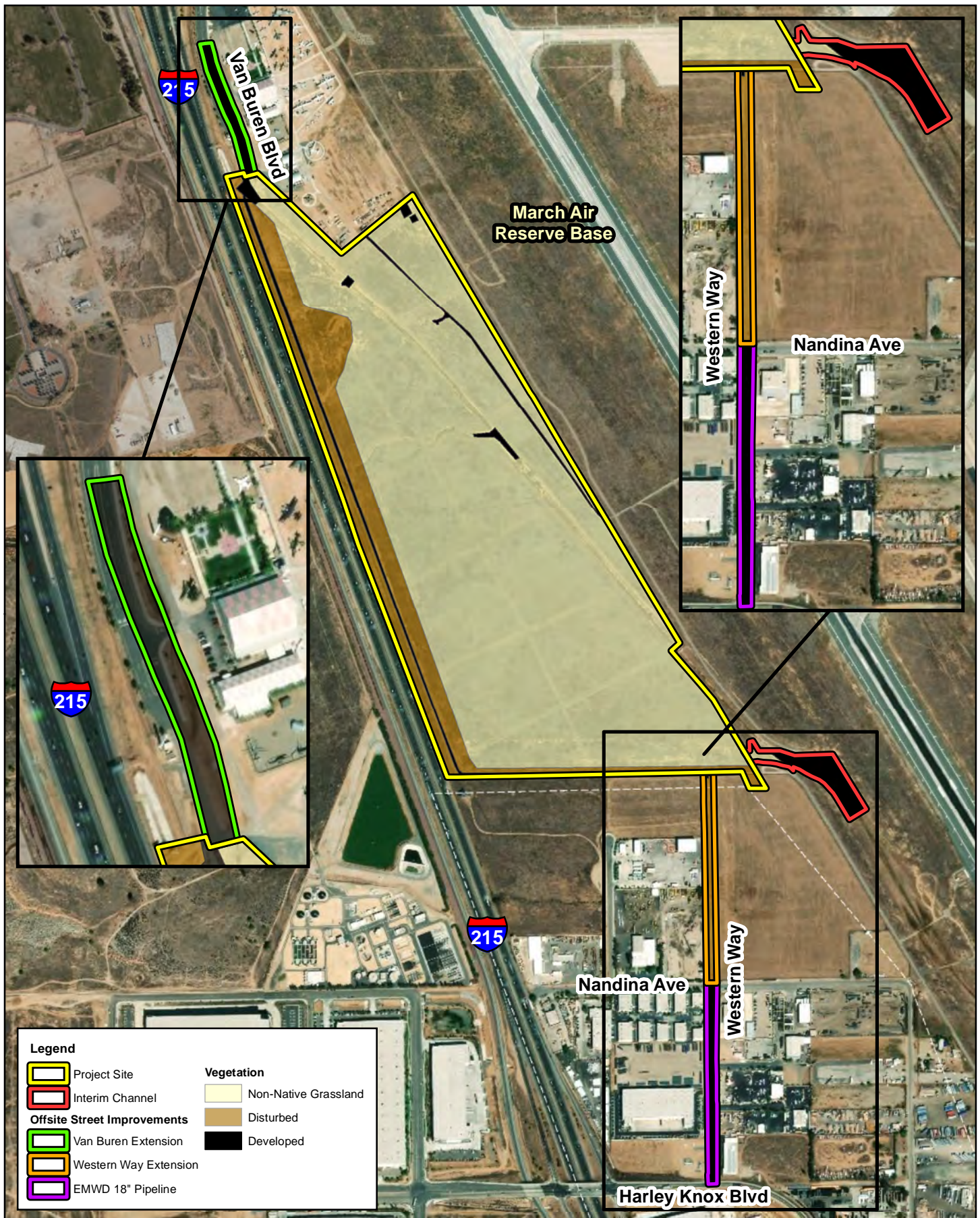
The majority of the project site consists of a heavily disturbed, undeveloped field. Historic aerial imagery shows indications of site-wide vegetation mowing, and from 2009 to 2011 the majority of the project site along its western and southern boundaries were cleared of vegetation for the construction and maintenance of an underground pipeline. The northwest portion of the project site has been used for materials storage since the pipeline was completed. Some areas along the northern edge of the project site are associated with and are actively used by the March Field Air Museum. These land uses have eliminated, naturally occurring habitats from the project site. Surveys show that the site is largely vegetated with early successional non-native plants that easily spread through disturbed, open areas, particularly non-native grasses and Russian thistle (*Salsola tragus*). Paved roadways run roughly northwest to southeast across the eastern and western portions of the project site, as well as east to west across the site's southern boundary. Five (5) drainage features are present within the site boundaries. The main drainage feature flows roughly northwest to southeast across the middle of the site. In addition, there are four drainage features that are tributary to the main drainage feature in the middle of the site. These drainage features are generally earthen but also contain sections that are either concrete-lined, riprap-lined, or lined with grouted riprap.

4.2 VEGETATION

The project site, including the interim channel, and two offsite street improvement areas are either develop or heavily disturbed and no longer consists of undeveloped, native plant communities. One (1) plant community was observed on the project site and continued off the site into the southern offsite street improvement area and the western portion of the interim channel, non-native grassland (Exhibit 5, *Vegetation*). In addition, there are two (2) on-site land cover types that would be classified as disturbed and developed. The Van Buren Boulevard road improvement area support a developed land cover type, while the northern portion of the Western Way extensive supported a non-native grassland and the southern portion is already paved and thus is classified as a developed land cover type.

4.2.1 Non-Native Grassland

On-site vegetation is best characterized as a non-native grassland. It is dominated by Russian thistle with pigweed (*Amaranthus albus*), doveweed (*Croton setiger*), jimsonweed (*Datura wrightii*), red-stemmed filaree (*Erodium cicutarium*), rattlesnake spurge (*Euphorbia albomarginata*), telegraph weed (*Heterotheca grandiflora*), short-podded mustard (*Hirschfeldia incana*), and horehound (*Marrubium vulgare*). The main drainage feature



VETERANS INDUSTRIAL PARK 215
BIOLOGICAL ASSESSMENT

Vegetation

contains scattered stands of mulefat (*Baccharis salicifolia*), Spanish lotus (*Acemisson americanus*), common sunflower (*Helianthus annuus*), and cocklebur (*Xanthium strumarium*) throughout. The four tributaries to the main drainage features are either primarily bare or vegetated with dense weedy plant species, primarily Russian thistle. A few native species can be found sparsely scattered throughout the site and include deerweed (*Acemisson glaber*), fourwing saltbush (*Atriplex canescens*), and California buckwheat (*Eriogonum fasciculatum*). The western portion of the interim channel, outside of the drainage feature, supports non-native grassland habitats.

4.2.2 Disturbed

The disturbed area on-site is generally an area in the northwest portion of the project site that has been subject to human disturbances from pipeline construction, maintenance activities, and materials storage. The disturbed area on the project site no longer supports native vegetation or comprises a native plant community but are generally un-vegetated or vegetated with weedy plant species. Portions of the disturbed areas contain areas of bare ground due to years of extensive disturbance.

4.2.3 Developed

Developed areas generally encompass all buildings and all paved surfaces. On the project site, the developed areas include paved roads/surfaces running along the western, southern, and eastern site boundaries, as well as isolated cement pads and hard-lined surfaces (riprap, concrete lining, and concreted riprap) within the on-site drainage features, including the interim channel on the MARB property.

4.3 WILDLIFE

Plant communities provide foraging habitat, nesting and denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species observed, expected, or not expected to occur on-site, including the interim channel, and adjacent road improvement areas. The discussion is to be used as a general reference and is limited by the season, time of day, and weather condition in which the survey was conducted. Wildlife observations were based on calls, songs, scat, tracks, burrows, and actual sightings of animals.

4.3.1 Fish

No fish or hydrogeomorphic features (e.g., creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the project site. Five drainage features are present on-site, but all are subject to ephemeral water sources and thus do not

provide perennial aquatic habitat. Therefore, no fish are expected to occur on the project site, and they are presumed absent.

4.3.2 Amphibians

No amphibians or hydrogeomorphic features that would provide suitable habitat for amphibian species were observed on or within the vicinity of the project site. The on-site drainage features are ephemeral and generally did not have standing water in them during the site survey. There were three small, isolated pools within the main drainage feature on-site. These small ponds are unlikely to support most breeding amphibians, although western spadefoot (*Spea hammondi*) can breed in small isolated ephemeral ponds that can form onsite following rain events. Given the isolated nature of the drainage system and its ephemeral characteristic, the potential for western spadefoot to occur is considered low.

4.3.3 Reptiles

The project site has the potential to support reptile species that are adapted to human development and disturbances. Three (3) reptilian species were detected during the field investigation: Great Basin fence lizard (*Sceloporus occidentalis longipes*), western side-blotched lizard (*Uta stansburiana elegans*), and coastal whiptail (*Aspidoscelis tigris stejnegeri*). The site abuts patches of open habitat to the west (opposite Interstate 215) and east (on MARB property) and has the potential to support additional reptiles adapted to both urban and edge habitat conditions, including southern Pacific rattlesnake (*Crotalus oreganus helleri*), gopher snake (*Pituophis catenifer*), and southern alligator lizard (*Elgaria multicarinata*).

4.3.4 Birds

The project site provides suitable foraging habitat for a limited variety of avian species. A total of nineteen (19) avian species were identified during the field investigation. Some of the most common avian species that were observed during the field investigation included rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), savannah sparrow (*Passerculus sandwichensis*), white-crowned sparrow (*Zonotrichia leucophrys*), western meadowlark (*Sturnella neglecta*), and Brewer's blackbird (*Euphagus cyanocephalus*).

Burrowing owls were identified during the biological assessment and focused surveys along the eastern boundary. One burrowing owl was flushed from the southeast corner of the project site into the adjacent airfield to the northeast. Additional owls were observed perching on the eastern boundary fence and foraging over the site but flushed back onto airfield property to the east to nest burrows. Ground squirrel burrows were identified on the project site along the eastern boundary that were suitable for burrowing owl, however, none of these burrows were used by burrowing owls. Minimal burrowing owl sign (whitewash) was observed at single

burrow in southeastern portion of the site; however, burrowing owls were not observed using this site for nesting.

4.3.5 Mammals

The project site provides limited habitat for mammalian species adapted to human presence and disturbance. However, most mammal species are nocturnal and are difficult to observe during a diurnal field visit. Mammals and/or sign detected during the field assessment included desert cottontail (*Sylvilagus audubonii*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), California ground squirrel (*Otospermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), and coyote (*Canis latrans*). Additionally, small mammal burrows were observed along the project site's edges and on a dirt mound near the northwestern section of the site.

4.4 NESTING BIRDS

No nests were observed on the project site, including the interim channel, during either biological assessment during October 21, 2015, June 19, 2018 or during the September 11, 2019 surveys. Few, if any, suitable nesting locations are present within the project site or its immediately adjacent areas. Upland habitat could support local ground-nesting birds such as killdeer (*Charadrius vociferus*) and horned larks (*Eremophila alpestris*). In addition, the small pockets of mulefat growing within the main drainage provide isolated nesting opportunities. The onsite survey was conducted in late October, outside of the avian nesting season (generally February 1 to August 31), while the offsite survey was conducted in the latter part of the avian nesting season.

4.5 MIGRATORY CORRIDORS AND LINKAGES

Habitat linkages provide links between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages, but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet inadequate for others. Wildlife corridors are significant features for dispersal, seasonal migration, breeding, and foraging. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

Neither the project site, including the interim channel, nor the offsite road improvement areas support any migratory corridors or linkages. The on-site drainages have the potential to provide limited wildlife movement within the immediate area. However, Interstate 215 west of the project site as well as surrounding development restricts potential wildlife movement through

the general area and the project site. The project site is located approximately 1.1 miles southeast of open space in the Sycamore Canyon area, which is separated from the project site by Van Buren Boulevard, the Riverside National Cemetery, and Interstate 215. The offsite road improvement areas are either existing roads or a vacant barren field bordered by development. Development of the proposed project and the associated road improvements is not expected to disrupt or have any adverse effects on any migratory corridors or linkages that may occur in the general vicinity of the project site.

4.6 JURISDICTIONAL AREAS

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge and/or fill materials into “waters of the United States” pursuant to Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and associated plant communities pursuant to Section 1602 of the Fish and Game Code, and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Five (5) unnamed drainage features were observed on the project site consisting of one main drainage feature (Drainage 1) and four tributaries (Drainage 2-5). Drainage 1 generally extends from northwest to southeast through the middle of the project site. All tributaries (Drainage 2-5) enter Drainage 1 within the site boundaries. It should be noted that Drainage 1 also extends through the middle of the interim channel on the MARB. No drainage features or jurisdictional waters occur within the two offsite road improvement areas. A formal jurisdictional delineation of the project site was prepared under separate cover.

Drainage 1 is tributary to the Perris Valley Storm Drain, which flows to Canyon Lake and ultimately Lake Elsinore. From Lake Elsinore, water flows out to Temescal Creek, which is ultimately tributary to the Santa Ana River (Relatively Permanent Water) and the Pacific Ocean (Traditional Navigable Water). Therefore, the on-site drainage features would qualify as waters of the United States and fall under the regulatory authority of the Corps, Regional Board, and/or CDFW. Activities impacting these drainage features will require a CWA Section 404 permit from the Corps, CWA Section 401 Water Quality Certification from the Regional Board, and/or a Section 1602 Streambed Alteration Agreement from CDFW. Impacts to Drainage 1 associated with the interim channel occur on federal lands (i.e., the MARB), as a result, CDFW does not have regulatory authority over Drainage 1 within footprint of the interim channel.

4.7 SPECIAL-STATUS BIOLOGICAL RESOURCES

The CNDDDB was queried for reported locations of special-status plant and wildlife species as well as special-status natural plant communities in the Riverside East, Steele Peak, Sunnymead, and Perris USGS 7.5-minute quadrangles. A search of published records of these species was conducted within these quadrangles using the CDFW's CNDDDB Rarefind 5 online software and CNDDDB Quickview Tool. The CNPS Inventory of Rare and Endangered Vascular Plants of California supplied information regarding the distribution and habitats of vascular plants in the vicinity of the project site. The field investigation was used to assess the ability of the plant communities found on-site to provide suitable habitat for relevant special-status plant and wildlife species.

The literature search identified thirty-four (34) special-status plant species, sixty-six (66) special-status wildlife species, and three (3) special-status habitats as having potential to occur within the Riverside East, Steele Peak, Sunnymead, and Perris quadrangles. Special-status plant and wildlife species were evaluated for their potential to occur within the project boundaries based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity are presented in Appendix B, *Potentially Occurring Special-Status Biological Resources*, and discussed below.

4.7.1 Special-Status Plants

Thirty-four (34) special-status plant species have been recorded in the CNDDDB and CNPS in the Riverside East, Steele Peak, Sunnymead, and Perris quadrangles. No special-status plant species were observed on-site, within the interim channel, or within the offsite road improvement areas during the field investigations. Based on habitat requirements for the identified special-status species, the lack of native habitats and the very low-quality of the non-native grasslands due to a heavy regime of mowing, it was determined that the project site and offsite road improvement areas has a very low potential to support most the listed special-status plant species. Only two tarplants, which are adapted to disturbed habitats, have the potential to occur. Smooth tarplant (*Centromadia pungens* ssp. *laevis*) was determined to have a moderate potential to occur and paniculate tarplant (*Deinandra paniculata*) which was determined to have a low potential to occur. All other special-status species within the project site and offsite road improvement areas are presumed absent.

4.7.2 Special-Status Wildlife

Sixty-six (66) special-status wildlife species have been reported in the Riverside East, Steele Peak, Sunnymead, and Perris quadrangles. Four (4) special-status wildlife species were observed during the field investigation: burrowing owl, prairie falcon (*Falco mexicanus*), San Diego black-tailed jackrabbit, and Oregon vesper sparrow (*Pooecetes gramineus affinis*).

Based on the results of the field investigation, it was determined that the project site has a moderate potential to support an additional four (4) special-status wildlife species: Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), coast horned lizard (*Phrynosoma blainvillii*), and Lawrence's goldfinch (*Spinus lawrencei*). Nine (9) species were determined to have a low potential to occur on-site, including golden eagle (*Aquila chrysaetos*), ferruginous hawk (*Buteo regalis*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), California horned lark (*E.a. actia*), western mastiff bat (*Eumops perotis californicus*), merlin (*Falco columbarius*), loggerhead shrike (*Lanius ludovicianus*), and western spadefoot. All remaining special-status wildlife species were presumed to be absent from the project site.

Burrowing Owl

Burrowing owl is currently designated as a California Species of Special Concern. The burrowing owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owl use a wide variety of arid and semi-arid environments with level to gently-sloping areas characterized by open vegetation and bare ground. The western burrowing owl (*A.c. hypugaea*), which occurs throughout the western United States including California, rarely digs its own burrows and is instead dependent upon the presence of burrowing mammals (i.e., ground squirrels, coyotes, and badgers [*Taxidea taxus*]) whose burrows are often used for roosting and nesting. The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls in the western U.S. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. They also require low growth or open vegetation allowing line-of-sight observation of the surrounding habitat to forage as well as watch for predators. In California, the burrowing owl breeding season extends from the beginning of February through the end of August.

The entire project site is vegetated with a variety of relatively low-growing ruderal plant species, especially Russian thistle and mustard, that allow for obstructed but partial line-of-sight observation opportunities needed by burrowing owl. In addition, small mammal burrows that have the potential to provide suitable burrowing owl nesting habitat were observed on the project site, particularly along its eastern side bordering the adjacent airfield. A single burrowing owl was observed during Michael Baker's October 21, 2015 field investigation of the project site. This bird was flushed from the southeast corner of the project site and onto the airfield.

A burrowing owl focused survey was conducted during the 2018 breeding season on April 15, May 9, May 25, and June 19, 2018 for the proposed project, including the interim channel, and offsite street improvement areas. A single burrowing owl was observed near the southeastern

portion of the project site during the fourth and final survey. Since no burrowing owls or sign were observed on the project site during the first three focused surveys and the owls flushed to offsite burrows within the adjacent airfield (approximately 250 to 500 feet east into the middle of the undeveloped area on the MARB southwest of the existing runway), it is assumed that the nesting burrow for the burrowing owls is located offsite and that the owl was foraging over the project site. The fence along the eastern boundary provides excellent perching opportunities for burrowing owls.

4.7.3 Special-Status Plant Communities

The CNDDB lists three (3) special-status habitats as being identified within the Riverside East, Steele Peak, Sunnymead, and Perris quadrangles: Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, and Southern Sycamore Alder Riparian Woodland. No CDFW special-status plant communities occur within the boundaries of the project site or within the offsite street improvement areas.

4.8 CRITICAL HABITAT

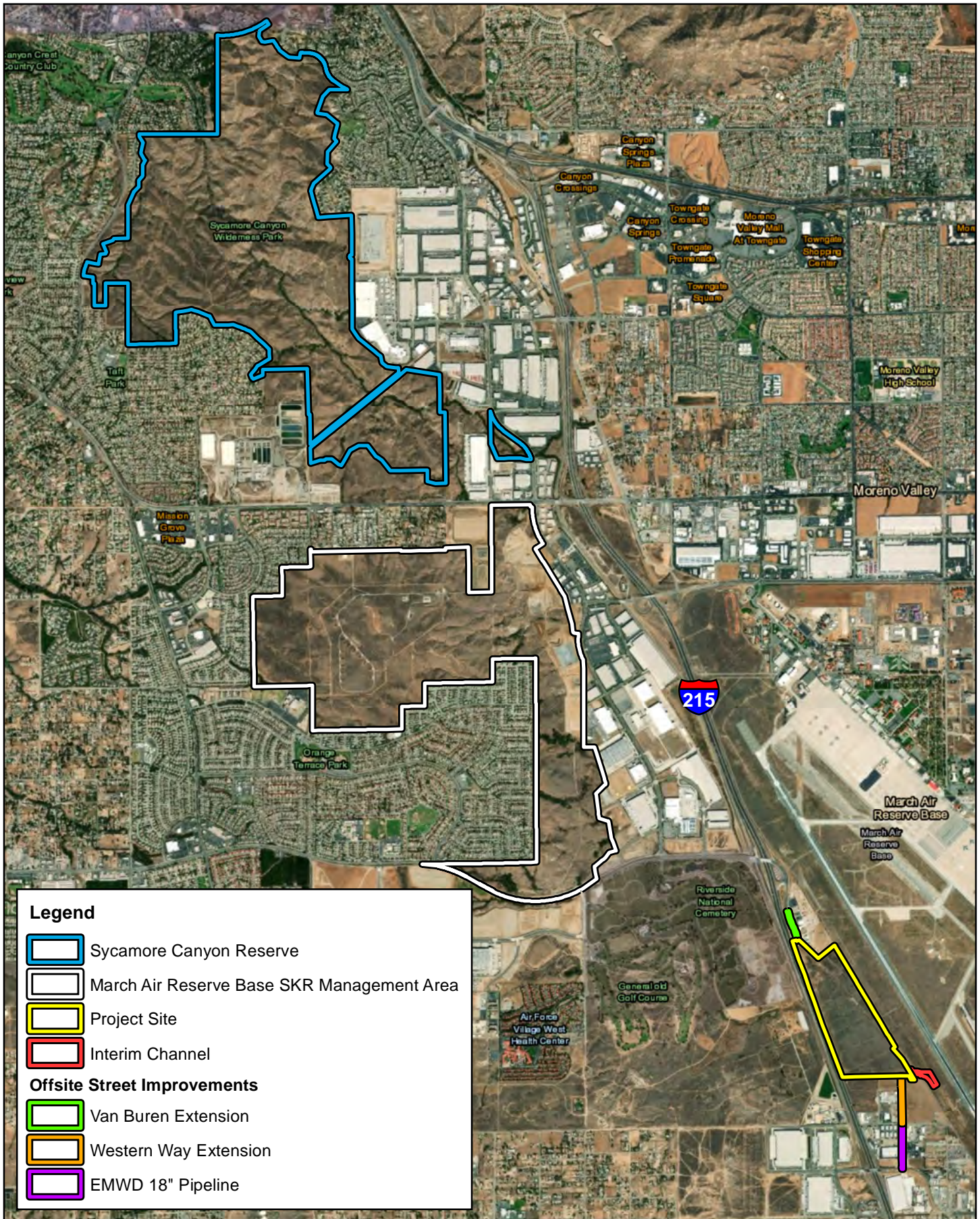
Under the federal Endangered Species Act, “Critical Habitat” is designated at the time of listing of a species or within one year of listing. “Critical Habitat” refers to habitat or a specific geographic area that contains the elements and features that are essential for the survival and recovery of the species. In the event that a project may result in loss or adverse modification to a species’ designated Critical Habitat, the project proponent may be required to engage in suitable mitigation. However, consultation for impacts to Critical Habitat is only required when a project has a federal nexus (i.e. occurs on federal land, is issued federal permits [e.g. Corps Section 404 Clean Water Act permit], or receives any other federal oversight or funding). If a project does not have a federal nexus, Critical Habitat consultations are not required.

The project site is not located within federally designated Critical Habitat and no Critical Habitat is present within a 5-mile radius of the site. Spreading navarretia (*Navarretia fossalis*) Designated Critical Habitat Subunit 6A: Riverside County is located approximately 6.5 miles southeast of the project site (75 FR 62192 62255); thread-leaved brodiaea (*Brodiaea filifolia*) Designated Critical Habitat Subunit 11a: San Jacinto Wildlife Area, Subunit 11b: San Jacinto Avenue/Dawson Road, and Subunit 11c: Case Road are all located approximately 7.5 miles southeast of the project site (76 FR 6848 6925); and San Bernardino kangaroo rat (*Dipodomys merriami parvus*) Designated Critical Habitat Unit 3: San Jacinto River/Bautista is located approximately 9.25 miles east of the site (67 FR 19812 19845). Coastal California gnatcatcher (*Polioptila californica californica*) Designated Critical Habitat Unit 10: Western Riverside County MSHCP was previously located within three miles of the site after the 2000 Final Ruling (65 FR 63680 63743). However, most of the Critical Habitat in Riverside County that was originally designated in 2000 was removed in 2007 (72 FR 72010 72213) because it was

determined that the Western Riverside County Multiple Species Habitat Conservation Plan would conserve and manage gnatcatcher habitat and associated Primary Constituent Elements in sufficient quantity and distribution to provide for the long term conservation and recovery of this species in western Riverside County.

4.9 STEPHEN'S KANGAROO RAT HABITAT CONSERVATION PLAN

Riverside County developed the Stephen's Kangaroo Rat Habitat Conservation Plan (SKR HCP) in 1990 for protecting the Stephens' kangaroo rat (*Dipodomys stephensi*, SKR), a federally endangered and state threatened species which occurs in Riverside County, including portions of the MARB (County Ordinance No. 663.10). The HCP provided for incidental take of SKR within the plan boundaries but outside of seven core reserves that were established to provide long-term conservation for SKR. SKR was found to occur primarily within the boundaries of these seven core reserves. Preservation of the core reserves was identified as adequate mitigation to offset any potential impacts to SKR outside the seven core reserves. The nearest reserve is the Sycamore Canyon Core Reserve located northwest of the MARB and west of the Interstate 215 Freeway (Exhibit 6, *Sycamore Canyon Reserve*). The MARB contributed a 1,000-acre SKR Management Area at the southern end of the Sycamore Canyon Core Reserve. The project site, itself, although not within a core reserve area, is within a Fee Area for SKR. Fee Areas were established to collect mitigation fees to fund the costs of managing the seven core reserve areas. Therefore, the project applicant is not expected to impact SKR but will need to pay the SKR HCP mitigation fee prior to development of the site. No further mitigation is required for SKR.



VETERANS INDUSTRIAL PARK 215
BIOLOGICAL ASSESSMENT

Sycamore Canyon Reserve

Section 5 Discussion of Impacts and Mitigation

The discussion below provides a summary of survey results; avoidance and minimization efforts; direct, indirect, and cumulative Project impacts; and compensatory mitigation measures for each biological resource area required to be analyzed according to CEQA, based on Appendix G (Environmental Checklist Form) of the CEQA Guidelines.

CEQA Threshold: *Would the proposed Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*

Special-status species determined to have the potential to occur within the general vicinity are presented in Appendix B, Potentially Occurring Special-Status Biological Resources.

5.1 SPECIAL-STATUS PLANT SPECIES

Survey Results

The project site and offsite street improvement areas are heavily disturbed and no longer consists of undeveloped, native plant communities. One (1) plant community was observed on-site, best defined as non-native grassland. On-site vegetation is dominated by Russian thistle with pigweed, doveweed, jimsonweed, red-stemmed filaree, rattlesnake spurge, telegraph weed, short-podded mustard, and horehound.

No special-status plant species were observed on-site, within the interim channel, or within the offsite street improvement areas during the field investigations. Based on habitat requirements for the identified special-status species, the lack of native habitats and the very low-quality of the non-native grasslands due to a heavy regime of mowing, it was determined that the project site did not provide suitable habitat for most the special-status species and they can be presumed absent. Only two tarplants, which are adapted to disturbed habitats, have the potential to occur. Smooth tarplant was determined to have a moderate potential to occur while paniculate tarplant was determined to have a low potential to occur.

Avoidance and Minimization Measures

All of the project site will be impacted. No avoidance or minimization measures are available to avoid or reduce impacts to special-status plant species.

Direct and Indirect Project Impacts

Due to the absence of special-status plant species from the project site, no direct or indirect impacts could occur to special-status plant species as a result of project implementation.

Mitigation

Due to the absence of special-status plant species on the project site, no mitigation measures are proposed.

5.2 SPECIAL-STATUS WILDLIFE SPECIES

Survey Results

Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site has a potential to support eight (8) non-listed but special-status wildlife species: burrowing owl, prairie falcon, San Diego black-tailed jackrabbit, Oregon vesper sparrow, Cooper's hawk, sharp-shinned hawk, coast horned lizard, and Lawrence's goldfinch. Four species (burrowing owls, prairie falcon, San Diego black-tailed jackrabbit, and Oregon vesper sparrow) were observed onsite during one or both of the two field investigations. Prairie falcon and Oregon vesper sparrow were observed incidentally foraging on the project site but neither the project site nor the offsite street improvement areas provide nesting opportunities for these species. The other four (4) special-status wildlife species (Cooper's hawk, sharp-shinned hawk, coast horned lizard, and Lawrence's goldfinch) were determined to have a moderate potential to occur.

A single burrowing owl was observed during Michael Baker's October 21, 2015 field investigation of the project site. This bird was flushed from the southeast corner of the project site and flew approximately 250 to 500 feet east into the middle of the undeveloped area on the MARB southwest of the existing runway. In addition, during the 2018 burrowing owl focused survey, a burrowing owl was observed near the southeastern portion of the project site during the fourth and final survey conducted on June 19, 2018. Both times, the burrowing flushed offsite to a burrow on the airport property. It is assumed that burrowing owls occupying airport property are using the project site for foraging.

Avoidance and Minimization Measures

The entire project site will be developed. Special-status wildlife species will migrate into surrounding open habitat areas. Avoidance and minimization measures are not available to reduce or eliminate impacts these species and/or their habitats.

Direct and Indirect Project Impacts

Direct impacts would primarily occur to four special-status species found onsite from the loss of nesting and foraging habitat. However, the project site is located within March Air Reserve Base and surrounding by large areas of undeveloped ruderal habitat that is a continuum of the ruderal habitat found onsite. The loss of foraging habitat for prairie falcon would be insignificant in light of the abundance of foraging habitat in the immediately vicinity. The Oregon vesper would be able to continue to use adjacent habitats during its migration. Similarly, black-tailed jackrabbits would be expected to migrate into adjacent, undeveloped areas.

Burrowing owls were observed perched on the eastern boundary fence and foraging on the project site. One owl flushed from the southeast corner of the project site to a burrow on the airport. Development of the site could result from injury or loss of life during site development if foraging on the site at the time of disrupt development. Development of the site could also cause burrowing owls in adjacent habitats to find new burrows and to establish a new foraging area.

Mitigation

BIO-1: Burrowing Owl Clearance Survey

A burrowing owl clearance survey shall be conducted prior to any ground disturbing activities in accordance with the CDFW 2012 Staff Report on Burrowing Owl Mitigation to ensure the continued absence of burrowing owl from the project site. Two pre-construction clearance surveys shall be conducted 14-30 days and 24 hours prior to ground disturbing activities to document the continued absence of burrowing owl from the project site. If the burrowing owls are determined to be nesting onsite, a burrowing owl relocation plan will need to be prepared and approval by CDFW prior to the commencement of any ground disturbing activities. The burrowing owl relocation plan shall outline recommended methods proposed to relocate the burrowing owls from the project site and provide measures that will be implemented for the maintenance, monitoring, and reporting of the relocated burrowing owls to increase chances of survivorship and better ensure compliance with CDFW guidelines. This plan should be implemented during the non-breeding season, and prior to seasonal rains to promote the best outcome for conservation of the burrowing owl.

However, if the burrowing owls are determined not to occupy the project site but appear to be foraging on the site, appropriate avoidance and minimization measures will be installed along the eastern boundary to discourage the use of the project site to ensure that no burrowing owls will not be harmed during site development in compliance with the MBTA and Fish and Game Code.

BIO-2: Nesting Bird Clearance Survey

If ground disturbance and vegetation removal cannot occur outside of the nesting season, normally between February 1 through August 31 but can vary each year based on seasonal weather conditions, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur

CEQA Threshold: *Would the proposed Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*

CEQA Threshold: *Would the proposed Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

5.3 RIPARIAN HABITAT AND SPECIAL-STATUS NATURAL COMMUNITIES

Survey Results

Five (5) unnamed drainage features, totaling 1.50 acres of waters of the U.S. and 3.28 acres of waters of the State, are located within the project site: one main drainage (Drainage 1) and four tributaries. No drainage features were observed within the two offsite road improvement areas. All tributaries enter Drainage 1 within the site boundaries. Drainage 1 runs roughly northwest to southeast across the project site and is tributary to the Perris Valley Storm Drain, which flows to Canyon Lake and ultimately Lake Elsinore. From Lake Elsinore, water flows out to Temescal Creek, which is ultimately tributary to the Santa Ana River (Relatively Permanent Water) and the Pacific Ocean (Traditional Navigable Water). Therefore, the on-site drainage features would qualify as waters of the United States and fall under the regulatory authority of the Corps, Regional Board, and CDFW. Based on a review of preliminary design plans, all drainages will be permanently impacted.

A formal jurisdictional delineation of the project site was prepared under separate cover to verify the location, connectivity, and extent of these ephemeral drainage features on-site. No jurisdictional features were observed within the offsite street improvement areas. Because these features were all determined to be jurisdictional under the Corps, Regional Board, and

CDFW, activities impacting these drainage features will require a CWA Section 404 individual permit from the Corps, CWA Section 401 Water Quality Certification from the Regional Board, and a Section 1602 Streambed Alteration Agreement from CDFW.

Additionally, none of the clay soils needed to support vernal pools were observed on-site; therefore, special-status plant and wildlife species associated with vernal pools, including fairy shrimp, are presumed absent from the project site.

Avoidance and Minimization Measures

Based on the preliminary design plans, development of the project site will permanently impact all drainages on the project site. No avoidance or minimization are recommended.

Direct and Indirect Project Impacts

Development of the project will result in the loss of 1.65 acres of waters of the U.S. and 5.28 acres of waters of the State. Existing flows will be collected north of the project site and redirected along the site's eastern boundary and will continue to flow offsite to the Perris Valley Storm Drain. No indirect impacts have been identified.

Mitigation

The following mitigation measures are proposed to reduce Project impacts to less than significant with mitigation incorporated:

BIO-3: Regulatory Approvals

In order to reduce impacts from the loss of on-site waters (1.65 acres of waters of the U.S. and 5.28 acres of waters of the State), the applicant shall compensate these losses by acquiring regulatory approvals from the U.S. Army Corps of Engineers (CWA Section 404 permit), the Regional Water Quality Control Board (CWA Section 401 Permit) and the California Department of Fish and Wildlife (Section 1602 Lake and Streambed Agreement) prior to ground disturbing activities. Opportunities may exist for on-site mitigation within the existing drainages, but additional offsite mitigation will be required. Mitigation for the loss of on-site waters will be negotiated with the above listed regulatory agencies and must be biologically equivalent or superior to the impacted jurisdictional features.

CEQA Threshold: *Would the proposed Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

5.4 WILDLIFE CORRIDORS

Survey Results

The project site does not support any identified migratory corridors or linkages. Onsite drainages have the potential to provide localized wildlife movement within the immediate area. However, Interstate 215 west of the project site as well as surrounding development restricts potential wildlife movement across the project site and offsite street improvement areas. Development of the proposed project is not expected to disrupt or have any adverse effects on any migratory corridors or linkages that may occur in the general vicinity of the project site.

Avoidance and Minimization Measures

Since development of the project site will not disrupt any migratory corridor or linkage, no avoidance or minimization efforts are required.

Direct and Indirect Project Impacts

No direct or indirect project impacts to the movement of native resident or migratory wildlife species will occur. Development of the site will not directly or indirectly impact habitat used for a native wildlife nursery.

Mitigation

Due to the lack of any identified impacts to wildlife movement, migratory corridors or linkages or native wildlife nurseries, no mitigation is required.

CEQA Threshold: *Would the proposed Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

CEQA Threshold: *Would the proposed Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan?*

5.5 LOCAL, REGIONAL, AND STATE PLANS

Survey Results

Riverside County developed the Stephen's Kangaroo Rat Habitat Conservation Plan (SKR HCP) in 1999 for protecting the SKR, a federally endangered and state threatened species which occurs in Riverside County, including portions of the MARB. The SKR HCP designated seven core reserves where SKR would be managed by Riverside County as conserved habitat,

including the Sycamore Canyon Core Reserve located northwest of the MARB and west of the Interstate 215 Freeway. The MARB contributed a 1,000-acre SKR Management Area at the southern end of the Sycamore Canyon Core Reserve. The project site is located within the Fee Area that were established to fund management of core reserve areas and not to offset potential impacts to SKR in the Fee Area. With payment of the fee, the project applicant will be in compliance with the SKR HCP. No additional mitigation will be required.

The project site is also within the boundaries of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). However, the March ARB Joint Powers Authority, which has jurisdiction over the project site, is not a permittee under the Western Riverside County MSHCP and, therefore, the applicant is not required to comply with this Plan. Development of the project will, therefore, not conflict with the provisions of any local, regional, or state Habitat Conservation Plans.

However, the offsite street improvement areas are located within the Mead Valley Area Plan of the MSHCP but is not located within any Criteria Cells or MSHCP Conservation Areas. Additionally, the offsite street improvements are located within the designated survey area for burrowing owl as depicted in Figures 6-4 within Section 6.3.2 of the MSHCP.

Based on the proposed project footprint for the offsite street improvement areas, and with the implementation of a pre-construction nesting bird/burrowing owl clearance survey, none of the Western Riverside County MSHCP covered species known to occur in the general vicinity of the proposed project will be directly or indirectly impacted by the proposed street improvements. Therefore, it was determined that the development of the offsite street improvement will have “no effect” on federally, State, or MSHCP listed species, or designated Critical Habitat. With completion of a pre-construction burrowing owl and nesting bird clearance survey payment of the MSHCP mitigation fees, development of the offsite street improvement areas will be fully consistent with the Western Riverside County MSHCP.

BIO-3: Compliance with the SKRHCP

The applicant with contact the Riverside County Conservation Authority prior to development in order to pay the required SKR Mitigation Fee.

BIO-4: Compliance with the Western Riverside County MSHCP for Offsite Street Improvements

The applicant with contact the Riverside County Conservation Authority prior to development in order to pay the required MSHCP Mitigation fee for the offsite street improvements.

Section 6 Conclusion

The majority of the project site consists of a heavily disturbed undeveloped field southwest of the MARB's runway. The project site, including the interim channel and two offsite street improvement areas are either develop or heavily disturbed and no longer consists of undeveloped, native plant communities. One (1) plant community was observed on the project site and continued off the site into the southern offsite street improvement area and western portion of the interim channel, non-native grassland. In addition, there are two (2) on-site land cover types that would be classified as disturbed and developed.

Based on the lack of availability of native habitats quality of the on-site habitats, it was determined that only two special-status plant species have the potential to occur within the onsite project area or the offsite road improvement areas: smooth tarplant and paniculate tarplant. These special-status plant species are adapted to disturbed habitats. Smooth tarplant was determined to have a moderate potential to occur while paniculate tarplant was determined to have a low potential to occur within the project site and offsite road improvement areas. All other special-status plant species or are presumed absent.

Four (4) special-status wildlife species were observed on the project site during the field investigations: burrowing owl, San Diego black-tailed jackrabbit, and Oregon vesper sparrow, and prairie falcon. No special-status wildlife species were observed within the two offsite road improvements areas. Based on habitat requirements for specific species along with the availability and quality of habitats needed by each special-status wildlife species, it was determined that the project site also has a moderate potential to support four (4) additional special-status wildlife species: Cooper's hawk, sharp-shinned hawk, coast horned lizard, and Lawrence's goldfinch. All other special-status wildlife species are presumed absent.

A burrowing owl focused survey was conducted during the 2018 breeding season on April 15, May 9, May 25, and June 19, 2018 for the proposed project and offsite street improvement areas. A burrowing owl was observed along the eastern boundary of the project site during the fourth and final survey conducted on June 19, 2018. Since no burrowing owls were observed on the project site during the first three focused surveys and the owls flushed to an offsite burrow on the adjacent March airfield, it is assumed that the burrowing owls are nesting offsite and that the observed burrow owl was foraging on the project site.

Multiple drainage features were observed on the project site that will fall under the jurisdiction of the Corps, Regional Board, and CDFW. No drainage features were observed within the two offsite road improvement areas. Activities impacting these drainage features will require a CWA Section 404 permit from the Corps, CWA Section 401 Water Quality Certification from the Regional Board, and a Section 1602 Streambed Alteration Agreement from CDFW.

The Project is also within the boundaries of the SKR HCP Fee Area. With payment of the SKR HCP fee, the project applicant will be in compliance with the SKR HCP. In addition, the offsite street improvement areas are located within the boundaries of the Western Riverside County MSHCP. With completion of a pre-construction burrowing owl and nesting bird clearance survey, as well as the payment of the MSHCP mitigation fees, development of the offsite street improvement areas will be fully consistent with the Western Riverside County MSHCP.

Pursuant to the Migratory Bird Treaty Act and California Fish and Game Code, future construction activities and/or the removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season. The nesting season generally extends from February 1 through August 31 but can vary slightly from year to year based upon seasonal weather conditions. If construction or vegetation clearing activities occur during the avian nesting season a pre-construction nesting bird clearance survey will be required and should specifically focus on the presence/absence of burrowing owl, if determined to no longer occupy the project site or offsite street improvement areas.

Section 7 Certification

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

Date: 10/14/19

Signed: _____



Thomas J. McGill, Ph.D.

Section 8 References

- California Department of Fish and Wildlife (CDFW). 2012. Staff Report on Burrowing Owl Mitigation. State of California Natural Resources Agency.
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Appendix A Site Photographs



Photograph 1: Facing southeast from the northwest section of the project site. The site's eastern boundary shares a fenceline with March Field Air Museum and the airfield at March Air Reserve Base.



Photograph 2: Facing east across the project site. The site is mostly vegetated with weedy species, particularly Russian thistle (*Salsola tragus*), or in some areas has bare patches like in this photo.



Photograph 3: Facing southeast (downstream) within Drainage 1. The site contains five drainages. In-stream vegetation is a mosaic of native and non-native species and in some drainages is too dense to walk through.



Photograph 4: Facing southeast down the project site. There are some paved roads along the edges of the site.



Photograph 5: Facing northwest (upstream) within Drainage 1. Drainage 1 has several small, isolated pools.



Photograph 6: Facing northwest from the southern edge of the site. Many areas of the project site are near-monocultures of Russian thistle.

Appendix B Potentially Occurring Special-Status Biological Resources

Table B-1: Potentially Occurring Special-Status Biological Resources

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
WILDLIFE SPECIES				
<i>Accipiter cooperii</i> Cooper's hawk	Fed: None CA: WL	Generally found in forested areas up to 3,000 feet in elevation, especially near edges and rivers. Prefers hardwood stands and mature forests, but can be found in urban and suburban areas where there are tall trees for nesting. Common in open areas during nesting season.	No	Moderate. There is suitable foraging habitat throughout the site. This species is adapted to urban environments and occurs commonly.
<i>Accipiter striatus</i> sharp-shinned hawk	Fed: None CA: WL	Found in pine, fir and aspen forests. They can be found hunting in forest interior and edges from sea level to near alpine areas. Can also be found in rural, suburban and agricultural areas, where they often hunt at bird feeders. Typically found in southern California in the winter months.	No	Moderate. There is suitable foraging habitat throughout the site. This species does not nest in southern California. This species is adapted to urban environments and occurs commonly.
<i>Agelaius tricolor</i> tricolored blackbird	Fed: None CA: SSC	Range is limited to the coastal areas of the Pacific coast of North America, from Northern California to upper Baja California. Can be found in a wide variety of habitat including annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields, cattle feedlots, and dairies. Occasionally forage in riparian scrub habitats along marsh borders. Basic habitat requirements for breeding include open accessible water, protected nesting substrate (freshwater marsh dominated by cattails, willows, and bulrushes [<i>Schoenoplectus</i> sp.]), and either flooded or thorny or spiny vegetation and suitable foraging space providing adequate insect prey.	No	Presumed absent. No suitable habitat is present on-site.
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	Fed: None CA: WL	Typically found between 3,000 and 6,000 feet in elevation. Breed in sparsely vegetated scrubland on hillsides and canyons. Prefers coastal sage scrub dominated by California sagebrush (<i>Artemisia californica</i>), but they can also be found breeding in coastal bluff scrub, low-growing serpentine chaparral, and along the edges of tall chaparral habitats.	No	Presumed absent. No suitable habitat is present on-site.
<i>Ammodramus savannarum</i> grasshopper sparrow	Fed: None CA: SSC	Occurs in grassland, upland meadow, pasture, hayfield, and old field habitats. Optimal habitat contains short- to medium-height bunch grasses interspersed with patches of bare ground, a shallow litter layer, scattered forbs, and few shrubs. May inhabit thickets, weedy lawns, vegetated landfills, fence rows, open fields, or grasslands.	No	Presumed absent. No suitable habitat is present on-site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Anniella pulchra pulchra</i> silvery legless lizard	Fed: None CA: SSC	Occurs primarily in areas with sandy or loose loamy soils under sparse vegetation of beaches, chaparral, or pine-oak woodland; or near sycamores, oaks, or cottonwoods that grow on stream terraces. Often found under or in the close vicinity of logs, rocks, old boards, and the compacted debris of woodrat nests.	No	Presumed absent. No suitable habitat is present.
<i>Aquila chrysaetos</i> golden eagle	Fed: None CA: FP; WL	Occupies nearly all terrestrial habitats of the western states except densely forested areas. Favors secluded cliffs with overhanging ledges and large trees for nesting and cover. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats. Deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	No	Low. There is suitable foraging habitat throughout the site, but due to the active airport this species may be more likely to forage around Lake Perris or the San Jacinto Wildlife Area to the east. There is no nesting habitat.
<i>Ardea herodias</i> great blue heron	Fed: None CA: None	Forages along streams, marshes, lakes, and meadows. Nests colonially in tall trees (typically <i>Eucalyptus</i> sp.), on cliffsides, or in isolated spots in marshes.	No	Presumed absent. No suitable habitat is present on-site.
<i>Artemisiospiza belli belli</i> Bell's sparrow	Fed: None CA: WL	Generally prefers semi-open habitats with evenly spaced shrubs 1 – 2 meters in height. Dry chaparral and coastal sage scrub. Less common in tall dense, old chaparral.	No	Presumed absent. No suitable habitat is present on-site.
<i>Asio otus</i> long-eared owl	Fed: None CA: SSC	Hunts mostly at night over grasslands and other open habitats. Nesting occurs in dense trees such as oaks and willows where it occupies stick nests of other species, particularly raptors or corvids.	No	Presumed absent. No suitable habitat is present on-site.
<i>Aspidoscelis hyperythra</i> orangethroat whiptail	Fed: None CA: SSC	Semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral.	No	Presumed absent. No suitable habitat is present on-site.
<i>Aspidoscelis tigris stejnegeri</i> coastal whiptail	Fed: None CA: None	Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas.	Yes	Present. This species was observed on-site.
<i>Athene cunicularia</i> burrowing owl	Fed: None CA: SSC	Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent upon fossorial mammals for burrows, most notable ground squirrels.	Yes	Present. One burrowing owl was observed during the habitat assessment. Suitable burrows were observed on the eastern portion of the project site and surrounding area.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Buteo regalis</i> ferruginous hawk	Fed: None CA: WL	Occurs primarily in open grasslands and fields, but may be found in sagebrush flats, desert scrub, low foothills, or along the edges of pinyon-juniper woodland. Feeds primarily on small mammals and typically found in agricultural or open fields.	No	Low. Marginal foraging habitat is present on-site. This species is commonly seen around Lake Perris, San Jacinto Wildlife Area, and the general open fields north and south of Ramona Expressway to the east of the project site. This species does not nest in southern California.
<i>Calypte costae</i> Costa's hummingbird	Fed: None CA: None	Desert and semi-desert, arid brushy foothills and chaparral. A desert hummingbird that breeds in the Sonoran and Mojave Deserts. Departs desert heat moving into chaparral, scrub, and woodland habitats.	No	Presumed absent. No suitable habitat is present on-site.
<i>Ceratochrysis longimala</i> desert cuckoo wasp	Fed: None CA: None	Occurs in arid soils and uses flowers for sustenance. Lays eggs in the nests of bees, wasps, and other host insects.	No	Presumed absent. No suitable habitat is present on-site.
<i>Chaetodipus fallax fallax</i> northwestern San Diego pocket mouse	Fed: None CA: SSC	Occurs in desert and coastal habitats in southern California, Mexico, and northern Baja California, from sea level to at least 1,400 meters. Found in a variety of temperate habitats ranging from chaparral and grasslands to scrub forests and deserts. Requires low growing vegetation or rocky outcroppings, as well as sandy soils for burrowing.	No	Presumed absent. No suitable habitat is present on-site.
<i>Chaetura vauxi</i> Vaux's swift	Fed:CA: None SSC	Prefers redwood and Douglas-fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out snags. Fairly common migrant throughout most of the state in April and May, and August and September.	No	Presumed absent. No suitable habitat is present on-site.
<i>Charadrius montanus</i> mountain plover	Fed: None CA: SSC	Found in short grasslands, freshly-plowed fields, newly-sprouting grain fields, and sometimes in sod farms. Prefers short vegetation or bare ground with flat topography, particularly grazed areas or areas with fossorial rodents.	No	Presumed absent. No suitable habitat is present on-site. If the site were mowed it may present marginal habitat.
<i>Charina trivirgata</i> rosy boa	Fed: None CA: None	Ranges from southern California and western Arizona in the United states, southward to Baja California and western Sonora in Mexico. Species often inhabits rocky areas in coastal sage scrub, chaparral, and desert environments.	No	Presumed absent. No suitable habitat is present.
<i>Chondestes grammacus</i> lark sparrow	Fed: None CA: None	Common resident in lowlands and foothills throughout much of California. Frequents sparse valley foothill hardwood, valley foothill hardwood-conifer, open mixed chaparral and similar brushy habitats, and grasslands with scattered trees or shrubs.	No	Presumed absent. No suitable habitat is present on-site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Circus cyaneus</i> northern harrier	Fed: None CA: SSC	Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Mostly found in flat, or hummocky, open areas of tall, dense grasses moist or dry shrubs, and edges for nesting, cover, and feeding.	No	Low. Marginal foraging habitat is present on-site. There is no nesting habitat on-site.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	Fed: THR CA: END	Obligate riparian species with a primary habitat association of willow-cottonwood riparian forest. Nests are typically placed (72% of the time) in willows (<i>Salix</i> spp.), particularly in black willow (<i>S. gooddingii</i>), red willow (<i>S. laevigata</i>), and sandbar willow (<i>S. exigua</i>). This species typically requires large blocks of intact riparian habitat, with anything less than 37 acres in size and 328 feet wide generally considered unsuitable. Breeding season home ranges can be as much as 100 acres per individual bird. Yellow-billed cuckoos are considered rare anywhere in southern California outside of the Colorado River.	No	Presumed absent. No suitable habitat is present on-site.
<i>Coleonyx variegatus abbotti</i> San Diego banded gecko	Fed: None CA: None	Occurs in coastal and cismontane southern California from interior Ventura County south, although it is absent from the extreme outer coast. It is uncommon in coastal scrub and chaparral, most often occurring in granite or rocky outcrops in these habitats.	No	Presumed absent. No suitable habitat is present on-site.
<i>Crotalus ruber</i> red-diamond rattlesnake	Fed: None CA: SSC	It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake; however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats.	No	Presumed absent. No suitable habitat is present on-site.
<i>Diadophis punctatus modestus</i> San Bernardino ringneck snake	Fed: None CA: None	Common in open, relatively rocky areas within valley-foothill, mixed chaparral, and annual grass habitats.	No	Presumed absent. No suitable habitat is present on-site.
<i>Diadophis punctatus similis</i> San Diego ringneck snake	Fed: None CA: None	Prefers moist habitats, including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, and woodlands.	No	Presumed absent. No suitable habitat is present on-site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Dipodomys merriami parvus</i> San Bernardino kangaroo rat	Fed: END CA: SSC	Primarily found in Riversidian alluvial fan sage scrub and sandy loam soils, alluvial fans and flood plains, and along washes with nearby sage scrub. May occur at lower densities in Riversidian upland sage scrub, chaparral and grassland in uplands and tributaries in proximity to Riversidian alluvial fan sage scrub habitats. Tend to avoid rocky substrates and prefer sandy loam substrates for digging of shallow burrows.	No	Presumed absent. No suitable habitat is present on-site.
<i>Dipodomys stephensi</i> Stephens' kangaroo rat	Fed: END CA: THR	Occur in arid and semi-arid habitats with some grass or brush. Prefer open habitats with less than 50% protective cover. Require soft, well-drained substrate for building burrows and are typically found in areas with sandy soil.	No	Presumed absent. No suitable habitat is present on-site.
<i>Elanus leucurus</i> white-tailed kite	Fed: None CA: FP	Occurs in low elevation, open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Uses trees with dense canopies for cover.	No	Low. Marginal foraging habitat is present on-site. There is no nesting habitat on-site.
<i>Empidonax traillii</i> willow flycatcher	Fed: None CA: END	A rare to locally uncommon, summer resident in wet meadow and montane riparian habitats (2,000 to 8,000 ft) in the Sierra Nevada and Cascade Range. Most often occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows.	No	Presumed absent. No suitable habitat is present on-site.
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	Fed: END CA: END	Occurs in riparian woodlands in southern California. Typically requires large areas of willow thickets in broad valleys, canyon bottoms, or around ponds and lakes. These areas typically have standing or running water, or are at least moist.	No	Presumed absent. No suitable habitat is present on-site.
<i>Emys marmorata</i> western pond turtle	Fed: None CA: SSC	Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater. Found at elevations from sea level to over 5,900 feet (1,800 m).	No	Presumed absent. No suitable habitat is present on-site.
<i>Eremophila alpestris actia</i> California horned lark	Fed: None CA: WL	Generally found in shortgrass prairies, grasslands, disturbed fields, or similar habitat types along the coast or in deserts. Trees or shrubs are usually scarce or absent. Generally rare in montane, coniferous, or chaparral habitats. Forms large flocks outside of the breeding season.	No	Low. There is marginal habitat on-site. Suitability to occur would increase if the site were mowed or otherwise cleared of the extensive Russian thistle (<i>Salsola tragus</i>).

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Eumops perotis californicus</i> western mastiff bat	Fed: None CA: SSC	Primarily a cliff-dwelling species, roost generally under exfoliating rock slabs. Roosts are generally high above the ground, usually allowing a clear vertical drop of at least 3 meters below the entrance for flight. In California, it is most frequently encountered in broad open areas. Its foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas.	No	Low. There is marginal foraging habitat on-site but no roosting habitat.
<i>Euphydryas editha quino</i> Quino checkerspot butterfly	Fed: END CA: None	Range is now limited to a few populations in Riverside and San Diego counties. Common in meadows and upland sage scrub/chapparral habitat.	No	Presumed absent. No suitable habitat is present on-site.
<i>Falco columbarius</i> merlin	Fed: None CA: WL	Nest in forested openings, edges, and along rivers across northern North America. Found in open forests, grasslands, and especially coastal areas with flocks of small songbirds or shorebirds.	No	Low. Marginal foraging habitat is present on-site. This species is commonly seen around Lake Perris, San Jacinto Wildlife Area, and the general open fields north and south of Ramona Expressway to the east of the project site. This species does not nest in southern California.
<i>Gila orcuttii</i> arroyo chub	Fed: None CA: SSC	Warm streams of the Los Angeles Plain, which are typically muddy torrents during the winter, and clear quiet brooks in the summer, possibly drying up in places. They are found both in slow-moving and fast-moving sections, but generally deeper than 40 cm.	No	Presumed absent. No suitable habitat is present on-site.
<i>Haliaeetus leucocephalus</i> bald eagle	Fed: Delisted CA: END; FP	Occur primarily at or near seacoasts, rivers, swamps, and large lakes. Need ample foraging opportunities, typically near a large water source.	No	Presumed absent. No suitable habitat is present on-site.
<i>Icteria virens</i> yellow-breasted chat	Fed: None CA: SSC	Primarily found in tall, dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds. Breeding habitat must be dense to provide shade and concealment. It winters south the Central America.	No	Presumed absent. No suitable habitat is present on-site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Lanius ludovicianus</i> loggerhead shrike	Fed: None CA: SSC	Often found in broken woodlands, shrublands, and other habitats. Prefers open country with scattered perches for hunting and fairly dense brush for nesting.	No	Low. There is marginal habitat on-site. This species is commonly seen around Lake Perris, San Jacinto Wildlife Area, and the general open fields north and south of Ramona Expressway to the east of the project site.
<i>Lasiurus xanthinus</i> western yellow bat	Fed: None CA: SSC	Roosts in palm trees in foothill riparian, desert wash, and palm oasis habitats with access to water for foraging.	No	Presumed absent. No suitable habitat is present on-site.
<i>Lepus californicus bennettii</i> San Diego black-tailed jackrabbit	Fed: None CA: SSC	Occurs in diverse habitats, but primarily is found in arid regions supporting shortgrass habitats. Openness of open scrub habitat is preferred over dense chaparral.	Yes	Present. This species was observed on-site.
<i>Myotis ciliolabrum</i> western small-footed myotis	Fed: None CA: None	Occurs in a wide range of habitats, mostly arid wooded and brushy uplands near water. Prefers open stands in forests and woodlands. Roosts in caves, buildings, mines, and crevices.	No	Presumed absent. No suitable habitat is present on-site.
<i>Myotis yumanensis</i> Yuma myotis	Fed: None CA: None	Found in forests and woodlands near water. Roosts in caves, buildings, mines, and crevices.	No	Presumed absent. No suitable habitat is present on-site.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	Fed: None CA: SSC	Occurs in coastal scrub communities between San Luis Obispo and San Diego Counties. Prefers moderate to dense canopies, and especially rocky outcrops.	No	Presumed absent. No suitable habitat is present on-site.
<i>Numenius americanus</i> long-billed curlew	Fed: None CA: WL	Preferred winter habitats include large coastal estuaries, upland herbaceous areas, and croplands. On estuaries, feeding occurs mostly on intertidal mudflats.	No	Presumed absent. No suitable habitat is present on-site.
<i>Nycticorax nycticorax</i> black-crowned night heron	Fed: None CA: None	Fairly common, yearlong resident in lowlands and foothills throughout most of California, including the Salton Sea and Colorado River areas, and very common locally in large nesting colonies. Feeds along the margins of lacustrine, large riverine, and fresh and saline emergent habitats and rarely, on kelp beds in marine sub tidal habitats. Nests and roosts in dense-foliaged trees and dense emergent wetlands.	No	Presumed absent. No suitable habitat is present on-site.
<i>Nyctinomops femorosaccus</i> pocketed free-tailed bat	Fed: None CA: SSC	Often found in pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis.	No	Presumed absent. No suitable habitat is present.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Onychomys torridus ramona</i> southern grasshopper mouse	Fed: None CA: SSC	Inhabits alkali desert scrub and other desert scrub habitats, and to a lesser extent succulent shrubs, desert washes, desert riparian, coastal scrub, mixed chaparral, and sagebrush habitats. Generally rare in valley foothill and montane riparian habitats. Prefers low to moderate shrub cover and requires friable soils.	No	Presumed absent. No suitable habitat is present on-site.
<i>Perognathus longimembris brevinasus</i> Los Angeles pocket mouse	Fed: None CA: SSC	Occurs in lower elevation grasslands and coastal sage scrub communities in and around the Los Angeles Basin. Prefers open ground with fine sandy soils. May not dig extensive burrows, but instead will seek refuge under weeds and dead leaves instead.	No	Presumed absent. No suitable habitat is present on-site.
<i>Phrynosoma blainvillii</i> coast horned lizard	Fed: None CA: SSC	Occurs in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest. In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance (i.e. fire, floods, roads, grazing, fire breaks). The key elements of such habitats are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	No	Moderate. There is suitable habitat for this species throughout the project site. Numerous native ant colonies were found in open spaces throughout the site.
<i>Plegadis chihi</i> white-faced ibis	Fed: None CA: WL	Prefers to feed in fresh emergent wetland, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded pastures and croplands. Nests in dense, fresh emergent wetland.	No	Presumed absent. No suitable habitat is present on-site.
<i>Poliioptila californica californica</i> coastal California gnatcatcher	Fed: THR CA: SSC	Obligate resident of sage scrub habitats that are dominated by California sagebrush (<i>Artemisia californica</i>). This species generally occurs below 750 feet elevation in coastal regions and below 1,500 feet inland. Ranges from the Ventura County, south to San Diego County and northern Baja California and it is less common in sage scrub with a high percentage of tall shrubs. Prefers habitat with more low-growing vegetation.	No	Presumed absent. No suitable habitat is present on-site.
<i>Poocetes gramineus affinis</i> Oregon vesper sparrow	Fed: None CA: SSC	This subspecies is distributed from western Washington and western Oregon to northwest Baja California. Vesper sparrows breed in dry sagebrush-grass associations, dry and open ponderosa pine (<i>Pinus ponderosa</i>) woodlands, in pinyon-juniper woodlands, and in alpine and subalpine shortgrass meadows. In the winter they are found in weedy or grassy pastures, prairies, burned areas, or woodland clearings.	Yes	Present. A vesper sparrow was observed on-site. There are two western subspecies of vesper sparrow, but they are indistinguishable in the field. Based on range descriptions, the bird observed is presumed to be an Oregon vesper sparrow.
<i>Rana draytonii</i> California red-legged frog	Fed: THR CA: SSC	Inhabits quiet pools of streams, marshes, and occasionally ponds. Occurs along the coast ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges.	No	Presumed absent. No suitable habitat is present on-site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Salvadora hexalepis virgulata</i> coast patch-nosed snake	Fed: None CA: SSC	Found in brushy or shrubby vegetation along the coast and requires small mammal burrows for refuge and overwintering.	No	Presumed absent. No suitable habitat is present on-site.
<i>Setophaga petechia</i> yellow warbler	Fed: None CA: SSC	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes and the eastern side of the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties. Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral. May also use oaks, conifers, and urban areas near stream courses.	No	Presumed absent. No suitable habitat is present on-site.
<i>Spea hammondi</i> western spadefoot	Fed: None CA: SSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washed, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rainpools which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	No	Low. There is marginal breeding habitat on-site where ephemeral pools of water collect in the main channel.
<i>Spinus lawrencei</i> Lawrence's goldfinch	Fed: None CA: None	Open woodlands, chaparral, and weedy fields. Closely associated with oaks. Nests in open oak or other arid woodland and chaparral near water.	No	Moderate. There is suitable foraging habitat throughout the project site but no nesting habitat. May forage on-site while roaming through the area.
<i>Spizella atrogularis</i> black-chinned sparrow	Fed: None CA: None	Breeds locally and uncommonly in foothills bordering Central Valley and commonly on arid mountain sloped of southern CA. Occurs mostly on sloping ground in mixed chaparral, chamise-redshank chaparral, sagebrush, and similar brushy habitats.	No	Presumed absent. No suitable habitat is present on-site.
<i>Spizella passerina</i> chipping sparrow	Fed: None CA: None	Prefers open wooded habitats with a sparse or low herbaceous layer and few shrubs, if any. Requires trees for resting and singing, and prefers trees for nesting, often forages in nearby herbaceous and open shrub habitats, including dry margins of wet meadows.	No	Presumed absent. No suitable habitat is present on-site.
<i>Streptocephalus woottoni</i> Riverside fairy shrimp	Fed: END CA: None	Freshwater crustacean that is found in vernal pools in the coastal California area.	No	Presumed absent. No suitable habitat is present on-site.
<i>Taxidea taxus</i> American badger	Fed: None CA: SSC	Primarily occupy grasslands, parklands, farms, tallgrass and shortgrass prairies, meadows, shrub-steppe communities and other treeless areas with sandy loam soils where it can dig more easily for its prey. Occasionally found in open chaparral (with less than 50% plant cover) and riparian zones.	No	Presumed absent. No suitable habitat is present on-site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Thamnophis hammondi</i> two-striped garter snake	Fed: None CA: SSC	Occurs in or near permanent fresh water, often along streams with rocky beds and riparian growth up to 7,000 feet in elevation.	No	Presumed absent. No suitable habitat is present on-site.
<i>Vireo bellii pusillus</i> least Bell's vireo	Fed: END CA: END	Primarily occupy Riverine riparian habitat that typically feature dense cover within 1 -2 meters of the ground and a dense, stratified canopy. Typically it is associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodlands, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses, 2,000 feet elevation in the interior.	No	Presumed absent. No suitable habitat is present on-site.
PLANT SPECIES				
<i>Abronia villosa</i> var. <i>aurita</i> chaparral sand-verbena	Fed: None CA: None CNPS: 1B.1	Grows in sandy soils in coastal sage scrub and in chaparral habitats. Grows in elevation from 262 to 5,249 feet. Blooming period ranges from January to September.	No	Presumed absent. No suitable habitat is present.
<i>Allium munzii</i> Munz's onion	Fed: END CA: THR CNPS: 1B.1	Found in chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Found at elevations ranging from 974 to 3,510 feet. Blooming period is from March to May.	No	Presumed absent. No suitable habitat is present.
<i>Ambrosia pumila</i> San Diego ambrosia	Fed: END CA: None CNPS: 1B.1	Occurs in open habitats in coarse substrates near drainages, and in upland areas on clay slopes or on the dry margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse grasslands or marginal wetland habitats such as river terraces, pools, and alkali playas. Found at elevations ranging from 66 to 1,362 feet. Blooming period is from April to October.	No	Presumed absent. No suitable habitat is present.
<i>Arenaria paludicola</i> marsh sandwort	Fed: END CA: END CNPS: 1B.1	Grows mainly in wetlands and freshwater marshes in arid climates. The plant can grow in saturated acidic bog soils and soils that are sandy with a high organic content. Found at elevations ranging from 33 to 558 feet. Blooming period is from May to August.	No	Presumed absent. No suitable habitat is present and the project site is outside of the known elevation range for this species.
<i>Artemisia palmeri</i> San Diego sagewort	Fed: None CA: None CNPS: 4.2	Found in sandy and mesic soils within chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland. Found at elevations ranging from 49 to 3,002 feet. Blooming period is from February to September.	No	Presumed absent. No suitable habitat is present.
<i>Atriplex coronata</i> var. <i>notatior</i> San Jacinto Valley crownscale	Fed: END CA: None CNPS: 1B.1	Grows in alkaline conditions within playas, mesic valley and foothill grasslands, and vernal pools. Found at elevations ranging from 456 to 1,640 feet. Blooming period is from April to August.	No	Presumed absent. No suitable habitat is present.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Atriplex pacifica</i> South Coast saltscale	Fed: None CA: None CNPS: 1B.2	Found in coastal bluff scrub, coastal dunes, coastal scrub, and in playas. Found at elevations ranging from 0 to 459 feet. Blooming period is from March to October.	No	Presumed absent. No suitable habitat is present and the project site is outside of the known elevation range for this species.
<i>Atriplex parishii</i> Parish's brittlescale	Fed: None CA: None CNPS: 1B.1	Habitat types include chenopod scrub, playas, and vernal pools. Found at elevations ranging from 82 to 6,234 feet. Blooming period is from June to October.	No	Presumed absent. No suitable habitat is present.
<i>Atriplex serenana</i> var. <i>davidsonii</i> Davidson's saltscale	Fed: None CA: None CNPS: 1B.2	Grows in alkaline soils within coastal bluff scrub and coastal scrub. Found at elevations ranging from 33 to 656 feet. Blooming period is from April to October.	No	Presumed absent. No suitable habitat is present and the project site is outside of the known elevation range for this species.
<i>Berberis nevinii</i> Nevin's barberry	Fed: END CA: END CNPS: 1B.1	Occurs on steep, north-facing slopes or in low-grade sandy washes in chaparral, cismontane woodland, coastal scrub, and riparian scrub. Found at elevations ranging from 951 to 5,167 feet. Blooming period is from March to June.	No	Presumed absent. No suitable habitat is present.
<i>Brodiaea filifolia</i> thread-leaved brodiaea	Fed: THR CA: Candidate END CNPS: 1B.1	Grows in chaparral openings, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools, often in clay soils. Found at elevations ranging from 82 to 3,675 feet. Blooming period is from March to June.	No	Presumed absent. No suitable habitat is present.
<i>California macrophylla</i> round-leaved filaree	Fed: None CA: None CNPS: 1B.2	Grows in clay soils within cismontane woodland valley and foothill grassland. Found at elevations ranging from 49 to 3,937 feet. Blooming period is from March to May.	No	Presumed absent. No suitable habitat is present.
<i>Calochortus plummerae</i> Plummer's mariposa-lily	Fed: None CA: None CNPS: 4.2	Prefers openings in chaparral, foothill woodland, coastal sage scrub, valley foothill grasslands, cismontane woodland, lower montane coniferous forest and yellow pine forest. Often found on dry, rocky slopes and soils and brushy areas. Can be very common after a fire. Found at elevations ranging from 459 to 6,299 feet. Blooming period is from May to July.	No	Presumed absent. No suitable habitat is present.
<i>Caulanthus simulans</i> Payson's jewelflower	Fed: None CA: None CNPS: 4.2	Occurs on granitic sandy soils in chaparral and coastal scrub habitats. Found at elevations ranging from 295 to 7,218 feet. Blooming period is from February to June.	No	Presumed absent. No suitable habitat is present.
<i>Centromadia pungens</i> ssp. <i>laevis</i> smooth tarplant	Fed: None CA: None CNPS: 1B.1	Found in alkaline soils within chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland habitats. Found at elevations ranging from 0 to 2,100 feet. Blooming period is from April to September.	No	Moderate. There is suitable habitat for this species throughout most of the project site.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Chloropyron maritimum ssp. maritimum</i> salt marsh bird's-beak	Fed: END CA: END CNPS: 1B.2	Upper terraces and higher edges of coastal salt marshes where tidal inundation is periodic. Found at elevations ranging from 0 to 98 feet. Blooming period is from May to October.	No	Presumed absent. No suitable habitat is present and the project site is outside of the known elevation range for this species.
<i>Chorizanthe leptotheca</i> Peninsular spineflower	Fed: None CA: None CNPS: 4.2	Found in granitic soils within chaparral, coast scrub, and lower montane coniferous forest habitats. Found at elevations ranging from 984 to 6,234 feet. Blooming period is from May to August.	No	Presumed absent. No suitable habitat is present.
<i>Chorizanthe parryi</i> var. parryi Parry's spineflower	Fed: None CA: None CNPS: 1B.1	Occurs on sandy and/or rocky soils in chaparral, coastal sage scrub, and sandy openings within alluvial washes and margins. Found at elevations ranging from 951 to 3,773 feet. Blooming period is from April to June.	No	Presumed absent. No suitable habitat is present.
<i>Chorizanthe polygonoides</i> var. longispina long-spined spineflower	Fed: None CA: None CNPS: 1B.2	Typically found on clay lenses which are largely devoid of shrubs. Can be found on the periphery of vernal pool habitat and even on the periphery of montane meadows near vernal seeps. Found at elevations ranging from 98 to 5,020 feet. Blooming period is from April to July.	No	Presumed absent. No suitable habitat is present. The site has been highly disturbed.
<i>Convolvulus simulans</i> small-flowered morning-glory	Fed: None CA: None CNPS: 4.2	Grows in clay soils within serpentinite seeps, chaparral, coastal scrub, valley and foothill grassland habitats. Found at elevations ranging from 98 to 2,297 feet. Blooming period is from March to July.	No	Presumed absent. No suitable habitat is present.
<i>Cylindropuntia californica</i> var. californica snake cholla	Fed: None CA: None CNPS: 1B.1	Found in chaparral and coastal scrub. Found at elevations ranging from 98 to 492 feet. Blooming period is from April to May.	No	Presumed absent. No suitable habitat is present and the project site is outside of the known elevation range for this species.
<i>Deinandra paniculata</i> paniculate tarplant	Fed: None CA: None CNPS: 4.2	Typically found in vernal mesic, sometimes sandy soils in coastal scrub, valley and foothill grasslands, and vernal pools. Found at elevations ranging from 82 to 3,084 feet. Blooming period is from April to November.	No	Low. There is marginal habitat on-site.
<i>Dodecahema leptoceras</i> slender-horned spineflower	Fed: END CA: END CNPS: 1B.1	Chaparral, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes. Found at elevations ranging from 1,181 to 2,690 feet. Blooming period is from April to June.	No	Presumed absent. No suitable habitat is present.
<i>Harpagonella palmeri</i> Palmer's grapplinghook	Fed: None CA: None CNPS: 4.2	Occurs on clay soils in chaparral, coastal scrub, and valley and foothill grasslands. Found at elevations ranging from 66 to 3,133 feet. Blooming period is from March to May.	No	Presumed absent. No suitable habitat is present.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Hordeum intercedens</i> vernal barley	Fed: None CA: None CNPS: 3.2	Found in coastal dunes, coastal scrub, vernal pools, and valley and foothill grassland habitats. Found at elevations ranging from 16 to 3,281 feet. Blooming period is from March to June.	No	Presumed absent. No suitable habitat is present.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	Fed: None CA: None CNPS: 1B.1	Prefers playas, vernal pools, and coastal salt marshes and swamps. Found at elevations ranging from 3 to 4,003 feet. Blooming period is from February to June.	No	Presumed absent. No suitable habitat is present.
<i>Lepechinia cardiophylla</i> heart-leaved pitcher sage	Fed: None CA: None CNPS: 1B.2	Grows in closed-cone coniferous forest, chaparral, and cismontane woodland habitats. Found at elevations ranging from 1,706 to 4,495 feet. Blooming period is from April to July.	No	Presumed absent. No suitable habitat is present.
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper-grass	Fed: None CA: None CNPS: 4.3	Dry soils on chaparral and coastal sage scrub. Found at elevations ranging from 3 to 2,904 feet. Blooming period is from January to July.	No	Presumed absent. No suitable habitat is present.
<i>Myosurus minimus</i> ssp. <i>apus</i> little mousetail	Fed: None CA: None CNPS: 3.1	Occurs in alkaline soils in valley and foothill grassland and vernal pools. Found at elevations ranging from 66 to 2,100 feet. Blooming period is from March to June.	No	Presumed absent. No suitable habitat is present.
<i>Navarretia fossalis</i> spreading navarretia	Fed: THR CA: None CNPS: 1B.1	Grows in chenopod scrub, assorted shallow freshwater marshes and swamps, playas, and vernal pools. Found at elevations ranging from 98 to 2,149 feet. Blooming period is from April to June.		Presumed absent. No suitable habitat is present.
<i>Romneya coulteri</i> Coulter's matilija poppy	Fed: None CA: None CNPS: 4.2	Found in recently burned areas within chaparral and coastal scrub habitats. Found at elevations ranging from 66 to 3,937 feet. Blooming period is from March to July.	No	Presumed absent. No suitable habitat is present.
<i>Symphyotrichum defoliatum</i> San Bernardino aster	Fed: None CA: None CNPS: 1B.2	Grows in grasslands and disturbed areas in the San Gabriel and San Bernardino Mountains and Peninsular Range. Occurs in vernal wet sites including ditches, streams, and springs in many plant communities including meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous woodland, and grassland. Found at elevations ranging from 7 to 6,693 feet. Blooming period is from July to November.	No	Presumed absent. No suitable habitat is present.
<i>Texosporium sancti-jacobi</i> woven-spored lichen	Fed: None CA: None CNPS: 3	Found on soil, small mammal pellets, dead twigs, and on <i>Selaginella</i> sp. within openings in chaparral habitat. Found at elevations ranging from 951 to 2,165 feet.	No	Presumed absent. No suitable habitat is present.

Scientific Name Common Name	Status	Habitat	Observed On-site	Potential to Occur
<i>Trichocoronis wrightii</i> var. wrightii Wright's trichocoronis	Fed: None CA: None CNPS: 2B.1	Grows in alkaline soils in meadows and seeps, marshes and swamps, riparian forest, and vernal pools. Found at elevations ranging from 16 to 1,427 feet. Blooming period is from May to September.	No	Presumed absent. No suitable habitat is present.
CDFW SENSITIVE HABITATS				
Southern Coast Live Oak Riparian Forest	CDFW Sensitive Habitat	Open to locally dense evergreen riparian woodlands dominated by <i>Quercus agrifolia</i> . This type appears to be richer in herbs and poorer in understory shrubs than other riparian communities. Bottomlands and outer floodplains along larger streams, on fine-grained, rich alluvium. Canyons and valleys of coastal southern California.	No	Absent
Southern Cottonwood Willow Riparian Forest	CDFW Sensitive Habitat	Dominated by cottonwood (<i>Populus</i> spp.) and willow (<i>Salix</i> spp.) trees and shrubs. Considered to be an early successional stage as both species are known to germinate almost exclusively on recently deposited or exposed alluvial soils.	No	Absent
Southern Sycamore Alder Riparian Woodland	CDFW Sensitive Habitat	Occurs below 2,000 meters in elevation, sycamore and alder often occur along seasonally-flooded banks; cottonwoods and willows are also often present. Poison oak, mugwort, elderberry and wild raspberry may be present in understory.	No	Absent

U.S. Fish and Wildlife Service (Fed) - Federal

END- Federal Endangered

THR- Federal Threatened

California Department of Fish and Wildlife (CA) - California

END- California Endangered

THR- California Threatened

Candidate- Candidate for listing under the California Endangered Species Act

FP- California Fully Protected

SSC- Species of Special Concern

WL- Watch List

California Native Plant Society (CNPS)**California Rare Plant Rank**

1B Plants Rare, Threatened, or Endangered in California and Elsewhere

2B Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3 Plants About Which More Information is Needed – A Review List

4 Plants of Limited Distribution – A Watch List

CNPS Threat Ranks

0.1- Seriously threatened in California

0.2- Moderately threatened in California

0.3- Not very threatened in California

Appendix C Flora and Fauna Compendium

Table C-1: Plant Species

Scientific Name	Common Name
PLANTAE	
<i>Acmispon americanus</i>	Spanish lotus
<i>Acmispon glaber</i>	Deerweed
<i>Amaranthus albus</i>	Pigweed*
<i>Ambrosia acanthicarpa</i>	Annual bursage
<i>Atriplex canescens</i>	Fourwing saltbush
<i>Baccharis salicifolia</i>	Mulefat
<i>Bromus madritensis ssp. rubens</i>	Red brome*
<i>Corethrogyne filaginifolia</i>	Common sandaster
<i>Croton setiger</i>	Doveweed
<i>Datura wrightii</i>	Jimsonweed
<i>Deinandra paniculata</i>	Paniculate tarplant
<i>Erigeron canadensis</i>	Horseweed
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Erodium cicutarium</i>	Red-stemmed filaree*
<i>Eucalyptus polyanthemos</i>	Silver dollar gum*
<i>Euphorbia albomarginata</i>	Rattlesnake spurge
<i>Helianthus annuus</i>	Common sunflower
<i>Heterotheca grandiflora</i>	Telegraph weed
<i>Hirschfeldia incana</i>	Short-podded mustard*
<i>Isocoma menziesii</i>	Goldenbush
<i>Lamium amplexicaule</i>	Henbit*
<i>Marrubium vulgare</i>	Horehound*
<i>Oncosiphon piluliferum</i>	Stinknet*
<i>Salix gooddingii</i>	Black willow
<i>Salsola tragus</i>	Russian thistle*
<i>Sisymbrium irio</i>	London rocket*
<i>Stephanomeria exigua</i>	Small wirelettuce
<i>Tamarix ramosissima</i>	Tamarisk*
<i>Trichostema lanceolatum</i>	Vinegarweed
<i>Verbena lasiostachys</i>	Western verbena
<i>Washingtonia filifera</i>	Mexican fan-palm*
<i>Xanthium strumarium</i>	Cocklebur

* Non-native species

Table C-2: Wildlife Species

Scientific Name	Common Name
AVES	
<i>Athene cunicularia</i>	Burrowing owl
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Calypte anna</i>	Anna's hummingbird
<i>Carpodacus mexicanus</i>	House finch
<i>Columba livia</i>	Rock pigeon*
<i>Corvus corax</i>	Common raven
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Falco mexicanus</i>	Prairie falcon
<i>Falco sparverius</i>	American kestrel
<i>Passerculus sandwichensis</i>	Savannah sparrow
<i>Pooecetes gramineus affinis</i>	Oregon vesper sparrow
<i>Sayornis nigricans</i>	Black phoebe
<i>Sayornis saya</i>	Say's phoebe
<i>Setophaga coronata</i>	Yellow-rumped warbler
<i>Spinus psaltria</i>	Lesser goldfinch
<i>Sturnella neglecta</i>	Western meadowlark
<i>Tyrannus vociferans</i>	Cassin's kingbird
<i>Zenaida macroura</i>	Mourning dove
<i>Zonotrichia leucophrys</i>	White-crowned sparrow
REPTILIA	
<i>Aspidoscelis tigris stejnegeri</i>	San Diegan tiger whiptail
<i>Sceloporus occidentalis longipes</i>	Great Basin fence lizard
<i>Uta stansburiana elegans</i>	Western side-blotched lizard
MAMMALIA	
<i>Canis latrans</i>	Coyote
<i>Lepus californicus</i>	Black-tailed jackrabbit
<i>Sylvilagus audubonii</i>	Cottontail

* Non-native species

**Appendix D Habitat Assessment and Western
Riverside County MSHCP
Consistency Analysis for Offsite
Street Improvements for the VIP
215 Project**



July 17, 2018

HILLWOOD INVESTMENT PROPERTIES

Attention: *Kathy Hoffer*

2855 Michelle Drive, Suite 180

Irvine, California 92606

SUBJECT: Habitat Assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for Offsite Street Improvements for the Veteran's Industrial Park 215 Project in the Cities of Moreno Valley and Perris, Riverside County, California

Introduction

This report contains the findings of ELMT Consulting's (ELMT) habitat assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis for offsite street improvements for the Veterans Industrial Park 215 Project (project site or site) located in the Cities of Moreno Valley and Perris, Riverside County, California. The Veterans Industrial Park 215 Project is located on the March Air Reserve Base (base), outside of the City boundaries of Moreno Valley and Perris. Offsite street improvements include the extension of Van Buren Boulevard north of the project site, and the extension of Western Way south of the project site to Nandina Avenue, and the installation of a new 18" Eastern Municipal Water District (EMWD) pipeline along Western Way from Nandina Avenue to Harley Knox Boulevard.

The habitat assessment was conducted by biologists Thomas J. McGill, Ph.D. and Travis J. McGill on June 19, 2018 to document baseline conditions and assess the potential for special-status¹ plant and wildlife species to occur within the offsite street improvement areas that could pose a constraint to implementation of the proposed project. Special attention was given to the suitability of the habitats found within the offsite areas proposed for various street improvements to support burrowing owl (*Athene cunicularia*) and several other special-status species identified by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB) and other electronic databases as potentially occurring on or within the general vicinity of the project site.

The Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Map was queried to determine if the MSHCP identifies any potential survey requirements for the offsite areas proposed for street improvements. Further, these offsite areas were also reviewed against the MSHCP to

¹ As used in this report, "special-status" refers to plant and wildlife species that are federally, State, and MSHCP listed, proposed, or candidates; plant species that have been designated with a California Native Plant Society Rare Plant Rank; wildlife species that are designated by the CDFW as fully protected, species of special concern, or watch list species; and specially protected natural vegetation communities as designated by the CDFW.

determine if they were located within any MSHCP areas including Criteria Cells (core habitat and wildlife movement corridors) or areas proposed for conservation.

Based on the RCA MSHCP Information Map query and review of the MSHCP, it was determined that the offsite street improvement areas are located within the Mead Valley Area Plan of the MSHCP but are not located within any Criteria Cells or MSHCP Conservation Areas. The offsite areas are located within the designated survey area for burrowing owl (*Athene cuicularia*). No special-status plant surveys (narrow endemic plant species surveys) or special-status wildlife surveys were identified for these offsite areas.

Project Description

This report covers the offsite street improvements associated with the Veterans Industrial 215 Project. The offsite street improvement areas include: 1) the extension of Van Buren Boulevard north of the project site; 2) the extension of Western Way from the southern boundary of the project site south to Nandina Avenue; and 3) the installation of a new 18" EMWD pipeline along Western Way from Nandina Avenue to Harley Knox Boulevard. Offsite street improvements will include the following:

Van Buren Boulevard Extension

Includes the construction of 4 lanes connecting the northern boundary of the project site to the existing 4 lane Van Buren Boulevard.

Western Way up to Nandina Avenue

Improvements to the street will include no raised median, curb, gutter, sidewalk, landscaping, and street lighting. Storm drainage along the streets will be accomplished by the installation of bio swales along the eastern side of Van Buren Boulevard and Western Way. Construction of dry utilities to serve the project site as well as undergrounding of power/telecommunications facilities (if applicable) will be included in the street construction.

Western Way from Nandina Avenue to Harley Knox Boulevard

Includes the installation of a new 18" EMWD pipeline within existing right-of-way. No street improvements are proposed as this segment is currently fully improved with pavement, curb, gutter, and sidewalk.

Project Location

The Veterans Industrial Park 215 project is located on the March Air Reserve Base east of Interstate 215, South of State Route 60 between the Cities of Moreno Valley and Perris, Riverside County, California. It should be noted that the March Air Reserve Base is not within the boundaries of the Western Riverside County's MSHCP. The proposed offsite street improvements are located outside of March Air Reserve Base in the Cities of Moreno Valley and Perris within the boundaries of the Western Riverside County's MSHCP (refer to Exhibits 1 and 2 in Attachment A).

Methodology

Western Riverside County MSHCP Consistency Analysis

The offsite street improvements are located in the Cities of Moreno Valley and Perris within the Mead Valley Area Plan of the MSHCP. The Cities are permittees under the MSHCP and, while the project is not specifically identified as a Covered Activity under Section 7.1 of the MSHCP, public and private development that are outside of Criteria Areas and Public/Quasi-Public (PQP) Lands are permitted under the MSHCP, subject to consistency with MSHCP policies that apply to area outside of Criteria Areas. As such, to achieve coverage, the project must be consistent with the following policies of the MSHCP:

- The policies for the protection of species associated with Riparian/Riverine areas and vernal pools as set forth in Section 6.1.2 of the MSHCP;
- The policies for the protection of Narrow Endemic Plant Species as set forth in Section 6.1.3 of the MSHCP;
- The requirements for conducting additional surveys as set forth in Section 6.3.2 of the MSHCP;
- Guidelines pertaining to the Urban/Wildlands Interface intended to address indirect effects associated with locating Development in proximity to the MSHCP Conservation Area as detailed in Section 6.1.4 of the MSHCP.

The project was reviewed to determine consistency with the MSHCP. Geographic Information System (GIS) software was utilized to map the project site in relation to MSHCP areas including Criteria Cells (core habitat and wildlife movement corridors) and the Conservation Area, including PQP lands.

Riparian/Riverine Areas and Vernal Pools

The MSHCP requires that an assessment be completed if impacts to riparian/riverine areas and vernal pools could occur from construction of offsite street improvements in support of the proposed project. According to the MSHCP, the documentation for the assessment shall include mapping and a description of the functions and values of the mapped areas with respect to the species listed in Section 6.1.2 of the MSHCP, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*.

Aerial photography was reviewed prior to conducting the habitat assessment. The aerials were used to locate and inspect any potential natural drainage features and water bodies that may be considered riparian/riverine habitat and/or fall under the jurisdiction of the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory authorities.

Narrow Endemic Plant Species

Section 6.1.3 of the MSHCP, *Protection of Narrow Endemic Plant Species*, states that the MSHCP database does not provide sufficient detail to determine the extent of the presence/distribution of Narrow Endemic Plant Species within the MSHCP Plan Area. Additional surveys may be needed to gather information to determine the presence/absence of these species to ensure that appropriate conservation of these species occurs. Based on the RCA MSHCP Information Map query and review of the MSHCP, it was determined

that the offsite street improvement areas are not located within the designated survey area for Narrow Endemic Plant Species.

Additional Survey Needs and Procedures

In accordance with Section 6.3.2 of the MSHCP, *Additional Survey Needs and Procedures*, additional surveys may be needed for certain species in order to achieve coverage for these species. The query of the RCA MSHCP Information Map and review of the MSHCP determined that the offsite street improvement areas are located within the designated survey area for burrowing owl as depicted in Figure 6-4 within Section 6.3.2 of the MSHCP. No other special-status wildlife species surveys were identified.

Urban/Wildlands Interface Guidelines

Section 6.1.4 of the MSHCP, *Guidelines Pertaining to Urban/Wildlands Interface*, is intended to address indirect effects associated with development in proximity to MSHCP Conservation Areas. The Urban/Wildlife Interface Guidelines are intended to ensure that indirect project-related impacts to the MSHCP Conservation Area, including drainage, toxics, lighting, noise, invasive plant species, barriers, and grading/land development, are avoided or minimized. The offsite street improvement areas are not located within or immediately adjacent to any Criteria Cells, corridors, or linkages. Therefore, the Urban/Wildlands Interface Guidelines do not apply to this project.

Literature Review

The first step in determining if a project is consistent with the above listed sections of the MSHCP is to conduct a literature review and records search for special-status biological resources potentially occurring on or within the vicinity of the project. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the project were determined through a query of the CDFWs CNDDDB Rarefind 5, the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, United States Fish and Wildlife Service (USFWS) species listings, and species covered within the MSHCP and associated technical documents.

All available reports, survey results, and literature detailing the biological resources previously observed on or within the vicinity of the project were reviewed to understand existing site conditions and note the extent of any disturbances that have occurred on the project that would otherwise limit the distribution of special-status biological resources. Standard field guides and texts were reviewed for specific habitat requirements of special-status and non-special-status biological resources, as well as the following resources:

- Google Earth Pro historic aerial imagery (1994-2018);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey;
- USFWS Critical Habitat designations for Threatened and Endangered Species;
- Stephen's Kangaroo Rat Habitat Conservation Plan; and
- RCA MSHCP Information Map.

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the project. The CNDDDB database was used, in conjunction with ArcGIS software, to locate the nearest recorded occurrences of special-status species and determine the distance from the project.

Habitat Assessment/Field Investigation

Following the literature review, biologists Thomas J. McGill, Ph.D. and Travis J. McGill inventoried and evaluated the condition of the habitat within the offsite street improvement areas on June 19, 2018. Plant communities identified on aerial photographs during the literature review were verified by walking meandering transects through the plant communities and along boundaries between plant communities. In addition, aerial photography was reviewed prior to the site investigation to locate potential natural corridors and linkages that may support the movement of wildlife through the area. These areas identified on aerial photography were then walked during the field survey.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Plant species observed during the field survey were identified by visual characteristics and morphology in the field. Unusual and less familiar plant species were photographed during the field survey and identified in the laboratory using taxonomical guides. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

Existing Site Condition

The Van Buren Boulevard extension is located at an approximate elevation of 1,525 feet above mean sea level, while the southern offsite street improvement areas are located at an approximate elevation of 1,500 feet above mean sea level with no areas of topographic relief. Based on the NRCS USDA Web Soil Survey, the offsite street improvement areas are underlain by Hanford fine sandy loam (0 to 2 percent slopes), Greenfield sandy loam (0 to 2 percent slopes), Monserate sandy loam (0 to 5 percent slopes), Exeter sandy loam (0 to 2 percent slopes), and Ramona sandy loam (0 to 2 percent slopes). Soils on-site have been mechanically disturbed and heavily compacted from historic land uses.

The proposed offsite street improvements north of the project site are located within the existing alignment of Van Buren Boulevard that consists of paved and heavily disturbed road shoulder. The proposed extension of Western Way between the southern boundary of the project site and Nandina Avenue is located within an existing access road that consists of loose gravel and heavily disturbed vacant land. The installation of EMWDs 18" pipeline will occur within an existing right-of-way for a fully improved street along Western Way between Nandina Avenue and Harley Knox Boulevard.

Vegetation

Due to existing land uses (i.e., routine weed abatement activities and commercial development), no native plant communities or natural communities of special concern were observed on or adjacent to the proposed offsite street improvement areas. The vegetation within the offsite street improvement areas can be characterized as a heavily disturbed land cover type that is sparsely vegetated with a variety of non-native

and early successional weedy plant species or developed. Common plant species observed within the offsite street improvement areas include coastal goldenbush (*Isocoma menziesii* var. *menziesii*), wild oat (*Avena fatua*), mouse barley (*Hordeum murinum*), London rocket (*Sisymbrium irio*), stinknet (*Oncosiphon piluliferum*), horseweed (*Erigeron bonariensis*), and red brome (*Bromus madritensis* ssp. *rubens*). Refer to Attachment B, *Site Photographs*, for representative photographs of the project site.

Wildlife

Plant communities provide foraging habitat, nesting/denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species that were observed or are expected to occur within the offsite street improvement areas. The discussion is to be used as a general reference and is limited by the season, time of day, and weather conditions in which the field survey was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation.

Fish

The MSHCP does not identify any covered or special-status fish species as potentially occurring within the offsite street improvement areas. Further, no fish or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the proposed offsite street improvement areas. Therefore, no fish are expected to occur and are presumed absent.

Amphibians

The MSHCP does not identify any covered or special-status amphibian species as potentially occurring within the offsite street improvement areas. Further, no amphibians or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for amphibian species were observed on or within the vicinity of the offsite street improvement areas. Therefore, no amphibians are expected to occur.

Reptiles

The MSHCP does not identify any covered or special-status reptilian species as potentially occurring within the offsite street improvement areas. The offsite street improvement areas provide a limited amount of habitat for a few reptile species adapted to a high degree of human disturbance associated with the on-site weed abatement activities and surrounding development. Great Basin fence lizard (*Sceloporus occidentalis longipes*) was the only reptilian species observed during the habitat assessment. Other common reptilian species expected to occur include common side-blotched lizard (*Uta stansburiana elegans*), gopher snake (*Pituophis catenifer*), and southern alligator lizard (*Elgaria multicarinata*). Due to the developed nature of existing roads and the high level of anthropogenic disturbances for the undeveloped field between Nandina Avenue and the southern boundary of the project site, no special-status reptilian species are expected to occur and are presumed absent.

Birds

The offsite street improvement areas provide minimal foraging habitat for bird species adapted to a high degree of human disturbance. Bird species detected during the field survey included killdeer (*Charadrius*

vociferus), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), house finch (*Haemorhous mexicanus*), and American crow (*Corvus brachyrhynchos*).

In accordance with the MSCHP, the offsite street improvement areas are located within the designated survey area for burrowing owl. A focused burrowing owl survey was conducted for the project site, including the offsite street improvement areas. No burrowing owls, sign (i.e. burrows, pellets, feathers, castings, or whitewash), were observed within the offsite street improvement areas during the focused survey and burrowing owl is presumed absent.

Mammals

The MSHCP does not identify any covered or special-status mammalian species as potentially occurring within the proposed offsite street improvement areas. Common mammalian species expected to occur include Botta's pocket gopher (*Thomomys bottae*), opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*). No bat species are expected to occur due to a lack of suitable roosting habitat (i.e., trees, crevices) on and surrounding these offsite street improvements areas.

Nesting Birds

No active nests or birds displaying nesting behavior were observed during the field survey. Although heavily disturbed or developed, the offsite street improvement areas and surrounding habitat could provide minimal foraging and nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that area adapted to urban environments.

Migratory Corridors and Linkages

Habitat linkages provide connections between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet still inadequate for others. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

The offsite street improvement areas have not been identified as occurring in a wildlife corridor or linkage. The proposed improvements will be confined to existing areas that have been heavily disturbed or developed. These offsite street improvement areas are isolated from regional wildlife corridors and linkages, and there are no riparian corridors, creeks, or useful patches of stepping stone habitat (natural areas) within or connecting the improvement areas to a recognized wildlife corridor or linkage. As such, offsite street improvements are not expected to impact wildlife movement opportunities. Therefore, impacts to wildlife corridors or linkages are not expected to occur.

Jurisdictional Areas

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge or fill materials into "waters of the

United States” pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and bank under Fish and Wildlife Code Sections 1600 et seq., and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

No jurisdictional drainage and/or wetland features were observed within offsite street improvement areas during the field survey. Therefore, development of the offsite street improvements will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory approvals will not be required.

Critical Habitat

Under the federal Endangered Species Act, “Critical Habitat” is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the United States Fish and Wildlife Service (USFWS) regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a CWA Permit from the Corps). If there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The offsite street improvement areas are not located with federally designated Critical Habitat (refer to Exhibit 3, *Critical Habitat*, in Attachment A). The closest designated Critical Habitat is located approximately 5.5 miles southeast of the project for spreading navarretia (*Navarretia fossalis*) along the San Jacinto River. Therefore, the loss or adverse modification of Critical Habitat will not occur as a result of the proposed offsite street improvements and consultation with the USFWS will not be required for implementation of the proposed improvements.

Western Riverside County MSHCP

The offsite street improvement areas are located within the Mead Valley Area Plan of the MSHCP but are not located within any Criteria Cells or MSHCP Conservation Areas (refer to Exhibit 4, *MSHCP Conservation Areas*, in Attachment A). Additionally, the offsite street improvement areas is located within the designated survey area for burrowing owl as depicted in Figures 6-4 within Section 6.3.2 of the MSHCP.

Riparian/Riverine Areas and Vernal Pools

Riparian/Riverine Areas

As identified in Section 6.1.2 of the MSHCP, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, riparian/riverine areas are defined as areas dominated by trees, shrubs, persistent emergent plants, or emergent mosses and lichens which occur close to or are dependent upon nearby freshwater, or areas with freshwater flowing during all or a portion of the year. Conservation of these areas

is intended to protect habitat that is essential to a number of listed or special-status water-dependent fish, amphibian, avian, and plant species. If impacts to riparian/riverine habitat cannot be avoided, a Determination of Biologically Equivalent or Superior Preservation (DBESP) must be developed to address the replacement of lost functions of habitats in regards to the listed species. This assessment is independent from considerations given to “waters of the U.S.” and “waters of the State” under the CWA and the California Fish and Game Code.

No jurisdictional drainages, riparian/riverine and/or wetland features were observed within the offsite street improvement areas during the field survey. Therefore, development of the proposed project will not result in impacts to riparian/riverine habitats within the offsite street improvement areas and a DBESP will not be required for the loss of riparian/riverine habitat offsite street improvement areas.

Vernal Pools and Fairy Shrimp Habitat

One of the factors for determining the suitability of the habitat for fairy shrimp would be demonstrable evidence of seasonal ponding in an area of topographic depression that is not subject to flowing waters. These astatic pools are typically characterized as vernal pools. More specifically, vernal pools are seasonal wetlands that occur in depression areas without a continual source of water. They have wetland indicators of all 3 parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology is made on a case-by-case basis. Such determinations should be considered the length of time the areas exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. The seasonal hydrology of vernal pools provides for a unique environment, which supports plants and invertebrates specifically adapted to a regime of winter inundation, followed by an extended period when the pool soils are dry.

Vernal pools are seasonally inundated, ponded areas that only form in regions where specialized soil and climatic conditions exist. During fall and winter rains typical of Mediterranean climates, water collects in shallow depressions where downward percolation of water is prevented by the presence of a hard pan or clay pan layer (duripan) below the soil surface. Later in the spring when rains decrease and the weather warms, the water evaporates and the pools generally disappear by May. The shallow depressions remain relatively dry until late fall and early winter with the advent of greater precipitation and cooler temperatures. Vernal pools provide unusual “flood and drought” habitat conditions to which certain plant and wildlife species have specifically adapted as well as invertebrate species such as fairy shrimp.

The MSHCP lists two general classes of soils known to be associated with listed and special-status plant species; clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with listed and special-status species within the MSHCP plan area include Bosanko, Auld, Altamont, and Porterville series soils, whereas Traver-Domino Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River and Salt Creek. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status plant or wildlife species associated with vernal pools can occur on the project site. None of these soils have been documented within

the offsite street improvement areas.

A review of recent and historic aerial photographs (1994-2018) of the offsite street improvement areas and its immediate vicinity did not provide visual evidence of an astatic or vernal pool conditions within the proposed offsite improvement areas. No ponding was observed, further supporting the fact that the drainage patterns currently occurring on the project site do not follow hydrologic regime needed for vernal pools. From this review of historic aerial photographs and observations during the field investigations, it can be concluded that there is no indication of vernal pools or suitable fairy shrimp habitat occurring within the proposed offsite street improvement areas.

Additional Survey Needs and Procedures

The RCA MSHCP Information Map query and review of the MSHCP was identified that the offsite street improvement areas are located within the designated survey area for burrowing owl as depicted in Figure 6-4 within Section 6.3.2 of the MSHCP.

Burrowing Owl

Burrowing owl is currently designated as a California Species of Special Concern. The burrowing owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with level to gently-sloping areas characterized by open vegetation and bare ground. The western burrowing owl (*A.c. hypugaea*), which occurs throughout the western United States including California, rarely digs its own burrows and is instead dependent upon the presence of burrowing mammals (i.e., California ground squirrels, coyotes, and badgers) whose burrows are often used for roosting and nesting. The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. They also require low growth or open vegetation allowing line-of-sight observation of the surrounding habitat to forage and watch for predators. In California, the burrowing owl breeding season extends from the beginning of February through the end of August.

No burrowing owls or sign were observed in the proposed offsite street improvement areas during the focused surveys conducted in 2018. As a result, it was determined that burrowing owls are absent from the proposed offsite street improvement areas.

Recommendations

Migratory Bird Treaty Act

Pursuant to the Migratory Bird Treaty Act (MBTA) and Fish and Game Code, removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season. The nesting season generally extends from February 1 through August 31, but can vary slightly from year to year based upon seasonal weather conditions. If ground disturbance and vegetation removal cannot occur outside of the nesting season, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with

a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a 300-foot buffer around the active nest. For raptors and special-status species, this buffer will be expanded to 500 feet. It is recommended that a biological monitor be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, normal construction activities can occur.

Pre-Construction Burrowing Owl Clearance Survey

Although focused surveys were negative, a pre-construction burrowing owl clearance survey is recommended prior to any ground disturbance or vegetation removal activities to ensure that burrowing remain absent from the project site. In accordance with the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area*, a pre-construction clearance survey shall be conducted no more than 30 days prior to any ground disturbance or vegetation removal activities.

Conclusion

The offsite street improvement areas consist of vacant, undeveloped land that has been subject to a variety of anthropogenic disturbances (i.e. weed abatement, surrounding development) or occur within developed areas (i.e., existing street right-of-way). No surveys were recommended for special-status plant species.

No special-status wildlife species were observed during the field investigation. Based on the field investigation, it was determined that the vacant field proposed for the Extension of Western Way from Nandina Avenue to the southern boundary of the project site has a low potential to support burrowing owl. However, no burrowing owls were observed in this area during the 2018 focused burrowing owl survey. Based on the results of the focused survey, it was determined that burrowing owls are absent from the proposed offsite street improvement areas.

No jurisdictional drainage, riparian/riverine, and/or wetland features were observed within the proposed offsite street improvement areas. Therefore, construction of the offsite street improvement areas will not result in impacts to Corps, Regional Board, and/or CDFW jurisdictional areas, or riparian/riverine habitat, and regulatory approvals will not be required.

Based on the proposed project footprint for the offsite street improvement areas, and with the implementation of a pre-construction nesting bird/burrowing owl clearance survey, none of the Western Riverside County MSHCP covered species known to occur in the general vicinity of the proposed project will be directly or indirectly impacted by the proposed street improvements. Therefore, it was determined that this project will have “no effect” on federally, State, or MSHCP listed species. The project will have “no effect” on designated Critical Habitat.

With completion of the recommendations in this document and payment of the MSHCP mitigation fees, development of the offsite street improvement areas will be fully consistent with the Western Riverside County MSHCP.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions regarding this proposal.

Sincerely,



Thomas J. McGill, Ph.D.
Managing Director
Natural Resources



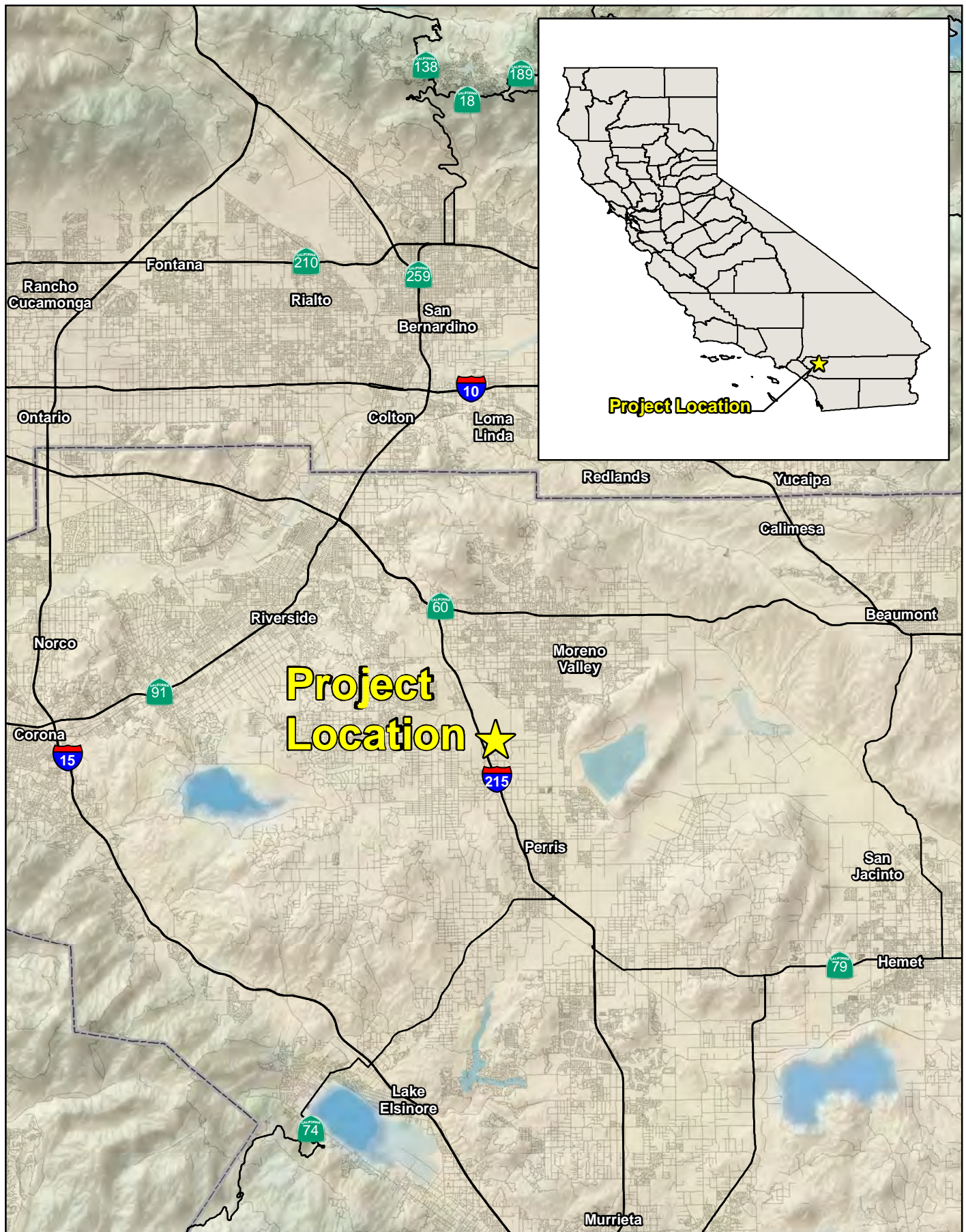
Travis J. McGill
Director
Natural Resources

Attachments:

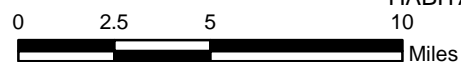
- A. *Project Exhibits*
- B. *Site Photographs*

Attachment A

Project Exhibits

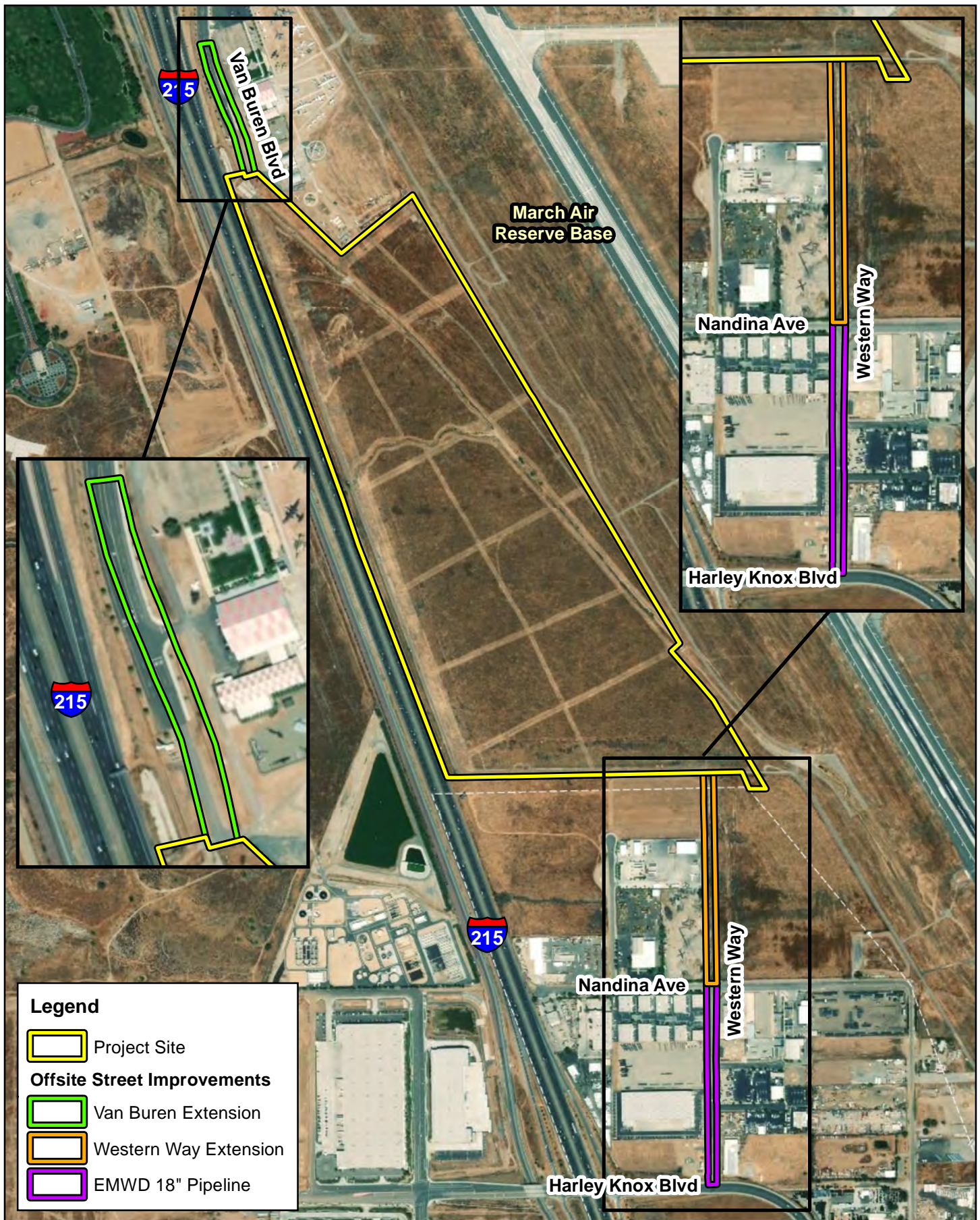


VETERANS INDUSTRIAL PARK 215 PROJECT OFFSITE STREET IMPROVEMENTS
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

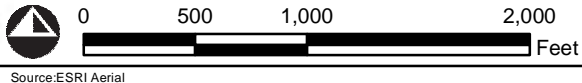


Source: ESRI Relief Map, National Highway Planning Network

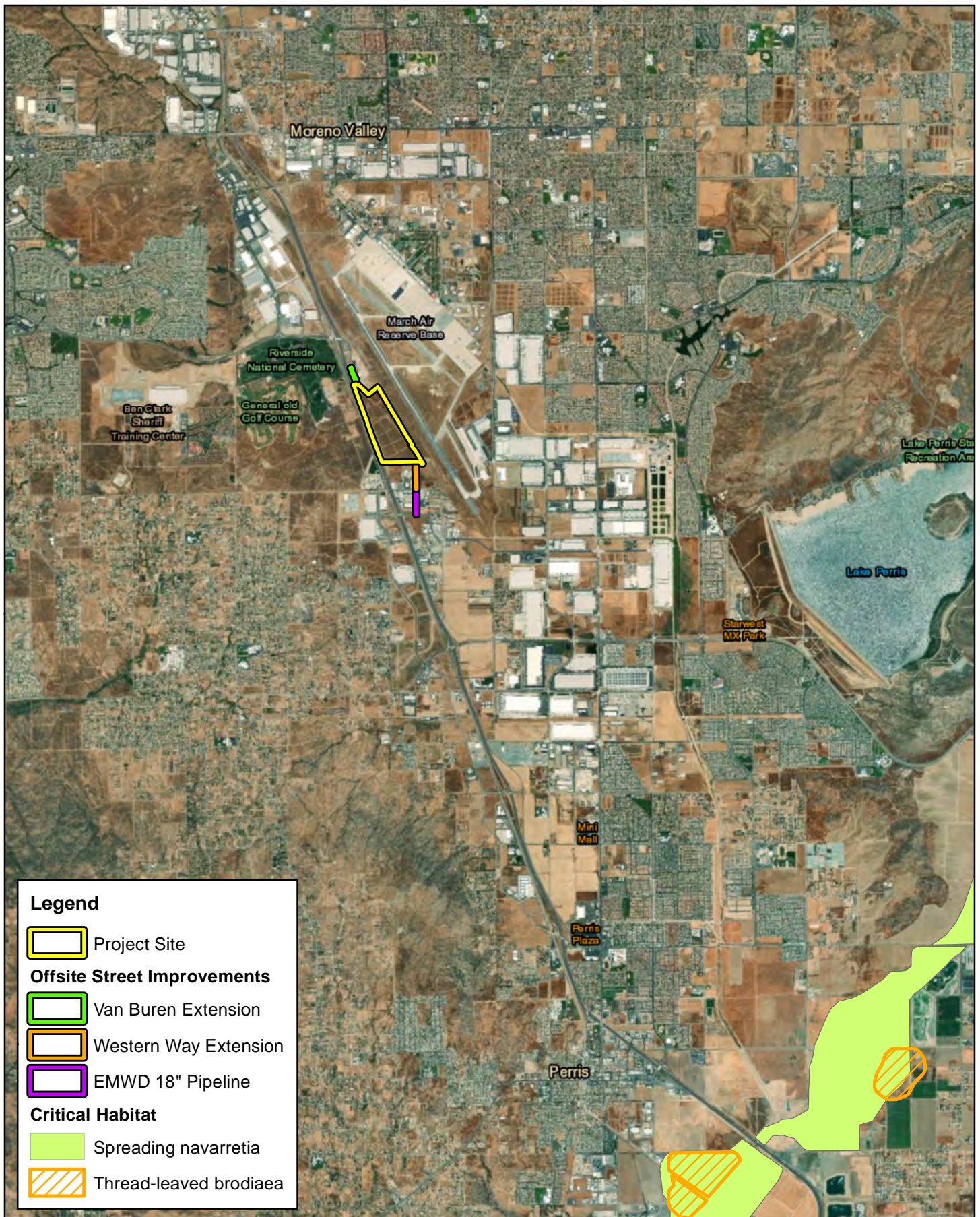
Regional Vicinity



VETERANS INDUSTRIAL PARK 215 PROJECT OFFSITE STREET IMPROVEMENTS
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

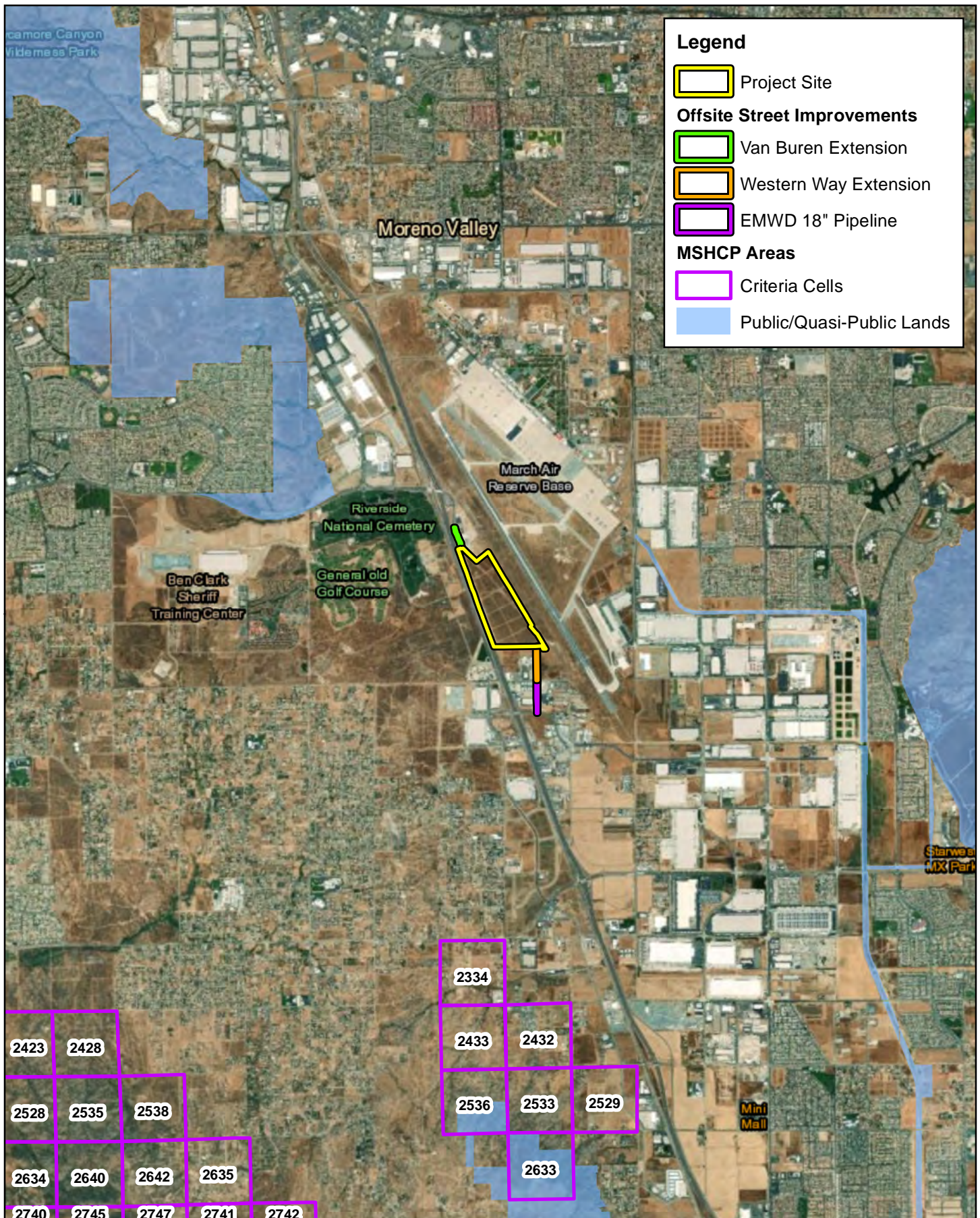


Project Site



VETERANS INDUSTRIAL PARK 215 PROJECT OFFSITE STREET IMPROVEMENTS
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

Critical Habitat



VETERANS INDUSTRIAL PARK 215 PROJECT OFFSITE STREET IMPROVEMENTS
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

MSHCP Criteria Area



Source: ESRI Aerial, Western Riverside County MSHCP

Attachment B

Site Photographs



Photograph 1: From Nandina Avenue looking north along the proposed extension of Western Way between the southern boundary of the project site and Nandina Avenue.



Photograph 2: Loose gravel along the existing access road where the extension of Western Way is proposed.



Photograph 3: Heavily disturbed access road where the extension of Western Way is proposed.



Photograph 4: Looking at the northern portion of the proposed extension of Western Way immediately south of the project site. The extension will follow the existing access road.

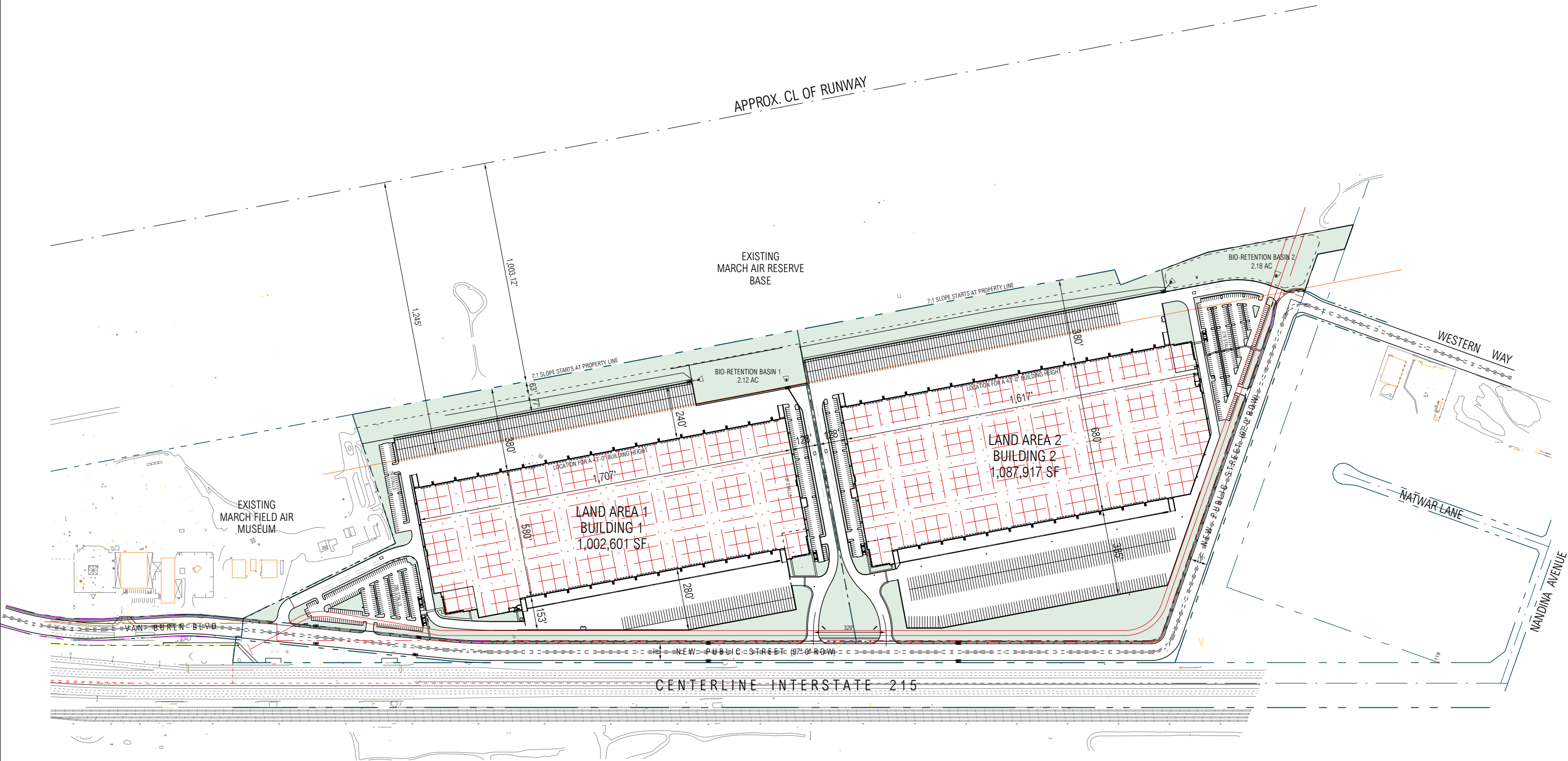


Photograph 5: Looking at the southern portion of the proposed extension of Western Way, immediately north of Nandina Avenue.

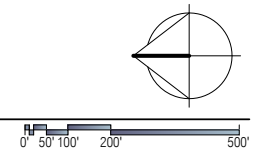


Photograph 6: Looking at the road shoulder of Nandian Avenue where the extension of Western Way will intersect with the existing paved portion of Western Way.

Appendix E Site Plans



OVERALL MASTER SITE PLAN
SCALE: 1" = 200'-0"



**D-2 Habitat Assessment and
Western Riverside
County Multiple Species
Habitat Conservation
Plan (MSHCP)
Consistency Analysis
for Offsite
Improvements**



July 17, 2018

HILLWOOD INVESTMENT PROPERTIES

Attention: *Kathy Hoffer*

2855 Michelle Drive, Suite 180

Irvine, California 92606

SUBJECT: Habitat Assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for Offsite Street Improvements for the Veteran's Industrial Park 215 Project in the Cities of Moreno Valley and Perris, Riverside County, California

Introduction

This report contains the findings of ELMT Consulting's (ELMT) habitat assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis for offsite street improvements for the Veterans Industrial Park 215 Project (project site or site) located in the Cities of Moreno Valley and Perris, Riverside County, California. The Veterans Industrial Park 215 Project is located on the March Air Reserve Base (base), outside of the City boundaries of Moreno Valley and Perris. Offsite street improvements include the extension of Van Buren Boulevard north of the project site, and the extension of Western Way south of the project site to Nandina Avenue, and the installation of a new 18" Eastern Municipal Water District (EMWD) pipeline along Western Way from Nandina Avenue to Harley Knox Boulevard.

The habitat assessment was conducted by biologists Thomas J. McGill, Ph.D. and Travis J. McGill on June 19, 2018 to document baseline conditions and assess the potential for special-status¹ plant and wildlife species to occur within the offsite street improvement areas that could pose a constraint to implementation of the proposed project. Special attention was given to the suitability of the habitats found within the offsite areas proposed for various street improvements to support burrowing owl (*Athene cunicularia*) and several other special-status species identified by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB) and other electronic databases as potentially occurring on or within the general vicinity of the project site.

The Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Map was queried to determine if the MSHCP identifies any potential survey requirements for the offsite areas proposed for street improvements. Further, these offsite areas were also reviewed against the MSHCP to

¹ As used in this report, "special-status" refers to plant and wildlife species that are federally, State, and MSHCP listed, proposed, or candidates; plant species that have been designated with a California Native Plant Society Rare Plant Rank; wildlife species that are designated by the CDFW as fully protected, species of special concern, or watch list species; and specially protected natural vegetation communities as designated by the CDFW.

determine if they were located within any MSHCP areas including Criteria Cells (core habitat and wildlife movement corridors) or areas proposed for conservation.

Based on the RCA MSHCP Information Map query and review of the MSHCP, it was determined that the offsite street improvement areas are located within the Mead Valley Area Plan of the MSHCP but are not located within any Criteria Cells or MSHCP Conservation Areas. The offsite areas are located within the designated survey area for burrowing owl (*Athene cuicularia*). No special-status plant surveys (narrow endemic plant species surveys) or special-status wildlife surveys were identified for these offsite areas.

Project Description

This report covers the offsite street improvements associated with the Veterans Industrial 215 Project. The offsite street improvement areas include: 1) the extension of Van Buren Boulevard north of the project site; 2) the extension of Western Way from the southern boundary of the project site south to Nandina Avenue; and 3) the installation of a new 18" EMWD pipeline along Western Way from Nandina Avenue to Harley Knox Boulevard. Offsite street improvements will include the following:

Van Buren Boulevard Extension

Includes the construction of 4 lanes connecting the northern boundary of the project site to the existing 4 lane Van Buren Boulevard.

Western Way up to Nandina Avenue

Improvements to the street will include no raised median, curb, gutter, sidewalk, landscaping, and street lighting. Storm drainage along the streets will be accomplished by the installation of bio swales along the eastern side of Van Buren Boulevard and Western Way. Construction of dry utilities to serve the project site as well as undergrounding of power/telecommunications facilities (if applicable) will be included in the street construction.

Western Way from Nandina Avenue to Harley Knox Boulevard

Includes the installation of a new 18" EMWD pipeline within existing right-of-way. No street improvements are proposed as this segment is currently fully improved with pavement, curb, gutter, and sidewalk.

Project Location

The Veterans Industrial Park 215 project is located on the March Air Reserve Base east of Interstate 215, South of State Route 60 between the Cities of Moreno Valley and Perris, Riverside County, California. It should be noted that the March Air Reserve Base is not within the boundaries of the Western Riverside County's MSHCP. The proposed offsite street improvements are located outside of March Air Reserve Base in the Cities of Moreno Valley and Perris within the boundaries of the Western Riverside County's MSHCP (refer to Exhibits 1 and 2 in Attachment A).

Methodology

Western Riverside County MSHCP Consistency Analysis

The offsite street improvements are located in the Cities of Moreno Valley and Perris within the Mead Valley Area Plan of the MSHCP. The Cities are permittees under the MSHCP and, while the project is not specifically identified as a Covered Activity under Section 7.1 of the MSHCP, public and private development that are outside of Criteria Areas and Public/Quasi-Public (PQP) Lands are permitted under the MSHCP, subject to consistency with MSHCP policies that apply to area outside of Criteria Areas. As such, to achieve coverage, the project must be consistent with the following policies of the MSHCP:

- The policies for the protection of species associated with Riparian/Riverine areas and vernal pools as set forth in Section 6.1.2 of the MSHCP;
- The policies for the protection of Narrow Endemic Plant Species as set forth in Section 6.1.3 of the MSHCP;
- The requirements for conducting additional surveys as set forth in Section 6.3.2 of the MSHCP;
- Guidelines pertaining to the Urban/Wildlands Interface intended to address indirect effects associated with locating Development in proximity to the MSHCP Conservation Area as detailed in Section 6.1.4 of the MSHCP.

The project was reviewed to determine consistency with the MSHCP. Geographic Information System (GIS) software was utilized to map the project site in relation to MSHCP areas including Criteria Cells (core habitat and wildlife movement corridors) and the Conservation Area, including PQP lands.

Riparian/Riverine Areas and Vernal Pools

The MSHCP requires that an assessment be completed if impacts to riparian/riverine areas and vernal pools could occur from construction of offsite street improvements in support of the proposed project. According to the MSHCP, the documentation for the assessment shall include mapping and a description of the functions and values of the mapped areas with respect to the species listed in Section 6.1.2 of the MSHCP, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*.

Aerial photography was reviewed prior to conducting the habitat assessment. The aerials were used to locate and inspect any potential natural drainage features and water bodies that may be considered riparian/riverine habitat and/or fall under the jurisdiction of the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory authorities.

Narrow Endemic Plant Species

Section 6.1.3 of the MSHCP, *Protection of Narrow Endemic Plant Species*, states that the MSHCP database does not provide sufficient detail to determine the extent of the presence/distribution of Narrow Endemic Plant Species within the MSHCP Plan Area. Additional surveys may be needed to gather information to determine the presence/absence of these species to ensure that appropriate conservation of these species occurs. Based on the RCA MSHCP Information Map query and review of the MSHCP, it was determined

that the offsite street improvement areas are not located within the designated survey area for Narrow Endemic Plant Species.

Additional Survey Needs and Procedures

In accordance with Section 6.3.2 of the MSHCP, *Additional Survey Needs and Procedures*, additional surveys may be needed for certain species in order to achieve coverage for these species. The query of the RCA MSHCP Information Map and review of the MSHCP determined that the offsite street improvement areas are located within the designated survey area for burrowing owl as depicted in Figure 6-4 within Section 6.3.2 of the MSHCP. No other special-status wildlife species surveys were identified.

Urban/Wildlands Interface Guidelines

Section 6.1.4 of the MSHCP, *Guidelines Pertaining to Urban/Wildlands Interface*, is intended to address indirect effects associated with development in proximity to MSHCP Conservation Areas. The Urban/Wildlife Interface Guidelines are intended to ensure that indirect project-related impacts to the MSHCP Conservation Area, including drainage, toxics, lighting, noise, invasive plant species, barriers, and grading/land development, are avoided or minimized. The offsite street improvement areas are not located within or immediately adjacent to any Criteria Cells, corridors, or linkages. Therefore, the Urban/Wildlands Interface Guidelines do not apply to this project.

Literature Review

The first step in determining if a project is consistent with the above listed sections of the MSHCP is to conduct a literature review and records search for special-status biological resources potentially occurring on or within the vicinity of the project. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the project were determined through a query of the CDFWs CNDDDB Rarefind 5, the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, United States Fish and Wildlife Service (USFWS) species listings, and species covered within the MSHCP and associated technical documents.

All available reports, survey results, and literature detailing the biological resources previously observed on or within the vicinity of the project were reviewed to understand existing site conditions and note the extent of any disturbances that have occurred on the project that would otherwise limit the distribution of special-status biological resources. Standard field guides and texts were reviewed for specific habitat requirements of special-status and non-special-status biological resources, as well as the following resources:

- Google Earth Pro historic aerial imagery (1994-2018);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey;
- USFWS Critical Habitat designations for Threatened and Endangered Species;
- Stephen's Kangaroo Rat Habitat Conservation Plan; and
- RCA MSHCP Information Map.

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the project. The CNDDDB database was used, in conjunction with ArcGIS software, to locate the nearest recorded occurrences of special-status species and determine the distance from the project.

Habitat Assessment/Field Investigation

Following the literature review, biologists Thomas J. McGill, Ph.D. and Travis J. McGill inventoried and evaluated the condition of the habitat within the offsite street improvement areas on June 19, 2018. Plant communities identified on aerial photographs during the literature review were verified by walking meandering transects through the plant communities and along boundaries between plant communities. In addition, aerial photography was reviewed prior to the site investigation to locate potential natural corridors and linkages that may support the movement of wildlife through the area. These areas identified on aerial photography were then walked during the field survey.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Plant species observed during the field survey were identified by visual characteristics and morphology in the field. Unusual and less familiar plant species were photographed during the field survey and identified in the laboratory using taxonomical guides. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

Existing Site Condition

The Van Buren Boulevard extension is located at an approximate elevation of 1,525 feet above mean sea level, while the southern offsite street improvement areas are located at an approximate elevation of 1,500 feet above mean sea level with no areas of topographic relief. Based on the NRCS USDA Web Soil Survey, the offsite street improvement areas are underlain by Hanford fine sandy loam (0 to 2 percent slopes), Greenfield sandy loam (0 to 2 percent slopes), Monserate sandy loam (0 to 5 percent slopes), Exeter sandy loam (0 to 2 percent slopes), and Ramona sandy loam (0 to 2 percent slopes). Soils on-site have been mechanically disturbed and heavily compacted from historic land uses.

The proposed offsite street improvements north of the project site are located within the existing alignment of Van Buren Boulevard that consists of paved and heavily disturbed road shoulder. The proposed extension of Western Way between the southern boundary of the project site and Nandina Avenue is located within an existing access road that consists of loose gravel and heavily disturbed vacant land. The installation of EMWDs 18" pipeline will occur within an existing right-of-way for a fully improved street along Western Way between Nandina Avenue and Harley Knox Boulevard.

Vegetation

Due to existing land uses (i.e., routine weed abatement activities and commercial development), no native plant communities or natural communities of special concern were observed on or adjacent to the proposed offsite street improvement areas. The vegetation within the offsite street improvement areas can be characterized as a heavily disturbed land cover type that is sparsely vegetated with a variety of non-native

and early successional weedy plant species or developed. Common plant species observed within the offsite street improvement areas include coastal goldenbush (*Isocoma menziesii* var. *menziesii*), wild oat (*Avena fatua*), mouse barley (*Hordeum murinum*), London rocket (*Sisymbrium irio*), stinknet (*Oncosiphon piluliferum*), horseweed (*Erigeron bonariensis*), and red brome (*Bromus madritensis* ssp. *rubens*). Refer to Attachment B, *Site Photographs*, for representative photographs of the project site.

Wildlife

Plant communities provide foraging habitat, nesting/denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species that were observed or are expected to occur within the offsite street improvement areas. The discussion is to be used as a general reference and is limited by the season, time of day, and weather conditions in which the field survey was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation.

Fish

The MSHCP does not identify any covered or special-status fish species as potentially occurring within the offsite street improvement areas. Further, no fish or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the proposed offsite street improvement areas. Therefore, no fish are expected to occur and are presumed absent.

Amphibians

The MSHCP does not identify any covered or special-status amphibian species as potentially occurring within the offsite street improvement areas. Further, no amphibians or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for amphibian species were observed on or within the vicinity of the offsite street improvement areas. Therefore, no amphibians are expected to occur.

Reptiles

The MSHCP does not identify any covered or special-status reptilian species as potentially occurring within the offsite street improvement areas. The offsite street improvement areas provide a limited amount of habitat for a few reptile species adapted to a high degree of human disturbance associated with the on-site weed abatement activities and surrounding development. Great Basin fence lizard (*Sceloporus occidentalis longipes*) was the only reptilian species observed during the habitat assessment. Other common reptilian species expected to occur include common side-blotched lizard (*Uta stansburiana elegans*), gopher snake (*Pituophis catenifer*), and southern alligator lizard (*Elgaria multicarinata*). Due to the developed nature of existing roads and the high level of anthropogenic disturbances for the undeveloped field between Nandina Avenue and the southern boundary of the project site, no special-status reptilian species are expected to occur and are presumed absent.

Birds

The offsite street improvement areas provide minimal foraging habitat for bird species adapted to a high degree of human disturbance. Bird species detected during the field survey included killdeer (*Charadrius*

vociferus), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), house finch (*Haemorhous mexicanus*), and American crow (*Corvus brachyrhynchos*).

In accordance with the MSCHP, the offsite street improvement areas are located within the designated survey area for burrowing owl. A focused burrowing owl survey was conducted for the project site, including the offsite street improvement areas. No burrowing owls, sign (i.e. burrows, pellets, feathers, castings, or whitewash), were observed within the offsite street improvement areas during the focused survey and burrowing owl is presumed absent.

Mammals

The MSHCP does not identify any covered or special-status mammalian species as potentially occurring within the proposed offsite street improvement areas. Common mammalian species expected to occur include Botta's pocket gopher (*Thomomys bottae*), opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*). No bat species are expected to occur due to a lack of suitable roosting habitat (i.e., trees, crevices) on and surrounding these offsite street improvements areas.

Nesting Birds

No active nests or birds displaying nesting behavior were observed during the field survey. Although heavily disturbed or developed, the offsite street improvement areas and surrounding habitat could provide minimal foraging and nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that area adapted to urban environments.

Migratory Corridors and Linkages

Habitat linkages provide connections between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet still inadequate for others. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

The offsite street improvement areas have not been identified as occurring in a wildlife corridor or linkage. The proposed improvements will be confined to existing areas that have been heavily disturbed or developed. These offsite street improvement areas are isolated from regional wildlife corridors and linkages, and there are no riparian corridors, creeks, or useful patches of stepping stone habitat (natural areas) within or connecting the improvement areas to a recognized wildlife corridor or linkage. As such, offsite street improvements are not expected to impact wildlife movement opportunities. Therefore, impacts to wildlife corridors or linkages are not expected to occur.

Jurisdictional Areas

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge or fill materials into "waters of the

United States” pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and bank under Fish and Wildlife Code Sections 1600 et seq., and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

No jurisdictional drainage and/or wetland features were observed within offsite street improvement areas during the field survey. Therefore, development of the offsite street improvements will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory approvals will not be required.

Critical Habitat

Under the federal Endangered Species Act, “Critical Habitat” is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the United States Fish and Wildlife Service (USFWS) regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a CWA Permit from the Corps). If there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The offsite street improvement areas are not located with federally designated Critical Habitat (refer to Exhibit 3, *Critical Habitat*, in Attachment A). The closest designated Critical Habitat is located approximately 5.5 miles southeast of the project for spreading navarretia (*Navarretia fossalis*) along the San Jacinto River. Therefore, the loss or adverse modification of Critical Habitat will not occur as a result of the proposed offsite street improvements and consultation with the USFWS will not be required for implementation of the proposed improvements.

Western Riverside County MSHCP

The project site is located within the Mead Valley Area Plan of the MSHCP but is not located within any Criteria Cells or MSHCP Conservation Areas (refer to Exhibit 4, *MSHCP Conservation Areas*, in Attachment A). Additionally, the project site is located within the designated survey area for burrowing owl as depicted in Figures 6-4 within Section 6.3.2 of the MSHCP.

Riparian/Riverine Areas and Vernal Pools

Riparian/Riverine Areas

As identified in Section 6.1.2 of the MSHCP, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, riparian/riverine areas are defined as areas dominated by trees, shrubs, persistent emergent plants, or emergent mosses and lichens which occur close to or are dependent upon nearby freshwater, or areas with freshwater flowing during all or a portion of the year. Conservation of these areas

is intended to protect habitat that is essential to a number of listed or special-status water-dependent fish, amphibian, avian, and plant species. If impacts to riparian/riverine habitat cannot be avoided, a Determination of Biologically Equivalent or Superior Preservation (DBESP) must be developed to address the replacement of lost functions of habitats in regards to the listed species. This assessment is independent from considerations given to “waters of the U.S.” and “waters of the State” under the CWA and the California Fish and Game Code.

No jurisdictional drainages, riparian/riverine and/or wetland features were observed within the offsite street improvement areas during the field survey. Therefore, development of the proposed project will not result in impacts to riparian/riverine habitats within the offsite street improvement areas and a DBESP will not be required for the loss of riparian/riverine habitat offsite street improvement areas.

Vernal Pools and Fairy Shrimp Habitat

One of the factors for determining the suitability of the habitat for fairy shrimp would be demonstrable evidence of seasonal ponding in an area of topographic depression that is not subject to flowing waters. These astatic pools are typically characterized as vernal pools. More specifically, vernal pools are seasonal wetlands that occur in depression areas without a continual source of water. They have wetland indicators of all 3 parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology is made on a case-by-case basis. Such determinations should be considered the length of time the areas exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. The seasonal hydrology of vernal pools provides for a unique environment, which supports plants and invertebrates specifically adapted to a regime of winter inundation, followed by an extended period when the pool soils are dry.

Vernal pools are seasonally inundated, ponded areas that only form in regions where specialized soil and climatic conditions exist. During fall and winter rains typical of Mediterranean climates, water collects in shallow depressions where downward percolation of water is prevented by the presence of a hard pan or clay pan layer (duripan) below the soil surface. Later in the spring when rains decrease and the weather warms, the water evaporates and the pools generally disappear by May. The shallow depressions remain relatively dry until late fall and early winter with the advent of greater precipitation and cooler temperatures. Vernal pools provide unusual “flood and drought” habitat conditions to which certain plant and wildlife species have specifically adapted as well as invertebrate species such as fairy shrimp.

The MSHCP lists two general classes of soils known to be associated with listed and special-status plant species; clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with listed and special-status species within the MSHCP plan area include Bosanko, Auld, Altamont, and Porterville series soils, whereas Traver-Domino Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River and Salt Creek. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status plant or wildlife species associated with vernal pools can occur on the project site. None of these soils have been documented within

the offsite street improvement areas.

A review of recent and historic aerial photographs (1994-2018) of the offsite street improvement areas and its immediate vicinity did not provide visual evidence of an astatic or vernal pool conditions within the proposed offsite improvement areas. No ponding was observed, further supporting the fact that the drainage patterns currently occurring on the project site do not follow hydrologic regime needed for vernal pools. From this review of historic aerial photographs and observations during the field investigations, it can be concluded that there is no indication of vernal pools or suitable fairy shrimp habitat occurring within the proposed offsite street improvement areas.

Additional Survey Needs and Procedures

The RCA MSHCP Information Map query and review of the MSHCP was identified that the project site is located within the designated survey area for burrowing owl as depicted in Figure 6-4 within Section 6.3.2 of the MSHCP.

Burrowing Owl

Burrowing owl is currently designated as a California Species of Special Concern. The burrowing owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with level to gently-sloping areas characterized by open vegetation and bare ground. The western burrowing owl (*A.c. hypugaea*), which occurs throughout the western United States including California, rarely digs its own burrows and is instead dependent upon the presence of burrowing mammals (i.e., California ground squirrels, coyotes, and badgers) whose burrows are often used for roosting and nesting. The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. They also require low growth or open vegetation allowing line-of-sight observation of the surrounding habitat to forage and watch for predators. In California, the burrowing owl breeding season extends from the beginning of February through the end of August.

No burrowing owls or sign were observed in the proposed offsite street improvement areas during the focused surveys conducted in 2018. As a result, it was determined that burrowing owls are absent from the proposed offsite street improvement areas.

Recommendations

Migratory Bird Treaty Act

Pursuant to the Migratory Bird Treaty Act (MBTA) and Fish and Game Code, removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season. The nesting season generally extends from February 1 through August 31, but can vary slightly from year to year based upon seasonal weather conditions. If ground disturbance and vegetation removal cannot occur outside of the nesting season, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with

a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a 300-foot buffer around the active nest. For raptors and special-status species, this buffer will be expanded to 500 feet. It is recommended that a biological monitor be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, normal construction activities can occur.

Pre-Construction Burrowing Owl Clearance Survey

Although focused surveys were negative, a pre-construction burrowing owl clearance survey is recommended prior to any ground disturbance or vegetation removal activities to ensure that burrowing remain absent from the project site. In accordance with the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area*, a pre-construction clearance survey shall be conducted no more than 30 days prior to any ground disturbance or vegetation removal activities.

Conclusion

The offsite street improvement areas consist of vacant, undeveloped land that has been subject to a variety of anthropogenic disturbances (i.e. weed abatement, surrounding development) or occur within developed areas (i.e., existing street right-of-way). No surveys were recommended for special-status plant species.

No special-status wildlife species were observed during the field investigation. Based on the field investigation, it was determined that the vacant field proposed for the Extension of Western Way from Nandina Avenue to the southern boundary of the project site has a low potential to support burrowing owl. However, no burrowing owls were observed in this area during the 2018 focused burrowing owl survey. Based on the results of the focused survey, it was determined that burrowing owls are absent from the proposed offsite street improvement areas.

No jurisdictional drainage, riparian/riverine, and/or wetland features were observed within the proposed offsite street improvement areas. Therefore, construction of the offsite street improvement areas will not result in impacts to Corps, Regional Board, and/or CDFW jurisdictional areas, or riparian/riverine habitat, and regulatory approvals will not be required.

Based on the proposed project footprint for the offsite street improvement areas, and with the implementation of a pre-construction nesting bird/burrowing owl clearance survey, none of the Western Riverside County MSHCP covered species known to occur in the general vicinity of the proposed project will be directly or indirectly impacted by the proposed street improvements. Therefore, it was determined that this project will have “no effect” on federally, State, or MSHCP listed species. The project will have “no effect” on designated Critical Habitat.

With completion of the recommendations in this document and payment of the MSHCP mitigation fees, development of the offsite street improvement areas will be fully consistent with the Western Riverside County MSHCP.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions regarding this proposal.

Sincerely,



Thomas J. McGill, Ph.D.
Managing Director
Natural Resources



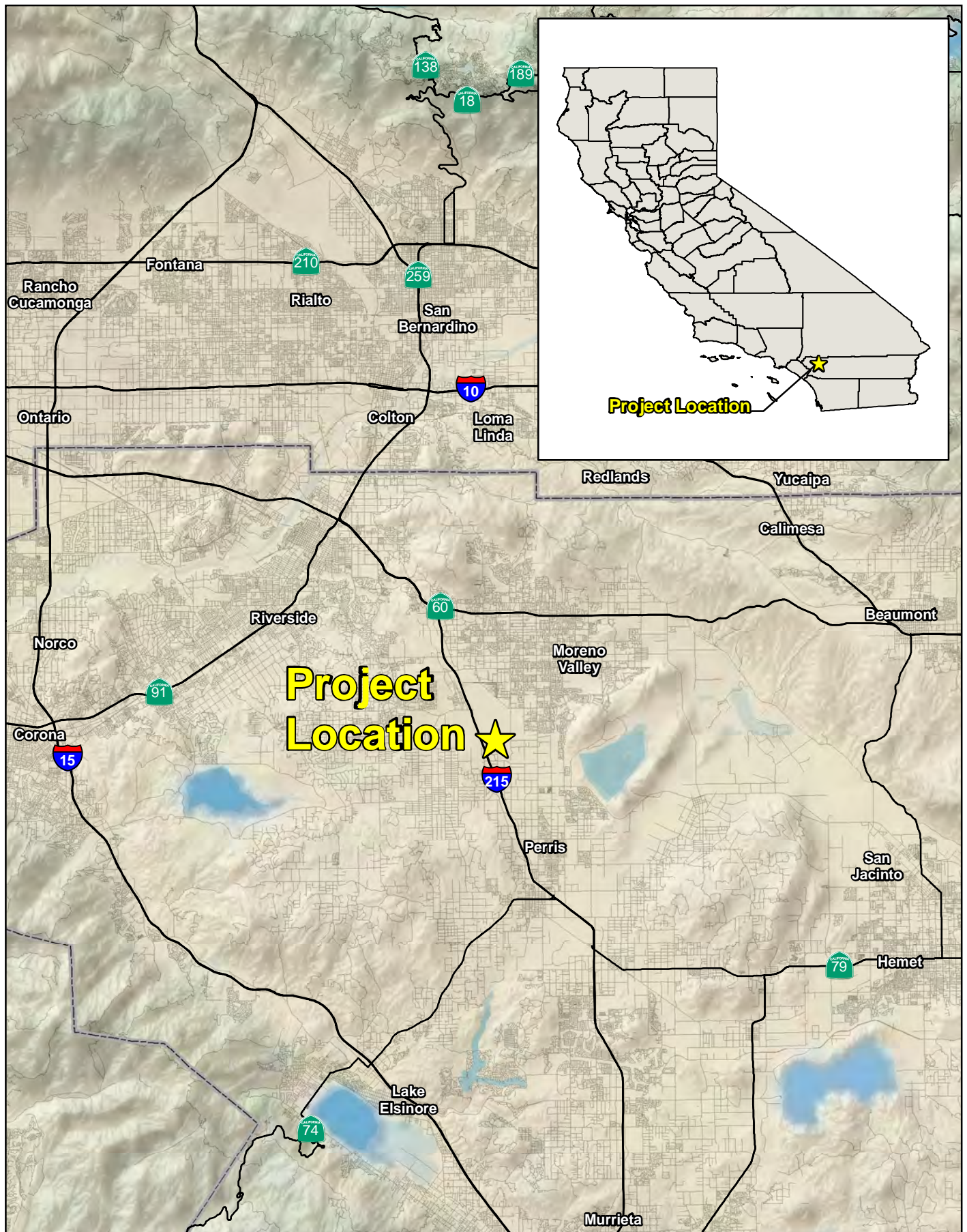
Travis J. McGill
Director
Natural Resources

Attachments:

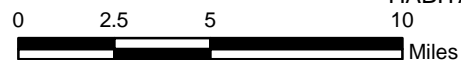
- A. *Project Exhibits*
- B. *Site Photographs*

Attachment A

Project Exhibits

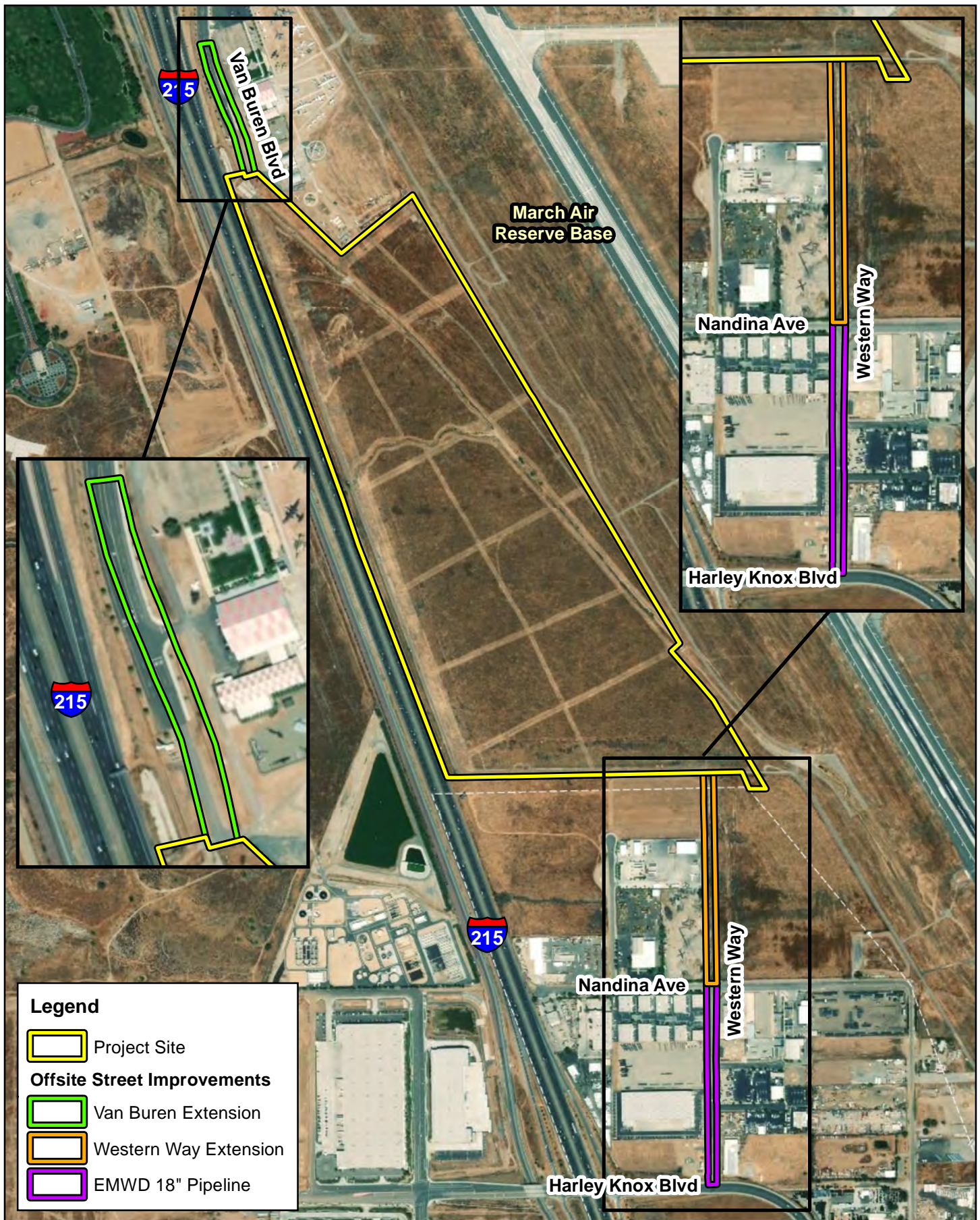


VETERANS INDUSTRIAL PARK 215 PROJECT OFFSITE STREET IMPROVEMENTS
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

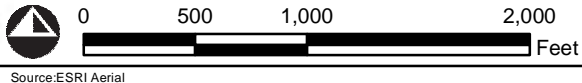


Source: ESRI Relief Map, National Highway Planning Network

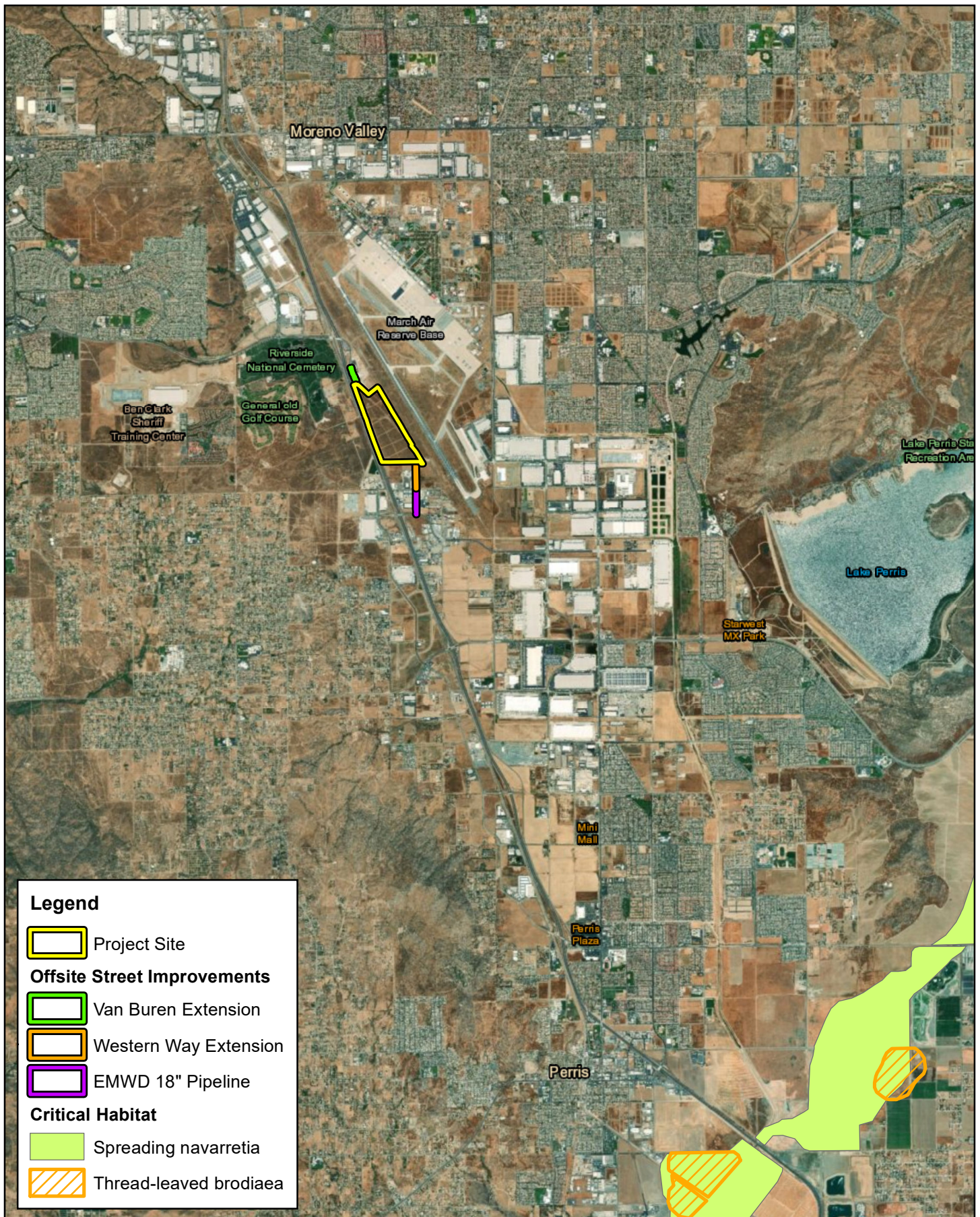
Regional Vicinity



VETERANS INDUSTRIAL PARK 215 PROJECT OFFSITE STREET IMPROVEMENTS
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

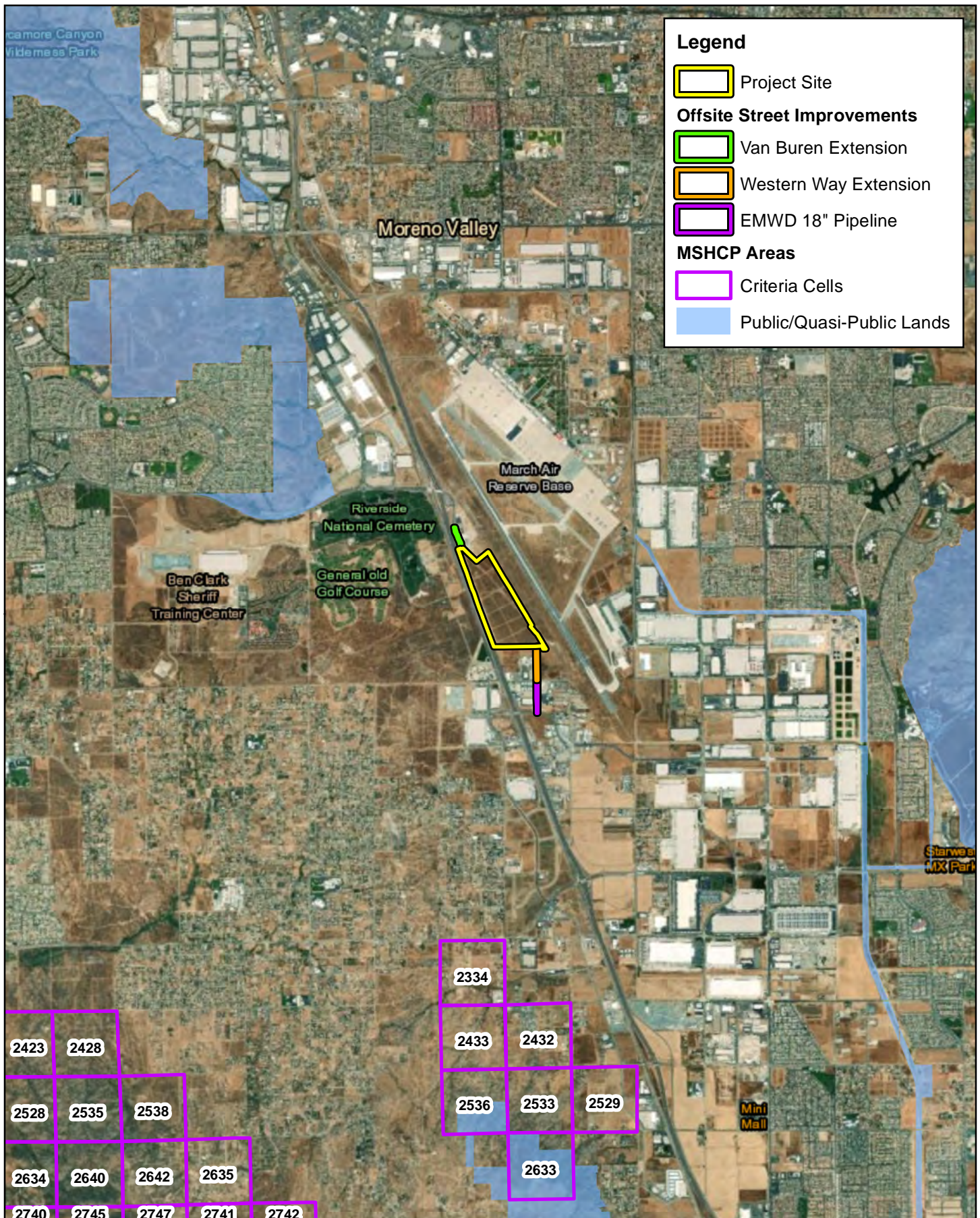


Project Site



VETERANS INDUSTRIAL PARK 215 PROJECT OFFSITE STREET IMPROVEMENTS
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

Critical Habitat



VETERANS INDUSTRIAL PARK 215 PROJECT OFFSITE STREET IMPROVEMENTS
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS



Source: ESRI Aerial, Western Riverside County MSHCP

MSHCP Criteria Area

Attachment B

Site Photographs



Photograph 1: From Nandina Avenue looking north along the proposed extension of Western Way between the southern boundary of the project site and Nandina Avenue.



Photograph 2: Loose gravel along the existing access road where the extension of Western Way is proposed.



Photograph 3: Heavily disturbed access road where the extension of Western Way is proposed.



Photograph 4: Looking at the northern portion of the proposed extension of Western Way immediately south of the project site. The extension will follow the existing access road.



Photograph 5: Looking at the southern portion of the proposed extension of Western Way, immediately north of Nandina Avenue.



Photograph 6: Looking at the road shoulder of Nandina Avenue where the extension of Western Way will intersect with the existing paved portion of Western Way.

D-3 Burrowing Owl Focused Survey Report

VETERANS INDUSTRIAL PARK 215 PROJECT

CITIES OF MORENO VALLEY AND PERRIS, RIVERSIDE COUNTY,
CALIFORNIA

Burrowing Owl Focused Survey Report

Prepared For:

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July 2018

VETERANS INDUSTRIAL PARK 215 PROJECT

CITIES OF MORENO VALLEY AND PERRIS, RIVERSIDE COUNTY,
CALIFORNIA

Burrowing Owl Focused Survey Report

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.



Travis J. McGill
Director



Thomas J. McGill, Ph.D.
Managing Director

July 2018

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APPENDIX

Appendix A	Site Photographs
Appendix B	Fauna Compendium

Section 1 Introduction

ELMT Consulting (ELMT) conducted a focused burrowing owl (*Athene cunicularia*) survey for the Veterans Industrial Park 215 Project located in the Cities of Moreno Valley and Perris, Riverside County, California (project site or site). ELMT biologists Thomas J. McGill, Ph.D. and Travis J. McGill surveyed the project site and offsite street improvement areas (i.e., extension of Van Buren Boulevard, and the extension of Western Way) in accordance with the survey protocols listed in the California Department of Fish and Wildlife (CDFW) 2012 Staff Report on Burrowing Owl Mitigation. The focused burrowing owl survey included an initial habitat assessment that was conducted in 2015 and four (4) separate burrowing owl focused surveys that were conducted during the 2018 avian breeding season. The four focused burrowing owl surveys were conducted on April 15, May 9, May 25, and June 19, 2018. All surveys were completed between 0630 to 1000 hours. The surveys were conducted to document the presence/absence of burrowing owl on the project site.

1.1 PROJECT LOCATION AND EXISTING CONDITIONS

The Veterans Industrial Park 215 project site is approximately 142.5 acres located within the boundaries of the March Inland Port Airport in unincorporated Riverside County, California. The project site is presently owned by the March Joint Powers Authority (MJP) and would be developed under a ground lease. The project site is located on the March Air Reserve Base (base) along Interstate 215 (I-215), adjacent to the Cities of Riverside, Perris, and Moreno Valley, Riverside County, California (Exhibit 1, *Regional Vicinity*). The project site is depicted on the Riverside East and Steele Peak quadrangles of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Sections 25, 26, 35, and 36 of Township 3 south, Range 4 west. The project site is located directly east of the Interstate 215 Freeway off-ramp at Van Buren Boulevard, south of the existing March Field Air Museum, and west of an existing March Air Reserve Base airport runway (Exhibit 2, *Project Site*). Offsite improvements are also proposed to facilitate access to the site from north using Van Buren Boulevard and from the south along Western Way. These offsite road improvements will occur on 2.4 acres within the City of Perris, outside but adjacent to the boundaries of March Inland Port Airport. The Interstate 215 Freeway off-ramp provides no access to the runway, any taxiways or other airport flying facilities. The Assessor Parcel Numbers (APNs) for the property are: 294-150-009, 294-170-005, 295-300-008, and 294-180-038. The project site is presently vacant and surrounded by the following uses:

North: Immediately to the north of the VIP 215 project site is the existing March Field Air Museum, zoned for Public Facilities uses.

East: The area east of the VIP 215 project site consists of the existing runways and facilities of the March Air Reserve Base.

South: Immediately south of the VIP 215 project site is the corporate boundary of the City of Perris, and the Perris Valley Commerce Center Specific Plan, zoned for Business Park and Light Industrial uses (City of Perris).

West: West of the project site is the Interstate 215 Freeway, with the Riverside National Cemetery and the Meridian Business Park beyond.

1.2 PROJECT DESCRIPTION

The project site has a General Plan designation of Aviation and is not currently zoned. The project site is not served by aircraft taxiways and ramp facilities and is proposed for development with non-aviation land uses. The project proposes speculative industrial buildings that would allow for a mix of logistics center uses that could support wholesale, storage, distribution, manufacturing and/or assembly centers. The conceptual site plan identifies two high cube industrial buildings which total approximately 2,219,852 square feet:

Building 1: 1,017,020 square feet

Building 2: 1,172,832 square feet

A logistics center can be defined as building space used for the intermediate storage and distribution of freight and commodities on route between their source and destination. Typical facilities have limited office areas. Each building would have a north to south orientation with trailer truck dock doors located on the rear of each building. All trailer truck parking would be provided on site. Both passenger vehicle and trailer truck parking would be provided in accordance with development code requirements.

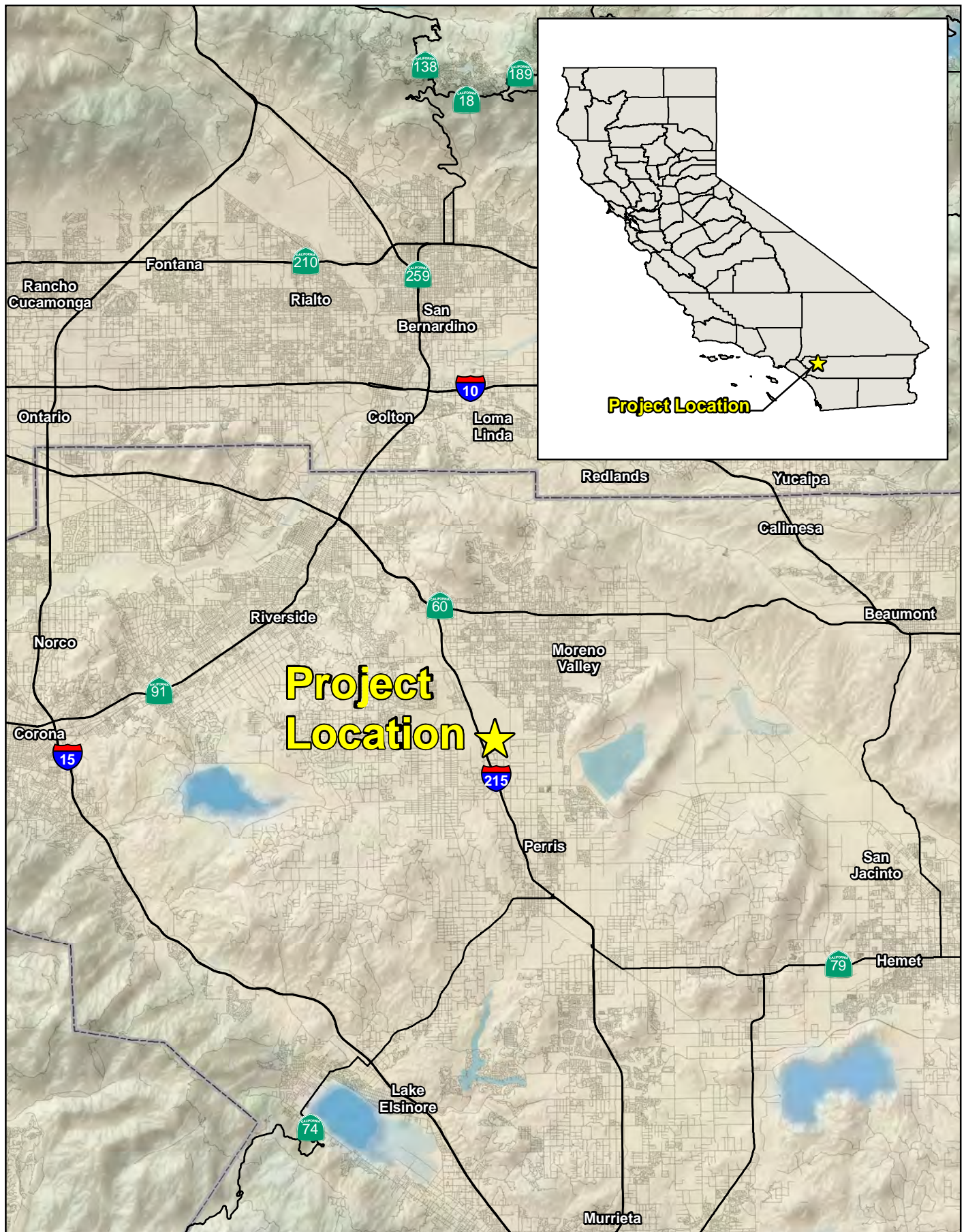
The proposed buildings would be designed to comply with the height limitations imposed by the Federal Aviation Agency's 7:1 conical surface of the airport, which begins at the eastern property line. Maximum building height on the eastern edge of the property closest to the runway (380 feet from the property line) would be 43 feet, rising to 45 feet at the top of the building's ridgeline. The proposed buildings would incorporate higher elements for the western corners of the buildings (a maximum of 50 feet). Perimeter security fencing would be provided adjacent to the runway. All development within the project area will include all onsite and offsite infrastructure necessary for operation of facilities at the completion of development.

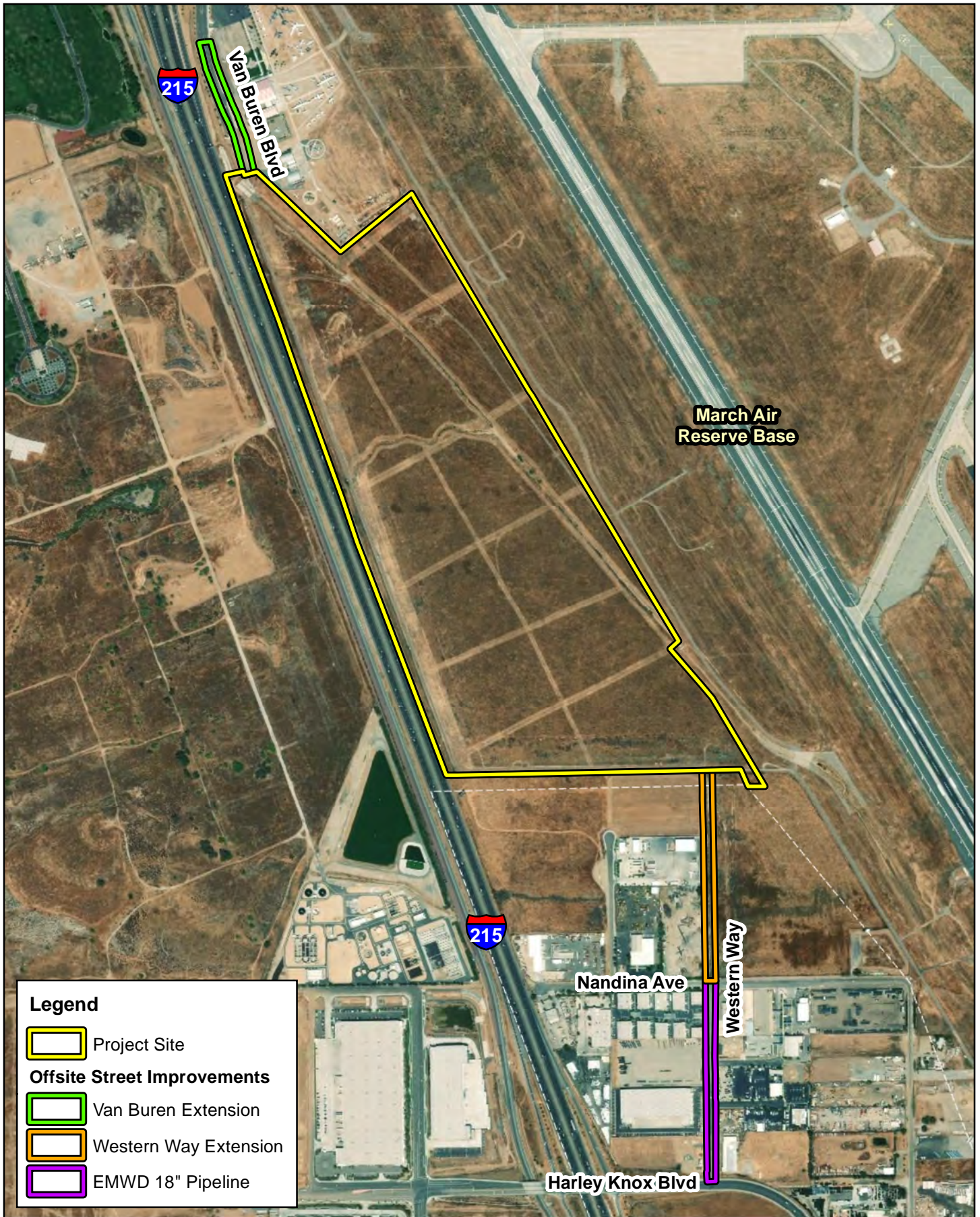
Currently, there is no improved access to the project site. Primary access to the project site would be provided through the construction of an extension of Van Buren Boulevard from its current terminus at the March Field Air Museum and to the project site's southeastern border. The extension of Van Buren Boulevard, between its existing terminus and the project site, would be a divided Modified Secondary Highway.

Secondary access would be provided through the construction of a new road running south from the site's southeastern border to Nandina Avenue, as an extension of existing Western Way. This Western Way extension would be an undivided Secondary Highway with a right-of-way of approximately 86 feet. This road would be an off-site infrastructure improvement encompassing approximately three acres.

Currently, there are no storm water facilities serving the project site. Storm water currently flows from west to east, beneath Interstate 215 Freeway and across the site. The conceptual drainage plan assumes the construction of a subsurface storm drain to intercept drainage at the project site's northern border near the existing terminus of Van Buren Boulevard. A second subsurface storm drain would be constructed to intercept drainage at the existing culvert under Interstate 215 Freeway. These two storm drains would convey off-site regional flows through and around the project site to a proposed trapezoidal channel along the eastern boundary of the project site. This trapezoidal channel would convey regional flows without resulting in standing water to the existing channel near the southeastern edge of the project site.

The project site is not currently served by water, sewer, power, natural gas or telecommunications facilities. Services and infrastructure would be extended to the project site concurrent with the construction of facilities for the proposed project. Existing water and sewer lines are present in the vicinity and any extensions would be located in existing or planned public rights-of-way.





VETERANS INDUSTRIAL PARK 215 PROJECT
BURROWING OWL FOCUSED SURVEY

Project Site

Exhibit 2

Section 2 Species Background

2.1 SPECIES BACKGROUND

The burrowing owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with well-drained, level to gently-sloping areas characterized by sparse vegetation and bare ground (Haug and Didiuk 1993; Dechant et al. 1999). Burrowing owls are dependent upon the presence of fossorial mammals, such as ground squirrels (*Otospermophilus beecheyi*), whose burrows are used for roosting and nesting (Haug and Didiuk 1993). The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. Burrowing mammals may burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. Large, hard objects at burrow entrances stabilize the entrance from collapse and may inhibit excavation by predators.

Burrowing owls have crepuscular (dawn and dusk) hunting habits but are often observed perched in or near the burrow entrance during the day. They prey upon invertebrates and small vertebrates (Thomsen 1971) through the low vegetation which allows for foraging visibility. The nesting season occurs between February 1 and August 31. Burrowing owl in California may migrate southerly, but often remain in the breeding area during the non-breeding period.

The burrowing owl was once abundant and widely distributed within coastal southern California, but it has declined precipitously in counties such as Los Angeles, Orange, San Diego, Riverside, and San Bernardino. A petition was filed to list the California population of the western burrowing owl as an Endangered or Threatened species (Center for Biological Diversity 2003); however, the California Department of Fish and Wildlife (CDFW) declined to list the burrowing owl as either endangered or threatened. The CDFW currently lists the burrowing owl as a California Species of Special Concern.

2.2 REGULATORY FRAMEWORK

The burrowing owl is a resident and migratory bird species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918. The MBTA reflects agreements made between the U.S., England, Mexico, the former Soviet Union, and Japan to protect all of North America's migratory bird populations. The MBTA protects migratory bird nests from possession, sale, purchase, barter, transport, import and export, and collection. The other prohibitions of the MBTA - capture, pursue, hunt, and kill - are inapplicable to nests. The regulatory definition of take, as defined in Title 50 C.F.R. part 10.12, means to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to hunt, shoot, wound, kill, trap, capture, or collect. Only the verb "collect" applies to nests. It is illegal to collect, possess, and by any means transfer possession of any migratory bird nest. The MBTA prohibits the destruction of a

nest when it contains birds or eggs, and no possession shall occur during the destruction (United States Fish and Wildlife Service, Migratory Bird Permit Memorandum, April 15, 2003). Certain exceptions to this prohibition are included in 50 C.F.R. section 21. Pursuant to CDFW Code section 3513, the Department enforces the MBTA consistent with rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.

Additionally, burrowing owl is protected under Sections 3503, 3503.3, 3511, and 3513 of the CDFW Code which prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (March 1 - August 15, annually). CDFW Code Section 3503.5 protects birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks and owls, including burrowing owls) which makes it unlawful to take, possess, or destroy their nest or eggs.

CDFW's 2012 Staff Report on Burrowing Owl Mitigation offers long-term assurances for conservation of this species in exchange for biologically appropriate levels of incidental take and/or habitat loss as defined in the approved plan. California's NCCP Act (FGC §2800 et seq.) governs such plans at the state level, and was designed to conserve species, natural communities, ecosystems, and ecological processes across a jurisdiction or a collection of jurisdictions. Complementary federal HCPs are governed by the Endangered Species Act (7 U.S.C. § 136, 16 U.S.C. § 1531 et seq.) (ESA). Regional conservation plans (and certain other landscape-level conservation and management plans), may provide conservation for unlisted as well as listed species. Because the geographic scope of NCCPs and HCPs may span many hundreds of thousands of acres, these planning tools have the potential to play a significant role in conservation of burrowing owls, and grasslands and other habitats.

Guidelines for the Implementation of the California Environmental Quality Act (CEQA) provide that a species be considered as endangered or "rare" regardless of appearance on a formal list for the purposes of the CEQA (Guidelines, Section 15380, subsections b and d). The CEQA requires a mandatory findings of significance if impacts to threatened or endangered species are likely to occur (Sections 21001(c), 21083. Guidelines 15380, 15064, 15065). Avoidance or mitigation must be presented to reduce impacts to less than significant levels.

Section 3 Methodology

General weather conditions during each of the surveys were suitable for detections of burrowing owls. The weather during the surveys had clear skies and minimal wind, with temperatures ranging from 70 to 85 degrees Fahrenheit (°F). Surveys are not accepted if they are conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90°F. The protocol survey for burrowing owl requires a systematic survey of all areas that provide suitable habitat plus a 150-meter (approximately 500 feet) zone of influence on all sides of suitable habitat, where applicable. Since the project site is bordered by the existing March Field Air Museum to the north, Interstate 215 to the west, and the March Air Reserve Base to the west, a zone of influence was not able to be surveyed outside of these portions of the project site. Where applicable, specifically the March Air Reserve Base, binoculars were used to scan open areas that have the potential to provide suitable habitat for burrowing owl. It should be noted that all open areas immediately south of the project site and east of the Western Way extension were surveyed for the presence/absence of burrowing owl.

Survey transects were conducted at a maximum of 30-meter (approximately 100 feet) intervals to ensure 100% visual coverage of all areas in suitable habitat, as applicable based on topography of the site. The focused burrowing owl surveys were conducted during the recognized timeframe in the morning one hour before sunrise to two hours after sunrise.

Areas providing potential habitat for burrowing owls were surveyed for suitable burrows, consisting of natural and non-natural substrates in areas with low, open vegetation. All burrows encountered were examined for shape, scat, pellets, white-wash, feathers, tracks, and prey remains. The location of all suitable burrowing owl habitat, potential owl burrows, burrowing owl sign, and any owls observed were recorded and mapped, with a hand-held GPS unit. Methods to detect presence of burrowing owls included direct observation, aural detection, and signs of presence; including pellets, white wash, feathers, or prey remains. Suitable burrows/sites, including rock piles and non-natural substrates, were thoroughly examined for signs of presence. The survey included identifying avian species in the area and observing behaviors that suggested nesting activity. Binoculars were used to observe distant birds and their activity around potential nesting habitat.

During the focused surveys, the survey area was assessed on foot by qualified biologists Thomas J. McGill, Ph.D., and Travis J. McGill who are knowledgeable in the habitats and behavior of burrowing owls on four (4) separate days (April 15, May 9, May 25, and June 19, 2018) between 0630 to 1000 hours.

Section 4 Results

4.1 EXISTING CONDITIONS

The proposed project site and offsite street improvement areas are located in an area that is undergoing conversion into industrial, commercial, and recreational developments, exhibiting a mosaic of developed and undeveloped parcels. Land uses in the vicinity of the project site and offsite street improvement areas consist of various base-related structures as well as the runway to the northeast, the March Field Air Museum immediately to the north, commercial development and vacant land to the south, and the Riverside National Cemetery and Lieutenant General Archie J. Old, Jr. Golf Course to the west, west of Interstate 215. The project site and offsite street improvement areas are relatively flat with no areas of significant topographic relief. On-site surface elevation ranges from approximately 1,530 to 1,500 feet above mean sea level and generally slopes to the southeast.

The majority of the project site and offsite street improvement areas consist of a heavily disturbed undeveloped fields. Historic aerial imagery shows indications of site-wide vegetation mowing, and from 2009 to present all or a portion of the project site along its western and southern boundaries, and along the extension of Western Way were graded for the construction and maintenance of an underground pipeline between 2009 and 2011. The northwest portion of the project site was used for materials storage during the installation of the pipeline. Some areas along the northern edge of the project site are associated with and are actively used by the March Field Air Museum. These land uses have heavily disturbed, if not completely eliminated, naturally occurring habitats from the project site and offsite street improvement areas. Ground-level field conditions confirm that the site has historically been mowed or cleared, as it is largely vegetated with early successional and non-native plant species that easily spread through disturbed, open areas. Paved roadways run roughly northwest to southeast across the eastern and western portions of the project site and offsite street improvement areas, as well as east to west across the site's southern boundary. Additionally, the project site and offsite street improvement areas have been subject to weed abatement activities and several rows of mowed vegetation or firebreaks were observed throughout the project site. Five (5) drainage features are present within the project site boundaries. The main drainage feature flows roughly northwest to southeast across the middle of the project site. In addition, there are four drainage features that are tributary to the main drainage feature in the middle of the project site. These drainage features are generally earthen but also contain sections that are either concrete-lined, riprap-lined, or lined with grouted riprap.

The project site and offsite street improvement areas are heavily disturbed and no longer support of undeveloped, native plant communities. One (1) plant community was observed on-site, non-native grassland. In addition, there are two (2) on-site land cover types that would be classified as disturbed and developed. On-site vegetation is best characterized as a non-native grassland. It is dominated by Russian thistle with pigweed (*Amaranthus albus*), doveweed (*Croton setiger*), jimsonweed (*Datura wrightii*), red-stemmed filaree (*Erodium cicutarium*), rattlesnake spurge (*Euphorbia albomarginata*), telegraph weed (*Heterotheca grandiflora*), short-podded mustard (*Hirschfeldia incana*), and horehound

(*Marrubium vulgare*). The main drainage feature contains scattered stands of mulefat (*Baccharis salicifolia*), Spanish lotus (*Acmispon americanus*), common sunflower (*Helianthus annuus*), and cocklebur (*Xanthium strumarium*) throughout. The four tributaries to the main drainage features are either primarily bare or vegetated with dense weedy plant species, primarily Russian thistle. Isolated native shrubs including deerweed (*Acmispon glaber*), fourwing saltbush (*Atriplex canescens*), and California buckwheat (*Eriogonum fasciculatum*) have established in sparse patches across the project site.

4.2 BURROWING OWL FOCUSED SURVEY

The entire project site and offsite street improvement areas are vegetated with a variety of relatively low-growing plant species that allow for the line-of-sight observation opportunities favored by burrowing owl. In addition, small mammal burrows that have the potential to provide suitable burrowing owl nesting habitat were observed throughout the project site and were more concentrated along the eastern boundary of the project site bordering the adjacent airfield in an area that is routinely mowed for weed abatement.

Common avian species detected during the focused surveys included American crow (*Corvus brachyrhynchos*), American kestrel (*Falco sparverius*), house finch (*Haemorrhous mexicanus*), northern mockingbird (*Mimus polyglottos*), California towhee (*Pipilo crissalis*), Say's phoebe (*Sayornis saya*), barn swallow (*Hirundo rustica*), Savannah sparrow (*Passerculus sandwichensis*), northern rough-winged swallow (*Stelgidoperyx serripennis*), lesser goldfinch (*Spinus psaltria*), Bewick's wren (*Thryomanes bewickii*), Cassin's kingbird (*Tyrannus vociferans*), western meadowlark (*Sturnella neglecta*), mourning dove (*Zenaida macroura*), and Eurasian-collard dove (*Streptopelia decaocto*). Refer to Appendix B for a complete list of wildlife species observed during the surveys.

No burrowing owls or sign (pellets, feathers, castings, or white wash) were observed on the project site and offsite street improvement areas during the first three focused surveys. Further, no burrowing owls or sign were observed within the offsite street improvement areas during the fourth and final focused survey. Two burrowing owls was observed during the fourth focused survey conducted on June 19, 2018.

Table 1: Survey Results

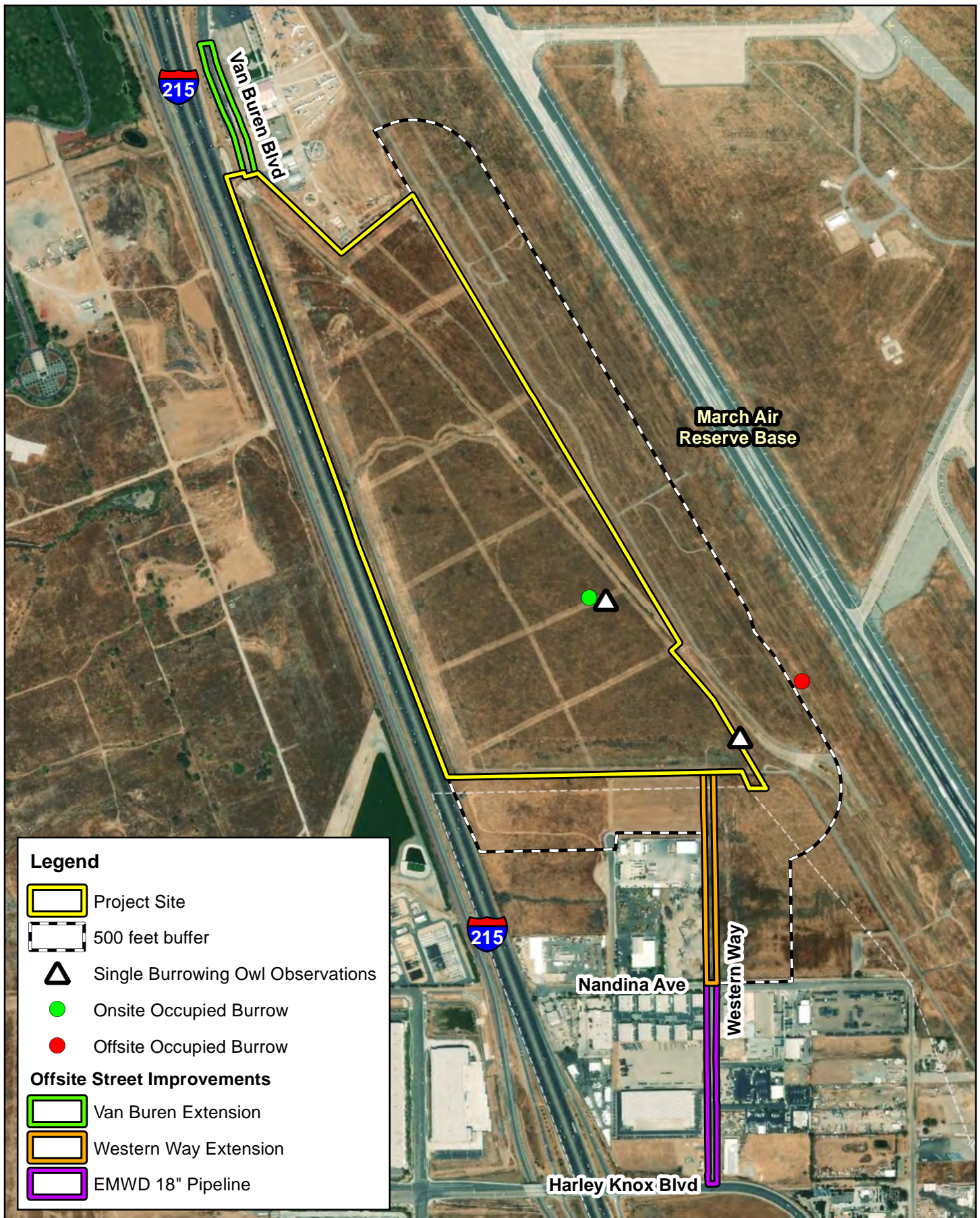
Survey Date (2018)	Personnel	Number of Burrowing Owls Observed
April 15	Tom McGill and Travis McGill	None
May 9	Tom McGill and Travis McGill	None
May 25	Tom McGill and Travis McGill	None
June 19	Tom McGill and Travis McGill	2 singles

The two single burrowing owls were observed near the southeastern portion of the project site and onto the adjacent airfield (Exhibit 3, *Survey Results*). The first burrowing owl was observed perched on the

chain-link fence that separates the project site from the airfield on the southeast corner of the project site. The burrowing owl flushed to a burrow within the adjacent undeveloped airfield. The burrow the owl flew to offsite was an established burrow with a large apron. The owl did not come back to the site during the survey.

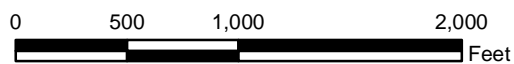
The second burrowing owl was flushed from a burrow approximately 400 meters north of the location the first burrowing owl was observed on the chain-link fence, on the eastern boundary of the project site. Whitewash and feathers were observed at the burrow the owl flushed from. After the owl flushed, it was observed foraging in the adjacent airfield. The second owl also did not come back to the site during the survey.

No other burrowing owls or burrowing owl sign was observed on or within 500 feet of the project site and offsite street improvement areas during the focused surveys.



VETERANS INDUSTRIAL PARK 215 PROJECT
BURROWING OWL FOCUSED SURVEY

Survey Results



Section 5 Conclusion and Recommendations

Two burrowing owls were observed near the southeastern portion of the project site during the fourth survey conducted on June 19, 2018. Since no burrowing owls or sign were observed on the project site during the first three focused surveys and the owls flew to offsite burrows within the airfield, it is assumed that the primary burrows for the burrowing owls are located offsite and that the owls, as observed, were foraging along the eastern boundary of the project site. However, the one onsite burrow that the burrowing owl flushed from is assumed to be an auxiliary burrow that was established towards the end of the breeding season, likely by young raised during the breeding season. It is probable that the young, from a breeding pair of owls that bred on the adjacent airfield property, were dispersing in the immediate area during the fourth and final survey.

It is recommended that the monitoring surveys be conducted through the remainder of the 2018 breeding season, the 2018/2019 non-breeding season and the beginning of the 2019 breeding season to document the behavior and location of the burrowing owls, and to determine if they continue to persist onsite and within the adjacent airfield after the 2018 breeding season.

If the burrowing owls continue to persist onsite after the monitoring surveys, a burrowing owl relocation plan will need to be prepared and approval by CDFW prior to the commencement of any ground disturbing activities. The burrowing owl relocation plan shall outline recommended methods proposed to relocate the burrowing owls from the project site and provide measures that will be implemented for the maintenance, monitoring, and reporting of the relocated burrowing owls to increase chances of survivorship and better ensure compliance with CDFW guidelines. This plan should be implemented during the non-breeding season, and prior to seasonal rains to promote the best outcome for conservation of the burrowing owl.

However, if the burrowing owls, after the monitoring surveys, are determined to no longer occupy the project site, a burrowing owl pre-construction clearance survey shall be conducted prior to any ground disturbing activities in accordance with the CDFW 2012 Staff Report on Burrowing Owl Mitigation to ensure the continued absence of burrowing owl from the project site. Two pre-construction clearance surveys shall be conducted 14-30 days and 24 hours prior to ground disturbing activities to document the continued absence of burrowing owl from the project site. If burrowing owls and/or birds displaying nesting behaviors are observed within the project site during future construction, further review may be needed to ensure compliance with the MBTA and Fish and Game Code.

Section 6 References

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- Michael Baker International, 2017. Veterans Industrial Park 215 Project Habitat Assessment. April 2016. Revised August 2017.
- Ramsen, Jr., J.V. 1978. *Bird Species of Special Concern in California*. Non-game Wildlife Investigations. Wildlife Management Branch Administrative Report No78-1. Report prepared for California Department of Fish and Game.

Appendix A Site Photographs



Photograph 1: From the northern boundary of the project site looking south along the northeastern boundary of the site adjacent to the museum.



Photograph 2: Looking east across the northeastern boundary of the project site south of the museum.



Photograph 3: Looking south along the eastern boundary of the project site. The fence on the left side of the photo separates the project site from the airfield.



Photograph 4: From the middle of the eastern boundary of the project site looking west across the middle of the project site at one of the mowed weed abatement areas.



Photograph 5: Vegetation within the middle of the project site.



Photograph 6: From the middle of the project site looking north along one of the mowed weed abatement areas.



Photograph 7: Looking west along the southern boundary of the project site.



Photograph 8: From the southwest corner of the project site looking north along the western boundary of the project site.



Photograph 9: From the middle of the western boundary of the project site looking east across the site.



Photograph 10: Looking at the northern portion of the project site.



Photograph 11: Looking northeast at the northern portion of the project site.



Photograph 12: From the northwest corner of the project site looking south along the western boundary of the site.



Photograph 13: From the southern portion of the Western Way extension looking north along the proposed alignment.



Photograph 14: From the northern portion of the Western Way extension looking south along the proposed alignment.



Photograph 15: Vacant field south of the project site, within the 500 feet buffer area that was surveyed.



Photograph 16: Vacant field east of the Western Way extension, within the 500 feet buffer area that was surveyed.



Photograph 17: Occupied burrowing owl burrow observed on the project site.



Photograph 18: Picture of the second burrowing owl that flushed from the burrow onsite.



Photograph 19: Picture of the burrowing owl at its burrow east of the project site within the airfield. This owl flew from the fence on the project site to this burrow.

Appendix B Fauna Compendium

Table B – 1: Wildlife Species

Scientific Name	Common Name
Aves	Birds
<i>Athene cunicularia</i>	Burrowing owl
<i>Buteo jamaicensis</i>	red-tailed hawk
<i>Callipepla californica</i>	California quail
<i>Calypte anna</i>	Anna's hummingbird
<i>Calypte costae</i>	Costa's hummingbird
<i>Charadrius vociferous</i>	killdeer
<i>Columba livia</i>	rock pigeon
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	common raven
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Falco sparverius</i>	American kestrel
<i>Haemorhous mexicanus</i>	house finch
<i>Hirundo rustica</i>	barn swallow
<i>Melospiza crissalis</i>	California towhee
<i>Mimus polyglottos</i>	northern mockingbird
<i>Passer domesticus</i>	house sparrow
<i>Passerculus sandwichensis</i>	Savannah sparrow
<i>Sayornis saya</i>	Say's phoebe
<i>Spinus psaltria</i>	lesser goldfinch
<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow
<i>Streptopelia adcaocto</i>	Eurasian collard-dove
<i>Sturnella neglecta</i>	western meadowlark
<i>Sturnus vulgaris</i>	European starling
<i>Thryomanes bewickii</i>	Bewick's wren
<i>Toxostoma redivivum</i>	California thrasher
<i>Tyrannus vociferans</i>	Cassin's kingbird
<i>Zenaida macroura</i>	mourning dove
Mammalia	Mammals
<i>Canis latrans</i>	coyote
<i>Lepus californicus</i>	black-tailed jackrabbit
<i>Otospermophilus beecheyi</i>	California ground squirrel
<i>Sylvilagus audubonii</i>	Audubon's cottontail
Reptilia	Reptiles
<i>Uta stansburiana elegans</i>	western side-blotched lizard

D-4 Delineation of State and Federal Jurisdictional Waters

VETERANS INDUSTRIAL PARK 215

RIVERSIDE COUNTY, CALIFORNIA

Delineation of State and Federal Jurisdictional Waters

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April 2016

Updated September 2019

VETERANS INDUSTRIAL PARK 215

RIVERSIDE COUNTY, CALIFORNIA

Delineation of State and Federal Jurisdictional Waters

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.



Travis J. McGill
Director



Thomas J. McGill, Ph.D.
Managing Director

April 2016
Updated September 2019

Executive Summary

ELMT Consulting (ELMT) has prepared this Delineation of State and Federal Jurisdictional Waters for the Veterans Industrial Park 215 (Project), located just outside of the Cities of Riverside, Perris, and Moreno Valley in Riverside County, California. The delineation documents the regulatory authority of the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW) pursuant to Section 401 and 404 of the Federal Clean Water Act, the California Porter-Cologne Water Quality Control Act, and Section 1600 *et. seq.* of the California Fish and Game Code.

Five (5) unnamed drainage features were observed on the project site consisting of one main drainage feature (Drainage 1) and four tributaries (Drainage 2-5). Drainage 1 generally extends from northwest to southeast through the middle of the project site. All tributaries (Drainage 2-5) enter Drainage 1 within the site boundaries. It should be noted that Drainage 1 also extends through the middle of the interim channel on the March Air Reserve Base (MARB). No drainage features or jurisdictional waters occur within the two offsite road improvement areas.

Drainage 1 is tributary to the Perris Valley Storm Drain, which flows to Canyon Lake and ultimately Lake Elsinore. From Lake Elsinore, water flows out to Temescal Creek, which is ultimately tributary to the Santa Ana River (Relatively Permanent Water) and the Pacific Ocean (Traditional Navigable Water). Therefore, the on-site drainage features would qualify as waters of the United States and fall under the regulatory authority of the Corps, Regional Board, and/or CDFW. Based on a review of preliminary design plans, all drainages will be permanently impacted. Refer to Table ES-1 for a summary of on-site jurisdictional areas and project related impacts.

Table ES-1: Jurisdictional Areas

Jurisdictional Feature	Stream Flow	Cowardin Class	Class of Aquatic Resource	Corps/Regional Board Non-Wetland Waters	CDFW Streambed
				On-Site Jurisdiction acreage (linear feet)	On-Site Jurisdiction acreage (linear feet)
Drainage 1	Ephemeral	Riverine	Non-Section 10 Non-Wetland	1.20 (4,307)	2.66 (4,307)
				0.15 (761)	–
Drainage 2	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.06 (511)	0.15 (511)
Drainage 3	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.18 (1,214)	0.33 (1,214)
Drainage 4	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.05 (138)	0.12 (138)
Drainage 5	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.02 (138)	0.02 (138)
TOTALS				1.66 (7,069)	3.28 (6,308)

Based on a review of current site conditions and preliminary design plans, the applicant must obtain the following regulatory approvals prior to impacts occur within jurisdictional areas: Corps CWA Section 404 Standard Individual Permit, Regional Board CWA Section 401 Water Quality Certification, and/or CDFW Section 1602 Streambed Alteration Agreement. Impacts to Drainage 1 associated with the interim channel occur on federal lands (i.e., the MARB), as a result, CDFW does not have regulatory authority over Drainage 1 within footprint of the interim channel. Refer to Sections 1-7 for a detailed analysis of site conditions and recommendations.

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Section 1 Introduction

This delineation has been prepared for Hillwood Investment Properties (Hillwood) in order to document the jurisdictional authority of the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW) pursuant to Sections 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Section 1600 *et seq.* of the Fish and Game Code. The analysis presented in this report is supported by field surveys and verification of site conditions conducted on October 21, 2015 and updated on June 19, 2018.

This jurisdictional delineation explains the methodology undertaken by ELMT Consulting (ELMT) to define the regulatory authority of the aforementioned regulatory agencies and documents the findings made by ELMT. This report presents our best effort at documenting the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries.

1.1 PROJECT LOCATION AND EXISTING CONDITIONS

The Veterans Industrial Park 215 project site encompasses 142.5 acres located within the boundaries of the March Inland Port Airport in unincorporated Riverside County, and an approximately 3-acre extension of Western Way south of the property. The project site is presently owned by the March Joint Powers Authority (MJPA) and would be developed under a ground lease. The project site is located on the MARB along Interstate 215, adjacent to the Cities of Riverside, Perris, and Moreno Valley, Riverside County, California (Exhibit 1, *Regional Vicinity*). In addition, offsite street improvements will be needed within 0.5 acres north of the project site along Van Buren Boulevard and 1.9 acres south of the site along Western Way. The project site and offsite street improvements are depicted on the Riverside East and Steele Peak quadrangles of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Sections 25, 26, 35, and 36 of Township 3 south, Range 4 west (Exhibit 2, *Site Vicinity*). The project site is located directly east of the Interstate 215 freeway off-ramp at Van Buren Boulevard, south of the existing March Field Air Museum, and southwest of the existing MARB runways (Exhibit 3, *Project Site*). The Interstate 215 Freeway off-ramp provides no access to the runway, any taxiways or other airport flying facilities. The Assessor Parcel Numbers (APNs) for the property are: 294-150-009, 294-170-005, 295-300-008, and 294-180-038. The project site is presently vacant and surrounded by the following uses:

- North:** Immediately to the north of the project site is the existing March Field Air Museum.
- East:** The area east of the project site consists of the existing runways, a mowed buffer area and airport facilities associated with the MARB.

- South:** Immediately south of the project site is the corporate boundary of the City of Perris, and business and industrial uses that are part of the Perris Valley Commerce Center Specific Plan.
- West:** West of the project site is the Interstate 215, with the Riverside National Cemetery and the Meridian Business Park beyond.

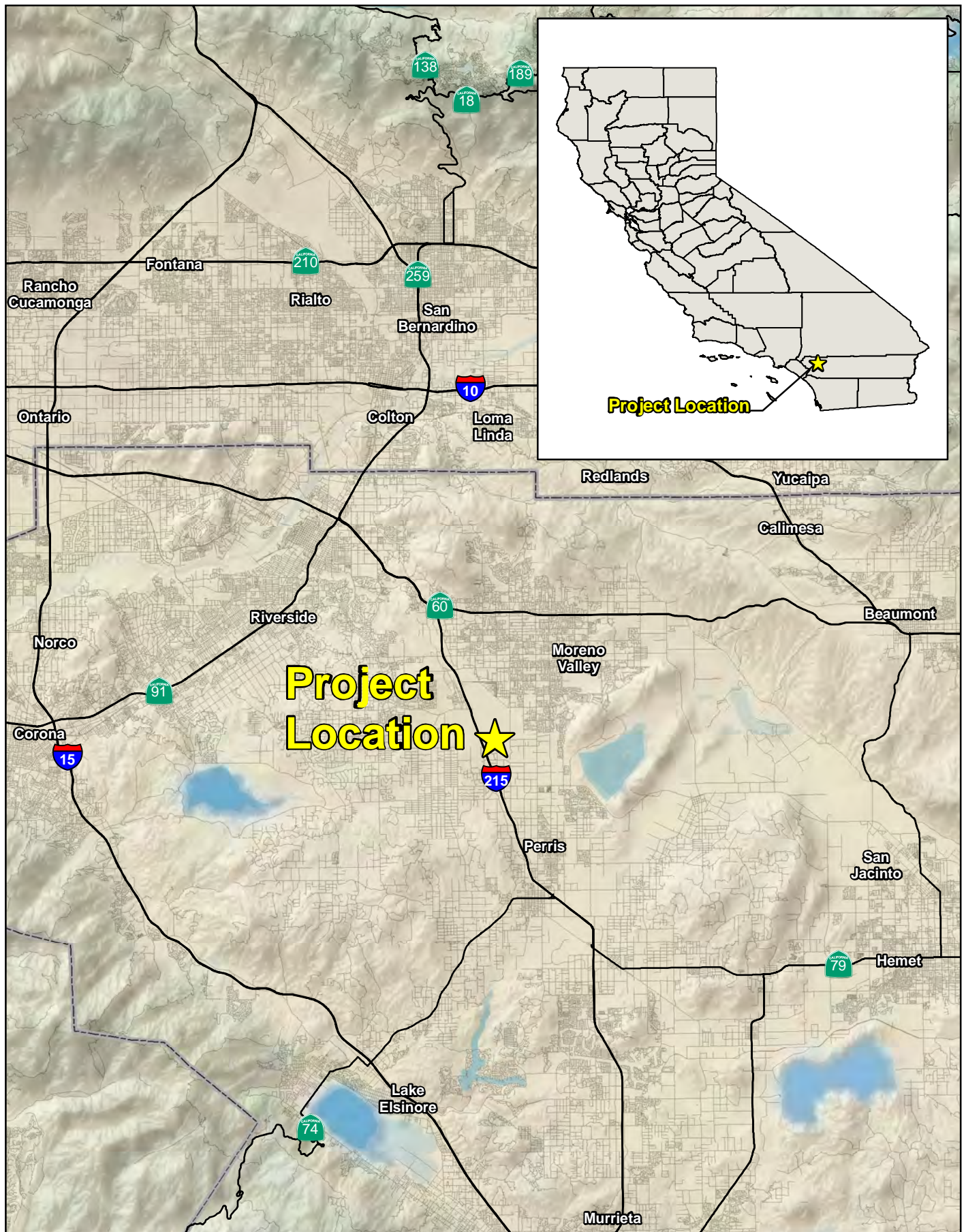
The project site, as well as area required for construction of new roadways and utilities, is currently vacant, unimproved land.

1.2 PROJECT DESCRIPTION

The proposed project includes two land use components: 1) a Specific Plan allowing for construction of up to 2,219,852 square feet of industrial/logistics uses, and 2) the construction of two industrial buildings for high-cube warehouse uses. Both buildings will primarily be used for the storage and/or consolidation of manufactured goods prior to their distribution to retail locations or other warehouses. The project site also includes an extension of Van Buren Boulevard, west and south of the project site. The conceptual site plan is provided in Appendix A.

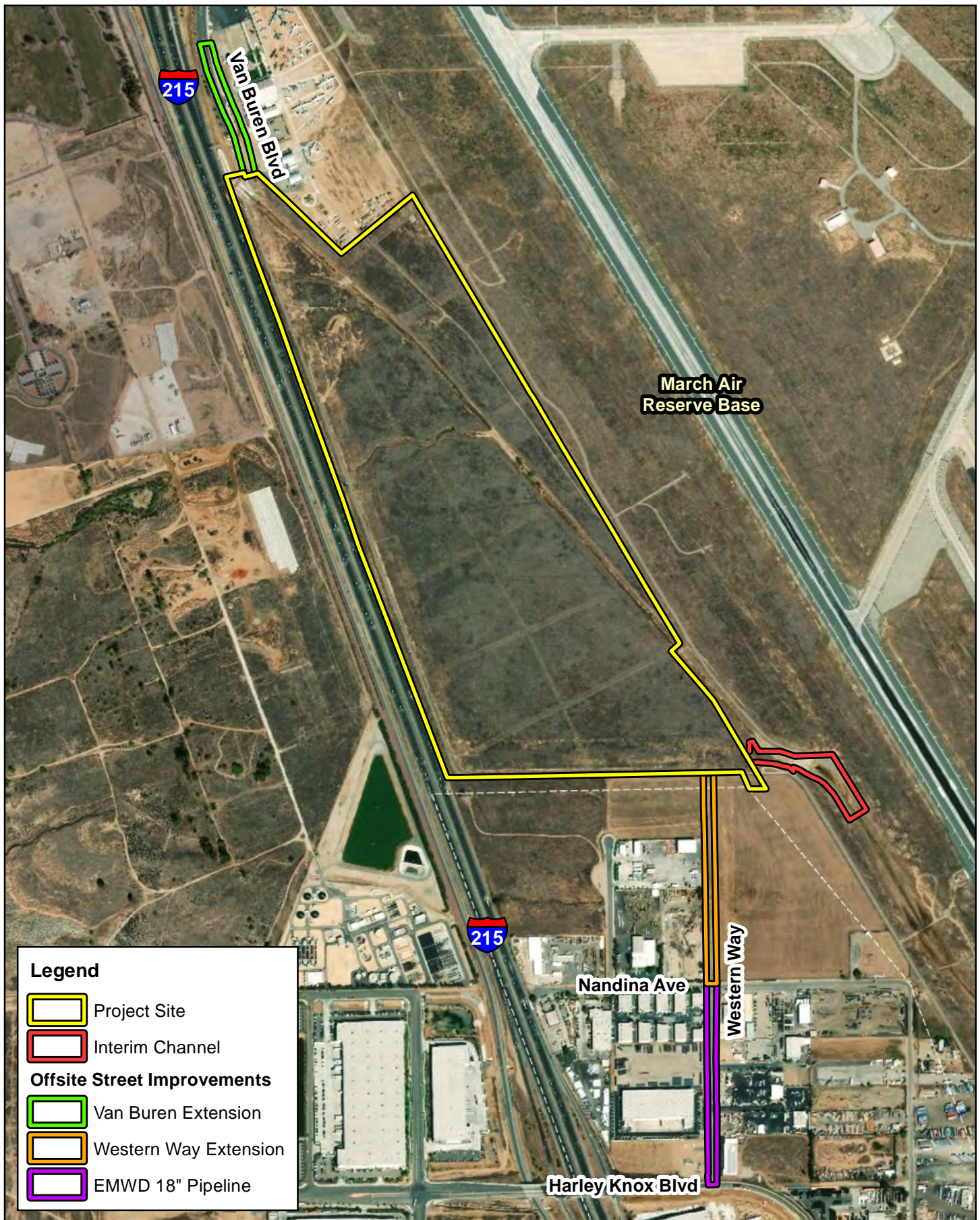
Specific offsite improvements associated with the project include the following:

- Approximately 3 acres of new roadway improvements for the extension of Western Way between the project site and Nandina Avenue;
- Expansion of an approximately 720-foot-long section of Van Buren Boulevard from an existing two-lane to four-lane roadway immediately north of the project site;
- Installation of a new 18-inch water line within the existing right-of-way of Western Way between Nandina Avenue and Harley Knox Boulevard; and
- An interim channel structure and associated access road encompassing approximately 1.7 acres will also be constructed onto MARB property.





VETERANS INDUSTRIAL PARK 215
 DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS
Site Vicinity



Legend

- Project Site
- Interim Channel
- Offsite Street Improvements**
- Van Buren Extension
- Western Way Extension
- EMWD 18" Pipeline

Section 2 Regulations

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Division regulates activities pursuant to Section 404 of the CWA, Section 10 of the Rivers and Harbors Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act. The Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates activities under Sections 1600 *et seq.* of the California Fish and Game Code.

2.1 U.S. ARMY CORPS OF ENGINEERS

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the discharge of dredged or fill material into waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps and EPA define “fill material” to include any “material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States.” Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and “materials used to create any structure or infrastructure in the waters of the United States.” The terms *waters of the United States* and *wetlands* are defined under CWA Regulations 33 Code of Federal Regulations (CFR) §328.3 (a) through (b).

2.2 REGIONAL WATER QUALITY CONTROL BOARD

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Boards that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board (SWRCB) assumes this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

Additionally, the California Porter-Cologne Water Quality Control Act gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Water Quality Control Act has become an important

tool post *Solid Waste Agency of Northern Cook County vs. United States Corps of Engineers*¹ (SWANCC) and *Rapanos v. United States*² (Rapanos) court cases with respect to the State's regulatory authority over isolated and insignificant waters. Generally, any applicant proposing to discharge waste into a water body must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include discharge of dredged and fill material into water bodies.

2.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq.* of the California Fish and Game Code establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided. Pursuant to Section 1602 of the California Fish and Game Code, a notification must be submitted to the CDFW for any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream or use material from a streambed. This includes activities taking place within rivers or streams that flow perennially or episodically and that are defined by the area in which surface water currently flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical and biological indicators.

¹ Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001)

² Rapanos v. United States, 547 U.S. 715 (2006)

Section 3 Methodology

The analysis presented in this report is supported by field surveys and verification of site conditions conducted on October 21, 2015. A site investigation was conducted to determine the jurisdictional limits of “waters of the United States” and “waters of the State” (including potential wetlands and vernal pools) located within the boundaries of the project site. While in the field, jurisdictional features were recorded on an aerial base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. Data points were obtained with a Garmin Map62 Global Positioning System to record and identify specific widths for ordinary high water mark (OHWM) indicators and the locations of photograph points, soil pits, and other pertinent jurisdictional features, if present. This data was then transferred as a .shp file and added to the project's jurisdictional exhibits. The jurisdictional exhibits were prepared using ESRI ArcInfo software. Appendix D provides further information on the methodology used to delineate the onsite jurisdictional features.

3.1 WATERS OF THE UNITED STATES

In the absence of adjacent wetlands, the limits of the Corps jurisdiction in non-tidal waters extend to the OHWM, which is defined as “. . . *that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*”³ Indicators of an OHWM are defined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Corps 2008). An OHWM can be determined by the observation of a natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; wracking; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and/or change in plant community. The Regional Board shares the Corps’ jurisdictional methodology, unless SWANCC or Rapanos conditions are present. In the latter case, the Regional Board considers such drainage features to be jurisdictional waters of the State.

Pursuant to the Corps Wetland Delineation Manual (Corps 1987), the identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. In order to qualify as a wetland, a feature must exhibit at least minimal characteristics within each of these three parameters. It should also be noted that both the Regional Board and CDFW follow the methods utilized by the Corps to identify wetlands. For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional*

³ CWA regulations 33 CFR §328.3(e).

Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008).

3.2 WATERS OF THE STATE

3.2.1 REGIONAL WATER QUALITY CONTROL BOARD

The California *Porter-Cologne Water Quality Control Act* gives the Regional Board very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Regional Board shares the Corps' methodology for delineating the limits of jurisdiction based on the identification of OHWM indicators and utilizing the three parameter approach for wetlands.

3.2.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq.* of the California Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. Generally, the CDFW's jurisdictional limit is not defined by a specific flow event, nor by the presence of OHWM indicators or the path of surface water as this path might vary seasonally. Instead, CDFW's jurisdictional limit is based on the topography or elevation of land that confines surface water to a definite course when the surface water rises to its highest point. Further, the CDFW's jurisdictional limit extends to include any habitat (e.g. riparian), including wetlands and vernal pools, supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. For this project location, CDFW jurisdictional limits were delineated using the methods outlined in the *MESA Field Guide* (Brady, III and Vyverberg 2013) and *A Review of Stream Processes and Forms in Dryland Watersheds* (Vyverberg 2010), which were developed to provide guidance on the methods utilized to describe and delineate episodic streams within the inland deserts region of southern California.

Section 4 Literature Review

ELMT conducted a thorough review of relevant literature and materials to preliminarily identify areas that may fall under the jurisdiction of the regulatory agencies. A summary of materials utilized during ELMT's literature review is provided below and in Appendix B. In addition, refer to Section 8 for a complete list of references used throughout the course of this delineation.

4.1 WATERSHED REVIEW

The project site is located within the San Jacinto River Watershed (Hydrologic Unit Code 18070202) which encompasses approximately 770 square miles and extends from the San Jacinto Mountains in the north and east to Lake Elsinore in the west. The majority of the watershed falls within Riverside County; however, the western boundary extends into a small undeveloped portion of Orange County. Elevations range from less than 1,250 feet above mean sea level at Lake Elsinore to approximately 1,400 to 1,700 feet on the valley floor to 10,834 feet at Mount San Jacinto in the San Jacinto Mountains. The Box Springs Mountains are located in the northwest, the San Jacinto Mountains in the north and east, and the Santa Ana Mountains in the southwest. Generally, the watershed can be divided into three distinct geomorphic regions: the San Jacinto Mountain Block, the Perris Block, and the Elsinore Trough. The San Jacinto Mountain Block includes granitic mountains characterized by shallow and stony soils. The Perris Block consists of relatively stable crystalline rock covered in deep alluvium derived from the San Jacinto Mountains. Southwest of the Perris Block is the Elsinore Trough, which is bounded on three sides by faults and the Elsinore Mountains.

The San Jacinto River, Mystic Lake, Perris Valley Storm Drainage, Salt Creek, Perris Reservoir, Canyon Lake, and Lake Elsinore are the dominant hydrologic features within the San Jacinto River Watershed. The headwaters to the San Jacinto River exhibit perennial flows while the valley reaches are characterized by intermittent flows. During significant storm events, periods of intense rainfall result in rapid increases in stream flow throughout the steep, mountainous portions of the watershed. Runoff from the upper reaches of the San Jacinto River generally flows towards the northwest and is eventually directed to Mystic Lake where flows are impounded during average/low flow years. Mystic Lake is relatively shallow and has a large surface area resulting in increased losses to infiltration, groundwater recharge, and evaporation. The storage capacity of Mystic Lake is only expected to be exceeded during significant storm events, resulting in the flows being returned to the San Jacinto River.

Downstream of Mystic Lake, the lower reaches of the San Jacinto River flow through Railroad Canyon before draining into Canyon Lake. Canyon Lake was created through the construction of the Railroad Canyon Dam and collects runoff from as far as Moreno Valley, San Jacinto, Hemet, and Perris. It is estimated that more than 90 percent of the San Jacinto River Watershed drains to

Canyon Lake. In addition to the San Jacinto River, Salt Creek is one of the main tributaries to Canyon Lake. The headwaters of Salt Creek are located in the City of Hemet and flows are primarily the result of surface water runoff from surrounding urban areas. Lake Elsinore is approximately 3 miles downstream of Canyon Lake at the lowest elevation of the San Jacinto River Watershed. Surface flow from the San Jacinto River Watershed reaches Lake Elsinore only through the direct release, overflow, or seepage from the Canyon Lake Dam. Lake Elsinore acts as a natural sump for the San Jacinto River Watershed; however, in rare situations the lake has overflowed into Temescal Creek, which ultimately drains to the Santa Ana River.

4.2 LOCAL CLIMATE

Riverside County features a somewhat cooler version of a Mediterranean climate, or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Relative to other areas in southern California, winters are colder with chilly to cold morning temperatures common. Climatological data obtained for the City of Perris, directly adjacent to March Air Reserve Base, indicates the annual precipitation averages 11.4 inches per year. Almost all of the precipitation occurs in the months between December and March, with hardly any occurring between the months of April and November. The wettest month is February, with a monthly average total precipitation of 2.86 inches. The average maximum and minimum temperatures for the City of Perris are 80.9 and 46.8 degrees Fahrenheit (F) respectively with July and August being the hottest months (monthly average high 98.0° F) and December being the coldest (monthly average low 34.0° F). Temperatures during the site visits were in the mid-70s° F with light winds and little to no cloud cover.

4.3 USGS TOPOGRAPHIC QUADRANGLE

The project site is located within the Riverside East and Steele Peak quadrangles of the USGS 7.5-minute topographic map series in Sections 25, 26, 35, and 36 of Township 3 south, Range 4 west. Surface elevations within the project site range from approximately 1,500 to 1,522 feet above mean sea level and generally slopes from northwest to southeast. According to the topographic map, the project site comprises five (5) drainages (one main drainage running northwest to southeast and four tributaries to this drainage, two running west to east and two running approximately north to south), minor vehicular roads, and vacant/undeveloped land. The surrounding area consists of various base-related structures including the airport to the northeast; the March Field Air Museum to the north and partially within the project site; the Riverside National Cemetery and Lieutenant General Archie J. Old, Jr. Golf Course to the west; residential, commercial, and industrial developments inside and outside of the base; and vacant/undeveloped land scattered throughout the general region.

4.4 AERIAL PHOTOGRAPHS

Prior to the field visit, current and historical aerial photographs (1994-2018) of the project site were reviewed as available from Google Earth Pro Imaging. Aerial photographs can be useful during the delineation process, as they often indicate the presence or absence of drainage features and riparian/riverine habitat within the boundaries of the project site.

1994 – 2008: According to the 5/31/1994 through 6/4/2008 aerial photographs, the project site consists primarily of vacant undeveloped land and appears to have changed very little during the 14-year timespan of the photographs. There were no significant changes to the site conditions during this time period. The on-site drainages appear to be mostly earthen except at the confluences of Drainages 1 and 4, Drainages 1 and 2, and Drainages 1 and 3, where they appear to be either concrete-lined or concrete riprap-lined for a short distance at each juncture. While it is difficult to be positive, up to 2008 it appears as if Drainages 1 and 4 are at-grade with each other. Drainage 1 in within the footprint of the interim channel is developed (e.g., concrete riprap) in the 1994 aerial. Surrounding land uses were generally the same in 1994 as in 2008, consisting of various base-related structures including the airport to the northeast; the March Field Air Museum to the north and partially within the project site; the Riverside National Cemetery and Lieutenant General Archie J. Old, Jr. Golf Course to the west; residential, commercial, and industrial developments inside and outside of the base; and vacant/undeveloped land.

2009 – 2012 According to the 6/5/2009 through 11/6/2012 aerial photographs, the project site continues to consist primarily of vacant undeveloped land. However, beginning with the 2009 aerial, a portion of the project site along its entire western and southern boundaries was cleared and under construction. An underground pipeline is visibly being constructed in the northwestern corner of the site, and large culverts can be seen stored on the ground in the cleared area, presumably used to continue the pipeline along the western and southern site boundaries. By 2011 a new paved road was present on the western side of the project site, likely running on top of the pipeline. A portion of the site's northwestern corner continued to be used for materials storage through this time period. The on-site drainages are mostly unchanged except in the northwestern corner, where Drainages 1 and 4 were converted back to earthen substrates and bridged over for construction between 2009 and 2011. By 6/7/2012 the three-way confluence of Drainages 1, 4, and 5 was lined with riprap, and by 11/6/2012 the confluences of Drainages 1, 4, and 5 and Drainages 1 and 2 were both converted back to earth and the first 0.25 mile of Drainage 1 was excavated. Surrounding land uses were generally the same in 2012 as in 2008.

2012 – 2014 According to the 11/12/2013 through 4/27/2014 aerial photographs, the project site continues to consist primarily of vacant undeveloped land. The largest change during this time period was constructing the drainages into the state that they were in at the time of Michael Baker's 2015 field survey. Drainage 1 was converted into a wide, trapezoidal drainage for its first 0.25 mile. Its northern limit became concrete-lined, with loose riprap immediately downstream of the concrete. A clear grade separation was established between

Drainages 1 and 4, and Drainage 4 was lined with grouted riprap. The confluence of Drainages 1 and 2 was lined with loose riprap. Surrounding land uses were generally the same in 2012 as in 2008.

2014 – 2018 According to the 2/9/2016 through 12/2/2018 aerial photographs, the project site remained the same between 2014 and 2018 with no significant changes to the habitat or surrounding areas. The only differences observed were the weed abatement strips mowed around the perimeter of the project site and across the site.

4.5 SOIL SURVEY

Soils within and adjacent to the project site were researched prior to the field visit using the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Custom Soil Resource Report for the Western Riverside Area, California. The presence of hydric soils is initially investigated by comparing the mapped soil series for the site to the County list of hydric soils. Soil surveys furnish soil maps and interpretations originally needed in providing technical assistance to farmers and ranchers; in guiding other decisions about soil selection, use, and management; and in planning, researching, and ultimately disseminating the results of the research. In addition, soil surveys are now heavily utilized in order to obtain soil information with respect to potential wetland environments and jurisdictional areas (i.e., soil characteristics, drainage, and color). According to the Custom Soil Resource Report, the project site is underlain by the following soil units: Exeter sandy loam, 0 to 2 percent slopes (EnA); Exeter sandy loam, 2 to 8 percent slopes, eroded (EnC2); Greenfield sandy loam, 0 to 2 percent slopes (GyA); Hanford fine sandy loam, 0 to 2 percent (HgA); Monserate sandy loam, 0 to 5 percent slopes (MmB); and Monserate sandy loam, 5 to 8 percent slopes, eroded (MmC2) (Exhibit 4, *Soils*).

4.6 HYDRIC SOILS LIST OF CALIFORNIA

ELMT reviewed the USDA NRCS Hydric Soils List of California in an effort to verify whether on-site soils are considered to be hydric⁴. It should be noted that lists of hydric soils along with soil survey maps provide off-site ancillary tools to assist in wetland determinations, but they are not a substitute for field investigations. The presence of hydric soils is initially investigated by comparing the mapped soil series for the site to the County list of hydric soils. According to the hydric soils list, the on-site soils have not been listed as hydric in the Western Riverside Area of Riverside County, California.

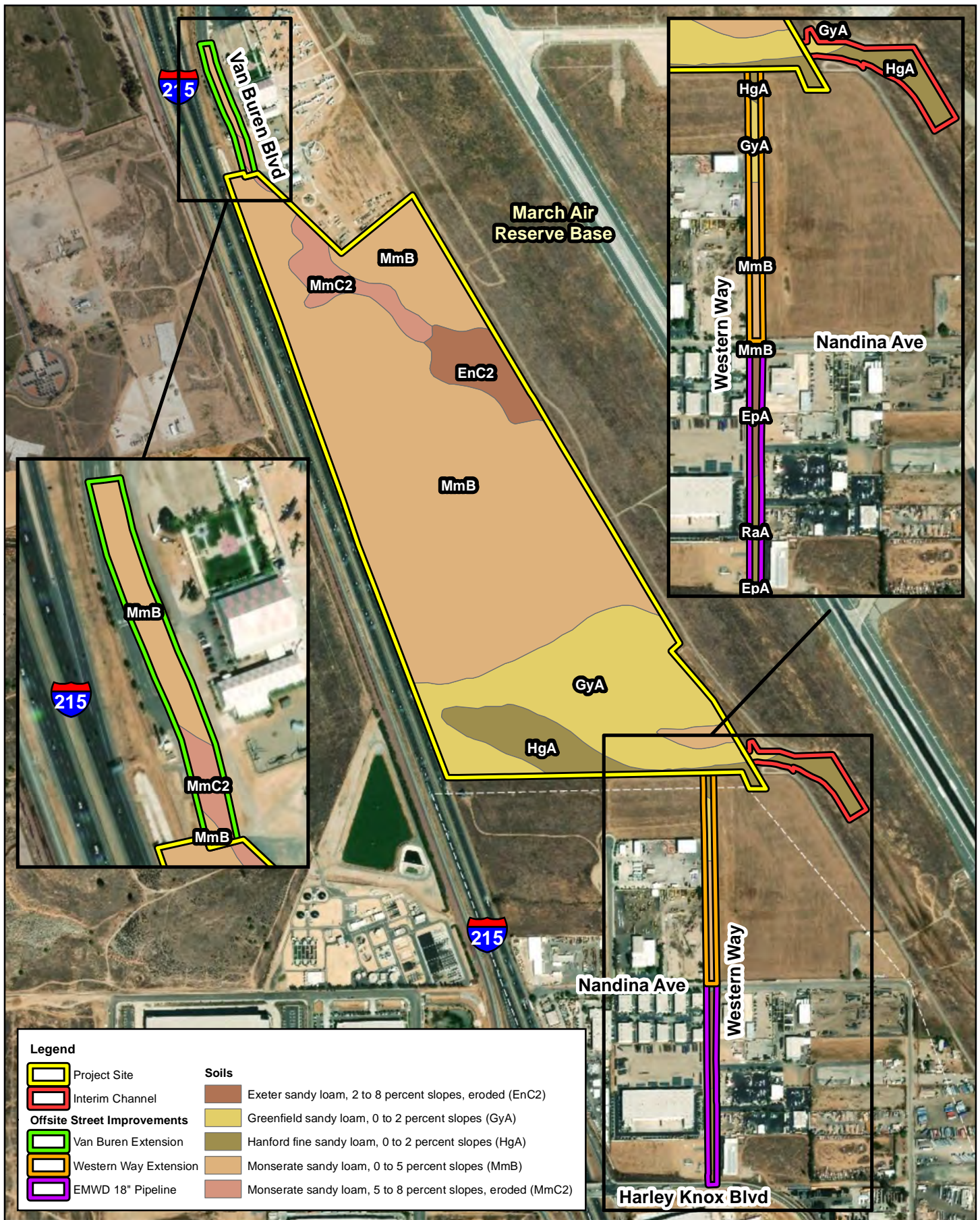
⁴ A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

4.7 NATIONAL WETLANDS INVENTORY

ELMT reviewed the U.S. Fish and Wildlife Service's (USFWS) National Wetlands Inventory maps. No riverine or wetland features have been documented within or adjacent to the project site. Refer to Appendix B, *Documentation*.

4.8 FLOOD ZONE

ELMT searched the Federal Emergency Management Agency (FEMA) website for flood data for the project site. The project site is located within Flood Insurance Rate Maps 06065C0745G and 06065C1410G. According to both maps, the project site is located within Zone D, which is defined as "Areas in which flood hazards are undetermined, but possible."



VETERANS INDUSTRIAL PARK 215
 DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Soils

Exhibit 4

Section 5 Site Conditions

A field investigation was originally conducted by Michael Baker International biologists on October 21, 2015 to verify existing site conditions and document the extent of potential jurisdictional areas within the boundaries of the project site. A subsequent survey was conducted by ELMT biologists Thomas J. McGill, Ph.D. and Travis J. McGill on June 19, 2018 to update the survey of the project site as well as to conduct a survey of offsite street improvement areas along Western Way and Van Buren Boulevard, including the interim channel. The interim channel was not able to be ground-truthed due to site access issues. However, ELMT was able to verify the conditions of the interim channel from the eastern boundary of the project site. Refer to Appendix C for representative photographs taken throughout the project site.

The majority of the project site consists of a heavily disturbed, undeveloped field. Historic aerial imagery shows indications of site-wide vegetation mowing, and from 2009 to 2011 the majority of the project site along its western and southern boundaries were cleared of vegetation for the construction and maintenance of an underground pipeline. The northwest portion of the project site has been used for materials storage since the pipeline was completed. Some areas along the northern edge of the project site are associated with and are actively used by the March Field Air Museum. These land uses have eliminated, naturally occurring habitats from the project site. Surveys show that the site is largely vegetated with early successional non-native plants that easily spread through disturbed, open areas, particularly non-native grasses and Russian thistle (*Salsola tragus*). Paved roadways run roughly northwest to southeast across the eastern and western portions of the project site, as well as east to west across the site's southern boundary. Five (5) drainage features are present within the site boundaries. The main drainage feature flows roughly northwest to southeast across the middle of the site. In addition, there are four drainage features that are tributary to the main drainage feature in the middle of the site. These drainage features are generally earthen but also contain sections that are either concrete-lined, riprap-lined, or lined with grouted riprap.

The project site, including the interim channel, and two offsite street improvement areas are either develop or heavily disturbed and no longer consists of undeveloped, native plant communities. One (1) plant community was observed on the project site and continued off the site into the southern offsite street improvement area and the western portion of the interim channel, non-native grassland (Exhibit 5, *Vegetation*). In addition, there are two (2) on-site land cover types that would be classified as disturbed and developed. The Van Buren Boulevard road improvement area support a developed land cover type, while the northern portion of the Western Way extensive supported a non-native grassland and the southern portion is already paved and thus is classified as a developed land cover type.

5.1 JURISDICTIONAL FEATURES

Drainage of the project site is accomplished via the five (5) on-site drainage features and generally follows on-site topography from the northwest to the southeast (Exhibit 5, *Drainage Features*). This includes base- and museum-related drainage, as well as drainage from west of I-215 that crosses under the interstate and onto the project site. Refer to the following sections for a description of on-site jurisdictional features.

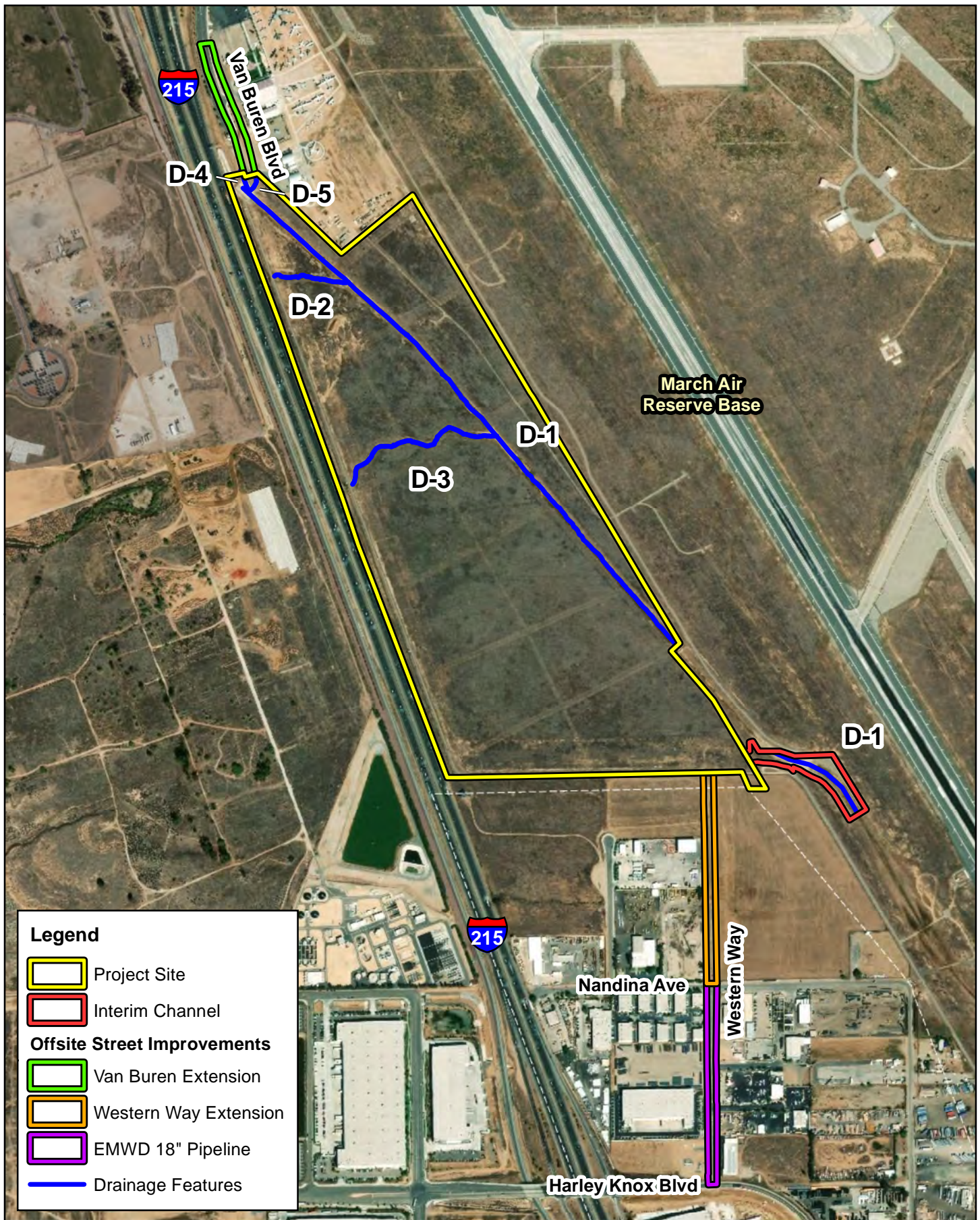
5.1.1 DRAINAGE FEATURES

Drainage 1

Drainage 1 runs generally northwest to southeast through the project site before discharging to the Perris Valley Storm Drain at a distance of approximately 3 miles southeast of the site's southern boundary. The drainage has been converted to a trapezoidal flood control channel. The northern end of the drainage is concrete-lined, the area immediately downstream of the concrete and the area at the confluence of Drainages 1 and 2 are both lined with loose riprap, the confluence of Drainages 1 and 3 is lined with concreted riprap, and the rest of the drainage is earthen. Drainage 1, within footprint of the interim channel, is primarily lined with concreted riprap with evidence of sediment deposits and erosion on the southern portion of the interim channel. The drainage ranges from 4 to 27 feet in width at the OHWM (equivalent to the channel invert across most of the drainage) and from 8 to 68 feet at the top of bank. Several small, isolated, and non-flowing pools of surface water were observed within Drainage 1 during the field investigation. Vegetation is present along the drainage banks, with generally a mosaic of native and non-native vegetation throughout, including several small stands of mulefat (*Baccharis salicifolia*). Evidence of a Corps OHWM was noted via water staining on concrete, riprap, and concreted riprap on side slopes, as well as differences in soil texture and color on earthen slopes.

Drainage 2

Drainage 2 runs generally from west to east from the project's western edge before discharging to Drainage 1 after a distance of approximately 550 feet. The drainage is mostly earthen and rectangular but is lined with loose riprap and is trapezoidal at its eastern end at the confluence with Drainage 1. It ranges from approximately 2 to 12 feet in width at the OHWM and 4 to 28 feet in width at the top of bank. No surface water was observed within Drainage 2 during the field investigation. The drainage in general is choked with vegetation, mostly Russian thistle, throughout much of its length until it widens and becomes riprap-lined at its eastern end. Evidence of a Corps OHWM was noted via water and mud staining on the riprap at the eastern, trapezoidal end of the drainage and via differences in soil texture in the earthen portions.



VETERANS INDUSTRIAL PARK 215
 DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS
Drainage Features

Drainage 3

Drainage 3 runs generally from southwest to northeast from the project's western edge before discharging to Drainage 1 after a distance of approximately 1,275 feet. The drainage is mostly earthen and rectangular but is lined with concreted riprap and is trapezoidal at its eastern end at the confluence with Drainage 1. It ranges from approximately 4 to 12 feet in width at the OHWM and 6 to 35 feet in width at the top of bank. No surface water was observed within Drainage 3 during the field investigation. The drainage in general is choked with vegetation, mostly Russian thistle, throughout much of its length until it widens and becomes concrete riprap-lined at its eastern end. Evidence of a Corps OHWM was noted via water and mud staining on the concreted riprap at the eastern, trapezoidal end of the drainage and via differences in soil texture in the earthen portions.

Drainage 4

Drainage 4 runs generally from north to south from the project's northern edge before discharging to Drainage 1 after a distance of approximately 140 feet. The drainage is trapezoidal and is mostly lined with grouted riprap except its earthen northwestern edge. Because of the difference in grade, Drainage 4 sheetflows over the eastern top of Drainage 1. It ranges from approximately 10 to 33 feet in width at the OHWM and 30 to 44 feet in width at the top of bank. The top of bank of Drainage 4 combines with that of Drainage 1 where Drainage 4 begins to sheetflow into Drainage 1. No surface water was observed within Drainage 4 during the field investigation. The drainage was mostly open and contained little vegetation. Evidence of a Corps OHWM was noted via water and mud staining on the riprap.

Drainage 5

Drainage 5 runs generally from north to south before curving to the southwest. It runs from the project's northern edge and discharges to Drainage 4 after a distance of approximately 160 feet. The drainage is mostly earthen except for its last 40 feet, which are lined with grouted riprap. It is generally a consistent width throughout the project site of approximately 6 feet across its OHWM and top of bank. No surface water was observed within Drainage 5 during the field investigation.

5.1.2 WETLAND FEATURES

In order to qualify as a wetland, a feature must exhibit all three wetland parameters (i.e., vegetation, soils, and hydrology) described in the Corps Arid West Regional Supplement. Although evidence of hydrology (i.e., surface water) was present within the on-site drainage features during the field surveys, these areas were primarily dominated by upland/facultative upland plant species and lacked the necessary amount of hydrophytic (obligate) vegetation needed to meet the wetland vegetation parameter. Therefore, no wetland features are anticipated to occur on the project site. Within the project site, water does not persist long enough to create anaerobic conditions within the soil.

Section 6 Findings

This report presents ELMT's best effort at determining the extent of jurisdictional features using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Please refer to Table 1, *Jurisdictional Areas and Impact Summary*, on the following page for a summary of on-site jurisdictional areas and anticipated impacts associated with the proposed project.

6.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

6.1.1 WATERS OF THE UNITED STATES DETERMINATION

Drainage 1 runs roughly northwest to southeast across the project site and is tributary to the Perris Valley Storm Drain, which flows into Canyon Lake and ultimately to Lake Elsinore. From Lake Elsinore, water flows out to Temescal Creek, which is ultimately tributary to the Santa Ana River (Relatively Permanent Water) and the Pacific Ocean (Traditional Navigable Water). Therefore, Drainage 1 and its four on-site tributaries would qualify as waters of the United States and fall under the regulatory authority of the Corps. A total of 1.66 acres (7,069 linear feet) of Corps jurisdiction (non-wetland waters) were documented within the boundaries of the project site and within the footprint of the interim channel. Approximately 1.51 acres (6,307 linear feet) of Corps jurisdiction were documented within the project site, and 0.15 acre (761 linear feet) of Corps jurisdiction was documented within the project footprint of the interim channel.

Based on a review of preliminary design plans, permanent impacts to all five drainages of 1.66 acres (7,069 linear feet) are expected. No additional drainage features that would meet the definition of waters of the United States occur within the project site, interim channel, or offsite street improvement areas. Refer to Exhibits 6a and 6b for an illustration of Corps jurisdictional areas.

6.1.2 WETLAND DETERMINATION

An area must exhibit all three wetland parameters described in the Corps Arid West Regional Supplement to be considered a jurisdictional wetland. Based on the results of the field investigation, it was determined that no areas within the project site met all three wetland parameters. Therefore, no jurisdictional wetland features exist within the project site.

6.2 REGIONAL WATER QUALITY CONTROL BOARD

No isolated or Rapanos conditions were observed within the boundaries of the project site. Therefore, the Regional Board jurisdictional limit follows that of the Corps and totals approximately 1.66 acres (7,069 linear feet). Approximately 1.66 acres (7,069 linear feet) of permanent impacts will occur to Regional Board jurisdiction within the five drainages as a result

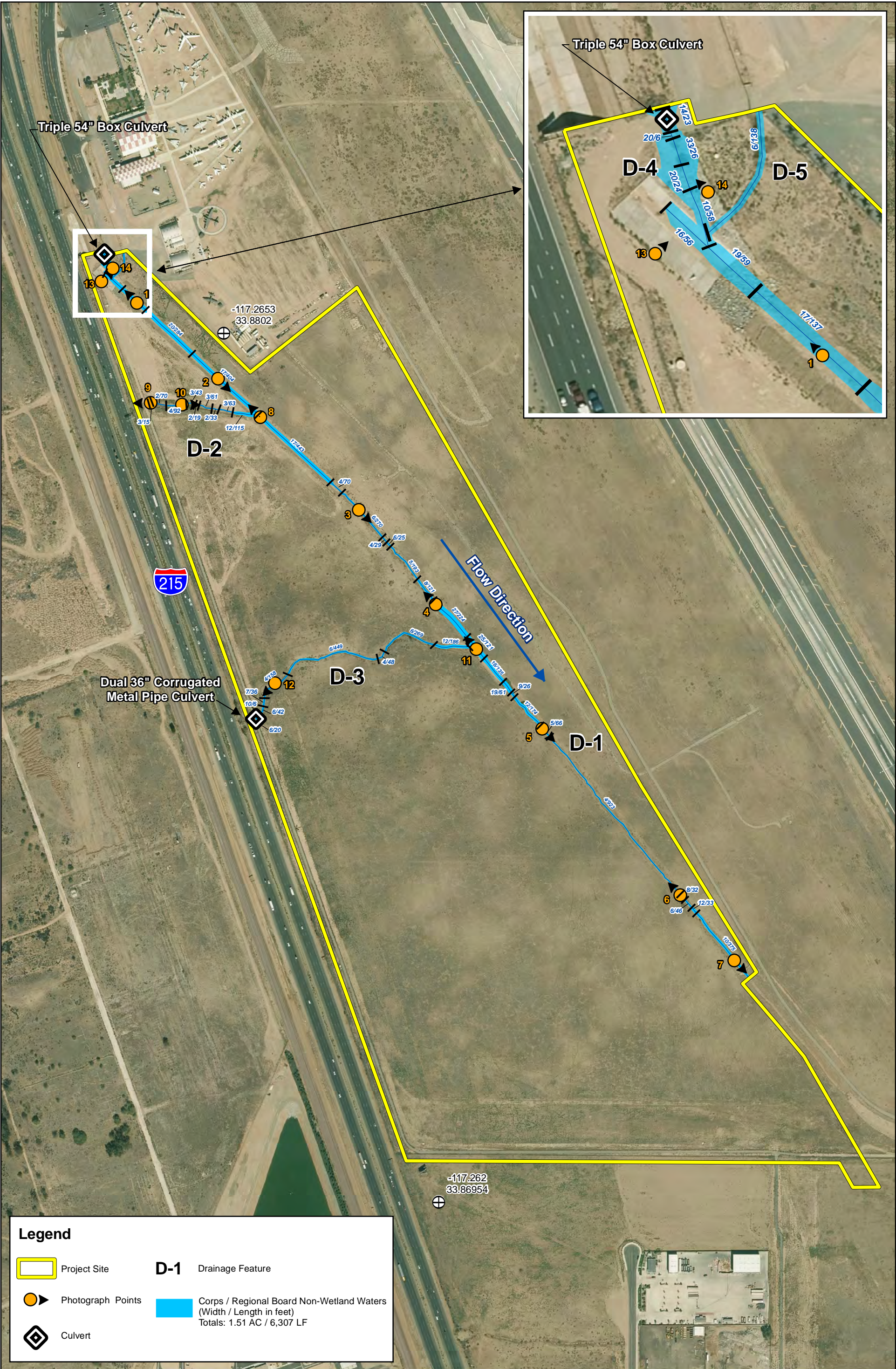
of project implementation. Refer to Exhibits 6a and 6b for an illustration of Regional Board jurisdictional areas.

6.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

The five on-site drainages exhibit characteristics consistent with CDFW's methodology and would be considered CDFW streambed. Therefore, approximately 3.28 acres (6,308 linear feet) of CDFW jurisdiction is located within boundaries of the project site. Based on a review of preliminary design plans, permanent impacts to all five drainages of 3.28 acres (6,308 linear feet) are expected as a result of the paving and development of the project site. No additional CDFW streambed features or associated habitat occur within the project site, interim channel, or offsite street improvement areas. It should be noted that Drainage 1, within the footprint of the interim channel occur on federal lands (i.e., the MARB). As a result, CDFW does not have regulatory authority over Drainage 1 within footprint of the interim channel. Refer to Exhibit 7 for an illustration of CDFW jurisdictional areas.

Table 1: Jurisdictional Area and Impact Summary

Jurisdictional Feature	Corps/Regional Board Non-Wetland Waters		CDFW Streambed	
	On-Site Jurisdiction Acres (Feet)	Permanent Impact Acres (Feet)	On-Site Jurisdiction Acres (Feet)	Permanent Impact Acres (Feet)
Drainage 1				
Project Site	1.20 (4,307)	1.20 (4,307)	2.66 (4,307)	2.66 (4,307)
MARB Property	0.15 (761)	0.15 (761)	–	–
Drainage 2	0.06 (511)	0.06 (511)	0.15 (511)	0.15 (511)
Drainage 3	0.18 (1,214)	0.18 (1,214)	0.33 (1,214)	0.33 (1,214)
Drainage 4	0.05 (138)	0.05 (138)	0.12 (138)	0.12 (138)
Drainage 5	0.02 (138)	0.02 (138)	0.02 (138)	0.02 (138)
TOTALS	1.66 (7,069)	1.66 (7,069)	3.28 (6,308)	3.28 (6,308)



Legend



Project Site



Photograph Points



Culvert

D-1

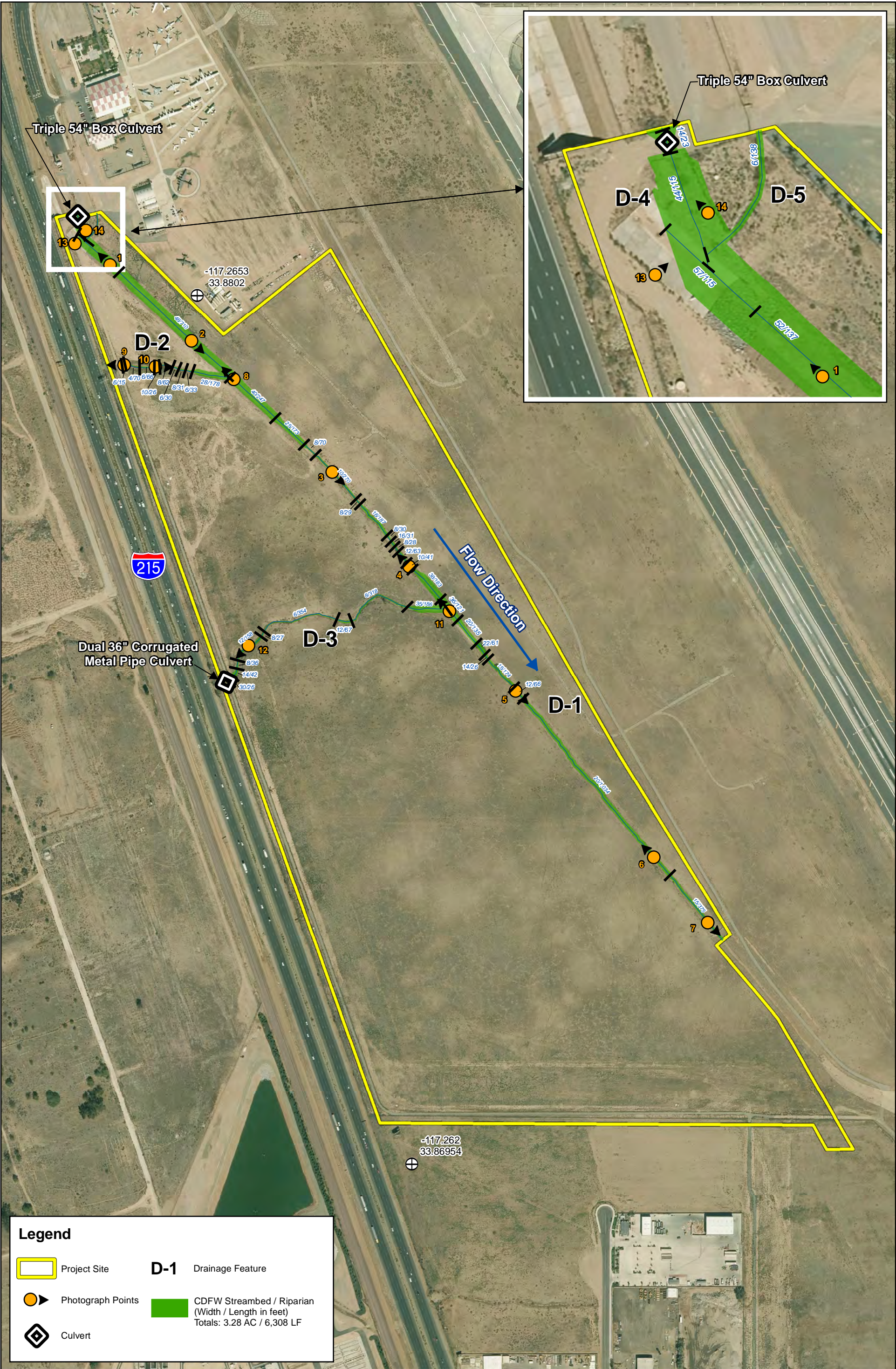
Drainage Feature



Corps / Regional Board Non-Wetland Waters
(Width / Length in feet)
Totals: 1.51 AC / 6,307 LF







Section 7 Regulatory Approval Process

The following is a summary of the various permits, certifications, and agreements that may be necessary prior to construction and/or alteration within jurisdictional areas. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries and permitting requirements.

7.1 U.S. ARMY CORPS OF ENGINEERS

The Corps regulates discharges of dredged or fill materials into waters of the United States, including wetlands, pursuant to Section 404 of the CWA. Therefore, any impacts to on-site jurisdictional areas will require a CWA Section 404 permit prior to project implementation. In order to qualify for the Corps Nationwide Permit (NWP) program, project impacts to “waters of the United States” typically need to be under a designated acre threshold (typically 0.5 acre). If project impacts exceed the acreage threshold then a Standard Individual Permit (IP) with the Corps would need to be processed. The NWPs are a streamlined process that already have supporting National Environmental Protection Agency (NEPA) compliance completed. If a project does not meet the requirements of the NWPs then IP will need to be processed, which requires its own NEPA compliance document.

Based on a review of preliminary design plans, it will be necessary for Hillwood to acquire a CWA Section 404 permit prior to impacts occurring within Corps jurisdictional areas. Since the proposed project will result in the permanent loss of more than a ½-acre to Corps jurisdiction (non-wetland water), the proposed project will be authorized via a Standard Individual Permit. It should be noted that a separate Section 404 permit will need to be obtained for impacts to Drainage 1 within the interim channel footprint on federal property (i.e., MARB).

7.2 REGIONAL WATER QUALITY CONTROL BOARD

The Regional Board regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. Therefore, any impacts to on-site jurisdictional areas will require a CWA Section 401 Water Quality Certification from the Santa Ana Regional Board prior to project implementation. The application will require a processing fee which is based on the extent of project impacts, and the final CWA Section 401 Water Quality Certification will not be issued until all fees are paid to the Regional Board. It should also be noted that the Regional Board requires that California Environmental Quality Act (CEQA) compliance be obtained prior to issuance of the Section 401 Water Quality Certification for impacts to the on-site drainage features, and National Environmental Policy Act (NEPA) compliance be obtained prior to the issuance of the Section 401 for impacts to Drainage 1 within the interim channel footprint on federal property.

7.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Pursuant to Section 1602 of the California Fish and Game Code, the CDFW regulates any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream. Therefore, impacts to the on-site jurisdictional areas will require a Section 1602 Streambed Alteration Agreement from CDFW prior to project implementation. The notification will require a processing fee which is based on the term and cost of the proposed project. It should also be noted that the CDFW requires that the payment of the process fee be paid and CEQA compliance be obtained prior to the issuance of the final Section 1602 Streambed Alteration Agreement.

7.4 RECOMMENDATIONS

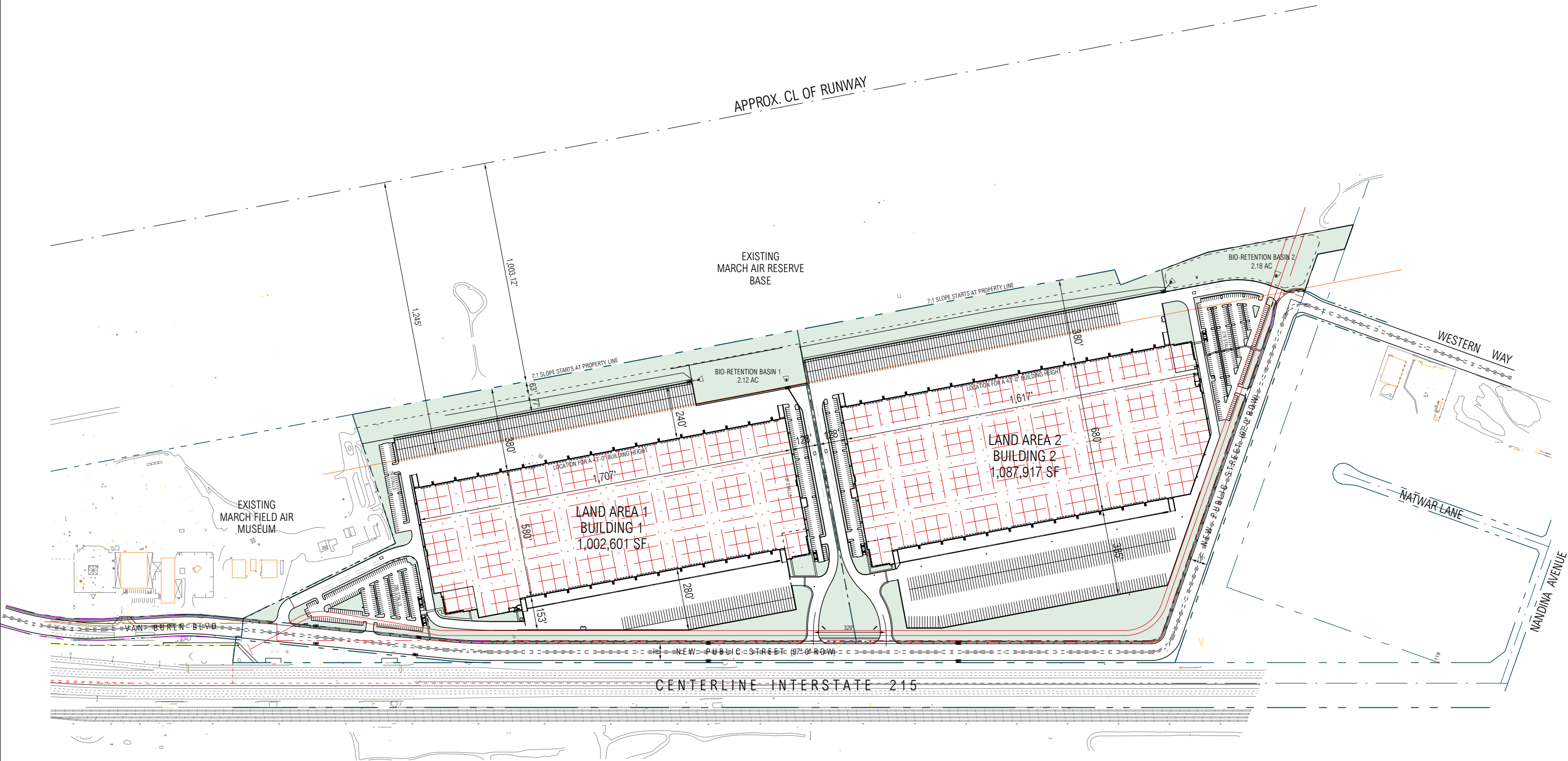
It is recommended that this delineation be forwarded to the regulatory agencies for their review and concurrence. The concurrence/receipt would solidify findings noted within this report.

Section 8 References

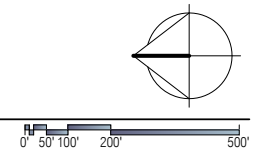
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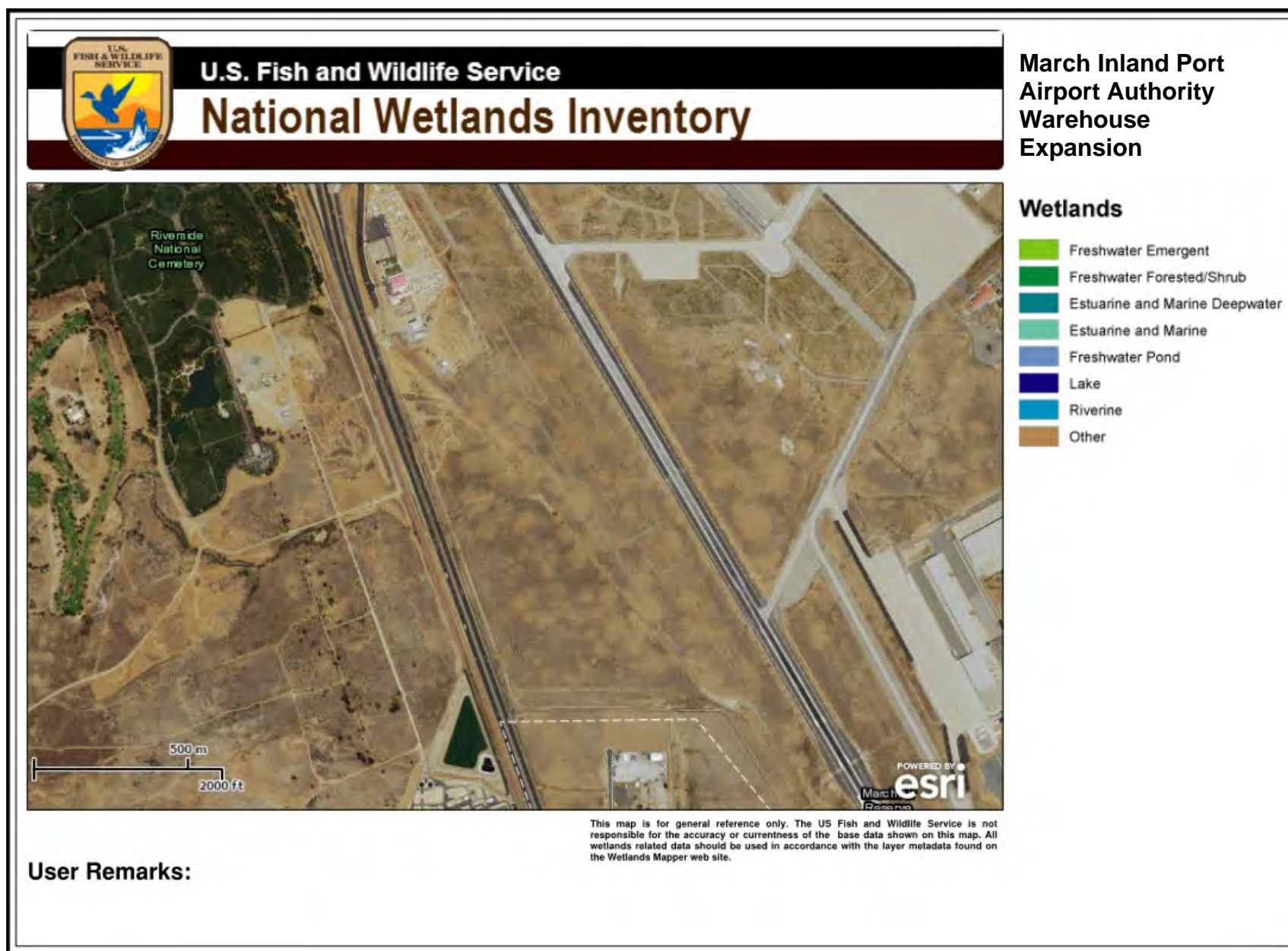
Appendix A Site Plan



OVERALL MASTER SITE PLAN
SCALE: 1" = 200'-0"



Appendix B Documentation



Appendix C Site Photographs



Photograph 1: Facing the northwest terminus of the project site (upstream) from within Drainage 1. Drainage 1 is lined with riprap within the project boundaries, but then becomes earthen. Outside of the project boundaries, the drainage is lined with cement.



Photograph 2: Facing southeast (downstream) within Drainage 1.



Photograph 3: Facing southeast (downstream) within Drainage 1. Drainage 1 narrows for a long length but still has a mostly clear streambed.



Photograph 4: Facing northwest (upstream) within Drainage 1. Drainage 1 has several small, isolated pools.



Photograph 5: Facing southeast (downstream) at a highly eroded section of Drainage 1. A small pool of surface water is present in the foreground.



Photograph 6: Facing northwest (upstream) within Drainage 1. The lower portion of Drainage 1 is mostly very narrow.



Photograph 7: Facing southeast (downstream) at the southern terminus of Drainage 1 within the project site. This end of the drainage is lined with rock and then with cement before the fence.



Photograph 8: Facing northwest (upstream) at the confluence of Drainages 1 and 2.



Photograph 9: Facing west (upstream) at two 36-inch culverts at the western end of Drainage 2. Interstate 215 is in the background.



Photograph 10: Facing east (downstream) within Drainage 2. Most of Drainage 2 is narrow and choked with vegetation, primarily Russian thistle (*Salsola tragus*).



Photograph 11: Facing northwest (upstream) at the confluence of Drainages 1 and 3. This confluence is lined with shotcrete.



Photograph 12: Facing southwest (upstream) within Drainage 3. Drainage 3 is variably wide and narrow but is generally choked with Russian thistle throughout.



Photograph 13: Facing northeast at the confluence of Drainages 1 (foreground) and 4 (background). Drainage 4 sheetflows over the top of Drainage 1.



Photograph 14: Facing northwest at the confluence of Drainages 1 (left) and 4 (right). Drainage 4 sheetflows over the top of Drainage 1.

Appendix D Methodology

WATERS OF THE UNITED STATES

Since 1972, the Corps and EPA have jointly regulated the filling of waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps has regulatory authority over the discharge of dredged or fill material into the waters of the United States under Section 404 of the CWA. The Corps and EPA define “fill material” to include any “material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States.” Examples include, but are not limited to, the placement of sand, rock, clay, construction debris, wood chips, and “materials used to create any structure or infrastructure in the waters of the United States.” The term “*waters of the United States*” is defined as follows:

- (1) all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) all interstate waters including interstate wetlands;
- (3) all waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) which are used or could be used for industrial purpose by industries in interstate commerce;
- (4) all impoundments of waters otherwise defined as waters of the United States under the definition;
- (5) tributaries of waters identified in paragraphs (1)-(4) mentioned above;
- (6) the territorial seas; and,
- (7) wetlands¹ adjacent to the waters identified in paragraphs (1)-(6) mentioned above.

WETLANDS

For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008). This document is one of a series of Regional Supplements to the Corps Wetland

¹ The term *wetlands* means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Delineation Manual (Corps 1987). The identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. In order to be considered a wetland, an area must exhibit at least minimal characteristics within these three (3) parameters. The Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. In the field, vegetation, soils, and evidence of hydrology are examined using the methodology listed below and documented on Corps wetland data sheets, when applicable. It should be noted that both the Regional Board and the CDFW jurisdictional wetlands encompass those of the Corps.

Vegetation

Nearly 5,000 plant types in the United States may occur in wetlands. These plants, often referred to as hydrophytic vegetation, are listed in regional publications by the U.S. Fish and Wildlife Service (USFWS). In general, hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during growing season. Hydrophytic vegetation decisions are based on the assemblage of plant species growing on a site, rather than the presence or absence of particular indicator species. Vegetation strata are sampled separately when evaluating indicators of hydrophytic vegetation. A stratum for sampling purposes is defined as having 5 percent or more total plant cover. The following vegetation strata are recommended for use across the Arid West:

- ◆ *Tree Stratum:* Consists of woody plants 3 inches or more in diameter at breast height (DBH), regardless of height;
- ◆ *Sapling/shrub stratum:* Consists of woody plants less than 3 inches DBH, regardless of height;
- ◆ *Herb stratum:* Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size; and,
- ◆ *Woody vines:* Consists of all woody vines, regardless of size.

The following indicator is applied per the test method below.² Hydrophytic vegetation is present if any of the indicators are satisfied.

Indicator 1 – Dominance Test

Cover of vegetation is estimated and is ranked according to their dominance. Species that contribute to a cumulative total of 50% of the total dominant coverage, plus any species that comprise at least 20% (also

² Although the Dominance Test is utilized in the majority of wetland delineations, other indicator tests may be employed. If one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology are present, then the Prevalence Test (Indicator 2) may be performed. If the plant community satisfies the Prevalence Test, then the vegetation is hydric. If the Prevalence Test fails, then the Morphological Adaptation Test may be performed, where the delineator analyzes the vegetation for potential morphological features.

known as the “50/20 rule”) of the total dominant coverage, are recorded on a wetland data sheet. Wetland indicator status in California (Region 0) is assigned to each species using the *National Wetland Plant List, version 2.4.0* (Corps 2012). If greater than 50% of the dominant species from all strata were Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation is considered to be met. Plant indicator status categories are described below:

- ◆ *Obligate Wetland (OBL)*: Plants that almost always occur in wetlands;
- ◆ *Facultative Wetland (FACW)*: Plants that usually occur in wetlands, but may occur in non-wetlands;
- ◆ *Facultative (FAC)*: Plants that occur in wetlands and non-wetlands;
- ◆ *Facultative Upland (FACU)*: Plants that usually occur in non-wetlands, but may occur in wetlands; and,
- ◆ *Obligate Upland (UPL)*: Plants that almost never occur in wetlands.

Hydrology

Wetland hydrology indicators are presented in four (4) groups, which include:

Group A – Observation of Surface Water or Saturated Soils

Group A is based on the direct observation of surface water or groundwater during the site visit.

Group B – Evidence of Recent Inundation

Group B consists of evidence that the site is subject to flooding or ponding, although it may not be inundated currently. These indicators include water marks, drift deposits, sediment deposits, and similar features.

Group C – Evidence of Recent Soil Saturation

Group C consists of indirect evidence that the soil was saturated recently. Some of these indicators, such as oxidized rhizospheres surrounding living roots and the presence of reduced iron or sulfur in the soil profile, indicate that the soil has been saturated for an extended period.

Group D – Evidence from Other Site Conditions or Data

Group D consists of vegetation and soil features that indicate contemporary rather than historical wet conditions, and include shallow aquitard and the FAC-neutral test.

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sand bars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

Soils

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper 16-20 inches.³ The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 20 inches of the soil profile.

Once in the field, soil characteristics are verified by digging soil pits along each transect to an excavation depth of 20 inches; in areas of high sediment deposition, soil pit depth may be increased. Soil pit locations are usually placed within the drainage invert or within adjoining vegetation. At each soil pit, the soil texture and color are recorded by comparison with standard plates within a *Munsell Soil Chart* (2009). Munsell Soil Charts aid in designating color labels to soils, based by degrees of three simple variables – hue, value, and chroma. Any indicators of hydric soils, such as organic accumulation, iron reduction, translocation, and accumulation, and sulfate reduction, are also recorded.

Hydric soil indicators are present in three groups, which include:

All Soils

“All soils” refers to soils with any United States Department of Agriculture (USDA) soil texture. Hydric soil indicators within this group include histosol, histic epipedon, black histic, hydrogen sulfide, stratified layers, 1 cm muck, depleted below dark surface, and thick dark surface.

Sandy Soils

“Sandy soils” refers to soil materials with a USDA soil texture of loamy fine sand and coarser. Hydric soil indicators within this group include sandy mucky mineral, sandy gleyed matrix, sandy redox, and stripped matrix.

³ According to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008), growing season dates are determined through on-site observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperature.

Loamy and Clayey Soils

“Loamy and clayey soils” refers to soil materials with a USDA soil texture of loamy very fine sand and finer. Hydric soil indicators within this group include loamy mucky mineral, loamy gleyed matrix, depleted matrix, redox dark surface, depleted dark surface, redox depressions, and vernal pools.

SWANCC WATERS

The term “isolated waters” is generally applied to waters/wetlands that are not connected by surface water to a river, lake, ocean, or other body of water. In the presence of isolated conditions, the Regional Board and CDFW take jurisdiction through the application of the OHWM/streambed and/or the 3 parameter wetland methodology utilized by the Corps.

RAPANOS WATERS

The Corps will assert jurisdiction over non-navigable, not relatively permanent tributaries and their adjacent wetlands where such tributaries and wetlands have a significant nexus to a Traditional Navigable Water (TNW). The flow characteristics and functions of the tributary itself, in combination with the functions performed by any wetlands adjacent to the tributary, determine if these waters/wetlands significantly affect the chemical, physical, and biological integrity of the TNWs. Factors considered in the significant nexus evaluation include:

- (1) The consideration of hydrologic factors including, but not limited to, the following:
 - volume, duration, and frequency of flow, including consideration of certain physical characteristics of the tributary
 - proximity to the TNW
 - size of the watershed average annual rainfall
 - average annual winter snow pack
- (2) The consideration of ecologic factors including, but not limited to, the following:
 - the ability for tributaries to carry pollutants and flood waters to TNWs
 - the ability of a tributary to provide aquatic habitat that supports a TNW
 - the ability of wetlands to trap and filter pollutants or store flood waters
 - maintenance of water quality