APPENDIX M

Natural Environment Study

CV Link Multi-Modal Transportation Project
Federal Project Number: ATPL 6164-(022)

Prepared by

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Revised October 6, 2016

Natural Environment Study

Associated Studies
Biological Assessment/HCP Consistency Determination, Jurisdictional Delineation, Mitigation Monitoring and Reporting Program

The project is located within the Coachella Valley region of Riverside County and extends from Palm Springs to Coachella primarily along major drainage service roads. The subject 49± mile multi-modal travel-way, with 74.47 miles of Link alignment analysed, will vary from 14 to approximately 30 feet in width, and for analysis purposes will be comprised of two western segments in Palm Springs, the combined route continuing southeast through Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, La Quinta, Indio and Coachella, and terminating on the north side of Avenue 56 (Airport Boulevard) at the Coachella Valley Stormwater Channel.

08 – Riverside County – 111

CV Link Multi-Modal Transportation Project

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Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Natural Environment Study

STATE OF CALIFORNIA
Department of Transportation
and
Coachella Valley Association of Governments

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This NES is available in PDF format on line at www.cvag.org or use the Caltrans District 8 California Relay Service TTY number 1 (909) 383-6300, the California Relay Service TTY customer service number 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.

Summary

The Summary of Findings and Conclusions includes the results of the impact analyses conducted for the subject CV Link project. These include a Biological Resource Assessment Report of the project routes, the Jurisdictional Delineation Report for those portions of the project that cross or may cross waters of the United States, and a Mitigation, Monitoring, and Reporting Program. The findings of the supporting technical reports and a summary of the general biological studies are provided herein. The negative and positive impacts, as well as the agreed upon mitigation measures and permits that will be required, are also included in this section.

Introduction & Summary Project Description
CV Link Multi-Modal Transportation Project is proposed as a ±49-mile non-motorized, multi-modal transportation pathway that passes through some of the most developed and populated portions of the Coachella Valley, providing non-motorized access and connectivity between residential, commercial, recreational, institutional, and other land uses throughout the region, and providing recreational opportunities for pathway users. It is also anticipated that CV Link will contribute to local reductions in traffic volumes and associated air pollutants.

The pathway route largely follows and is to be built upon the channel and levee service roads of the region's principal watercourses, including Chino Wash, Tahquitz Creek, and the Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel (WWR/CVSC). In some locations, the pathway shares right-of-way with roads and provides direct access to key commercial districts and recreational and institutional venues. In addition, grade-separated crossings (bridges or under-crossings) of major roadways are proposed. In areas where these major drainage corridors are inaccessible, on-street routes are proposed. Route variations using the street network are considered in challenging areas and will provide options for near and long-term implementation.

CV Link is a multi-jurisdictional project. The core alignment analyzed in this NES will extend across 11 jurisdictions, including seven incorporated cities and the Reservation lands of three Native American tribes. This NES evaluates potential impacts associated with the near-term construction and operation of CV Link's core route, from Palm Springs to Coachella, and mid-term enhancements of the core route, which may include the addition and enhancement of other pathways, access points, and grade separations. Long-term future extensions of the core route to Desert Hot Springs and the Salton Sea, which would extend the pathway to a buildout length of 74.47± miles, are envisioned but not fully conceptualized and are not part of the project analyzed in this NES.

A part of the CV Link will also incorporate and expand the Tahquitz Creek Trail in Palm Springs between South Palm Canyon Drive and the Whitewater Channel. The western termini are at Highway 111 (North Palm Canyon Drive) in northern Palm Springs at the Palm Springs Visitor Center at Tramway Road – access point for the Aerial Tram, and at South Palm Canyon Drive in central Palm Springs, providing access to Downtown Palm Springs and the Tahquitz Canyon Visitor Center.

The eastern terminus of the CV Link core alignment is at Airport Boulevard (Ave 56) and the Coachella Valley Stormwater Channel (CVSC) in the City of Coachella and the unincorporated community of Thermal. This terminus provides multi-modal access to the administrative offices of the Coachella Valley Unified School District, John Kelley Elementary School, the La Familia Continuing Education High School, a new Riverside County Sheriff's Station, US Post Office, the Jacqueline Cochran Airport, the Horses in the Sun (HITS) facility, and the Thermal Club Race Track (under construction).

1.1 Purpose and Need

The purpose of the CV Link is to enhance non-motorized multimodal connectivity between major employment, residential, recreational, and institutional centers throughout the Coachella Valley. The CV Link will:

a. Facilitate and promote the use of alternative modes of transportation, including pedestrian, bicycles, neighborhood electric vehicles (NEVs), golf carts, and wheelchairs

b. Provide significant improvements to local and regional air quality and reduced emission of greenhouse gases (GHGs) associated with motor-vehicle-based transportation

c. Reduce vehicle miles traveled which will also reduce pollutant emissions and result in air quality improvements.

e. Help achieve the goals of the Federal Active Transportation Program (ATP)

f. Contribute to reductions in motor vehicle congestion along local roadways, including State Highway 111 - the valley's principal motorized connector route

g. Enhance the valley transportation network and provide new health and recreational opportunities for pathway users.

h. Realize the economic benefits of complementing the hospitality and resort destination components of the Coachella Valley economy

i. Serve as a community gathering space and community aesthetic feature that incorporates innovative design and artistic elements

h Be consistent and compatible with existing and planned local development and circulation.

i. Minimize impacts to the Tahquitz Creek, Whitewater River Stormwater Channel, the Coachella Valley Stormwater Channel and other drainages to the greatest extent practicable

Statement of Need

The Coachella Valley transportation network has been shaped and constrained by topography, drainage patterns and other geomorphic constraints that have resulted in numerous high volume arterial roadways, many in proximity to residential, recreation and open space areas. The constrained roadway network and high traffic volumes adverse impact network operating conditions, decreasing opportunities for the integration of multi-modal facilities. As a result, also includes increased emissions of criteria pollutant and GHGs..

CV Link will provide a valley-wide backbone multimodal transportation facility that will enhance connectivity between major employment centers, residential and commercial development, community recreation and open space amenities, and educational institutional centers throughout the valley. CV Link meets the need to facilitate and promote the use of alternative modes of transportation, including walking, bicycles, low-speed electric vehicles (LSEVs: golf carts and NEVs), and wheelchairs. It will also create and expand employment opportunities by generating hundreds of local and regional jobs in design, construction, and maintenance. CV Link will also enhance the competitiveness of the Coachella Valley destination resort economy, providing much needed and significant beneficial economic effects.

Trip Reduction and Air Quality Improvements

The CV Link project has the potential to substantially reduce the amount of vehicle miles traveled. By the Year 2040, the reduction ranges from 7.4 million miles for the Proposed Project (without Rancho Mirage) to 9.1 million miles for the full core alignment. This reduction in VMTs will result in a substantial reduction in the emission of criteria pollutants, including PM_{10}, as well as greenhouse gases. The air quality impacts and benefits associated with this project have been evaluated and are presented in the CV Link NEPA EA.

Summary of Impacted Habitat

The quality of the habitat along and in proximity to the CV Link alignments ranges from landscaped road medians and parkways to limited riparian and wetlands located within the major drainages traversed by the CV Link pathway. Almost all of the lands proposed for CV Link development have been heavily impacted by urban development, including public streets, golf courses, drainages, and channel service and maintenance roads. Impacts to habitat would occur primarily in the channel drainages, with total permanent impacts of approximately 2.22 acres (96,888 square feet, CV Link CWA 404 application) and approximately 0.49 acres (21,559 square feet) of temporary impacts. Potential indirect impacts are limited to birds and bats, including roost or nest sites under existing and future bridges along the route. Cumulative impacts to wildlife habitat are quite limited, with project channel impacts occurring in areas where channel maintenance already occurs periodically.

Summary of Special Status Species

A total of eighty-nine (89) special-status biological resources are known to occur in the vicinity (within an approximate 5-mile radius) of the CV Link alignments. In all, forty-four (44) special-status plants, one (1) special-status vegetation community, four (4) special-status invertebrates, two (2) special-status fishes, four (4) special-status amphibians, four (4) special-status reptiles, seventeen (17) special-status birds and thirteen (13) special-status mammals were identified as potentially occurring within the general vicinity of the Project alignment. No special-status plant species were observed. Wildlife detected included four special-status bird species, burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), yellow warbler (*Setophaga petechia*), and vermilion flycatcher (*Pyrocephalus rubinus*).

The vast majority of the CV Link alignments are located in areas where native habitat has been removed and/or replaced by urban development and infrastructure. Of the 44 special-status plants which may occur in the vicinity, 37 are considered to be absent. Six of the remaining 7 plant species are considered to have a low potential to occur in the project area. The endangered Coachella Valley milkvetch (*Astragalus lentiginosus* var. *coachellae*) has a moderate potential to occur in the project area.

A total of four (4) special-status invertebrate species have been reported from the vicinity of the planned CV Link facilities. These include Casey's June beetle (*Dinacoma caseyi*), Coachella Valley giant sand-treader cricket (*Macrobaenetes valgum*), cheeseweed owlfly (*Oliarces clara*) and Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*). Casey's June beetle occurs along a portion of the western CV Link alignment and a Habitat Conservation Plan (HCP) is being prepared in coordination with the US Fish & Wildlife Service. The remaining three sensitive invertebrates are believed to have a low probability of occurrence in appropriate habitats adjacent to the Project alignment. The Coachella Valley Jerusalem cricket and Coachella giant sand-treader cricket are covered species under the CVMSHCP. Direct, indirect and cumulative impacts to the Casey's June beetle will be limited through implementation of the June Beetle HCP.

CV Link Permits Required

Agency	Permit/Action Required
California Department of Transportation (as assigned by the Federal Highway Administration)	Environmental Assessment (EA) evaluation, pursuant to the National Environmental Policy Act (NEPA)
U.S. Army Corps of Engineers	Section 404 permit for impacts to waters of the United States
U.S. Environmental Protection Agency	401 Certification for impacts to federal/tribal lands, pursuant to the federal Clean Water Act
California Regional Water Quality Control Board	401 Certification for impacts to non-federal lands, pursuant to the federal Clean Water Act

California Department of Fish and Wildlife	Section 1600 Streambed Alteration agreement
U.S. Fish and Wildlife Service	Section 10 permit for impacts to Casey's June Beetle

Presence of Invasive Species

No invasive species were identified during the project biological resource surveys. Landscape plans for the proposed CV Link project are consistent with the recommended and prohibited plant lists in the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP).

Beneficial Impacts

The CV Link project provides a new and innovative backbone multi-modal transportation route that will result in curtailing impacts to air quality and reducing GHG emissions associated with motor vehicle miles traveled. The CV Link also provides important multi-modal access to open space and parks, including a wild bird sanctuary near Indio. Interpretive signs with information about local wildlife and the desert ecosystem are planned for CV Link. Recommendations include the provision of these signs adjacent to areas of native habitat (such as the Whitewater Floodplain Reserve, CV Wild Bird Sanctuary and elsewhere) to educate the public about native wildlife, plant, or vegetation communities. Signage and wildlife viewing locations will help foster respect and create interest and admiration for some of the native flora and fauna that inhabit the Coachella Valley.

Description of Regulatory Environment

Coachella Valley Multiple Species Habitat Conservation Plan

Most of the sensitive species potentially associated with the CV Link project are covered species under the Coachella Valley Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan (CVMSHCP). The CVMSHCP provides for habitat conservation and management actions to meet the requirements of the state and federal endangered species acts, while at the same time allowing for land development (economic growth) within the plan area without significant delay or hidden costs. The CV Link project will be subject to the local development mitigation fee to offset potential impacts to covered species within the CVMSHCP area. The purpose of this fee is to support the assembly of a preserve system for the covered species and natural vegetation communities within areas identified as having high conservation value.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) protects migratory birds and their nests. The CVMSHCP provides coverage for federally listed species which are also listed under the Migratory Bird Treaty Act. The CVMSHCP does not provide take authorization for other bird species potentially occurring or nesting within the project area that are protected by the MBTA. Because impacts to nesting birds that are not federally listed are not covered by the CVMSHCP, any activities that could potentially cause disruption of natural nesting behavior or directly disturb an active nest or nesting bird must be avoided. Although there is no established protocol for nest avoidance, regulatory agencies generally recommend avoidance buffers of about 500 feet for birds-of-prey, and 100–300 feet for songbirds, however this is often determined on a case by case, or project by project basis. The nesting season for most bird species in the Coachella Valley is generally from approximately 1 February to 31 August. Avoidance of Project activities that have the potential to disturb nesting birds during the nesting season is the easiest way to avoid impacts. If it is not feasible to avoid such Project activities during the nesting season, nesting bird surveys conducted by a qualified biologist should be completed prior to any such activities. If active nests are found, they should be avoided and adequate no disturbance buffer zones established and observed by Project activities until after the young have fledged.

Casey's June Beetle HCP

The project proponent is currently in consultation with the USFWS to develop a HCP for the Casey's June beetle, which is currently listed under the federal Endangered Species Act (ESA). The USFWS will undertake an ESA Section 10 incidental take permit, which is required to accompany an HCP when non-federal activities will result in take of threatened or endangered species. The HCP will provide analysis of mitigation, minimization and avoidance measures reviewed and approved by the USFWS. The project proponent will be required to adhere to the approved conditions set forth in the final HCP as it relates to CV Link.

Chapter 1 – Introduction

The project is located within the Coachella Valley region of Riverside County and extends from Palm Springs to Coachella primarily along major drainage service roads. The subject 49± mile multi-modal pathway will vary from 14 to approximately 30 feet in width, and for analysis purposes will be comprised of two western segments in Palm Springs, the combined route continuing southeast through Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, La Quinta, Indio and Coachella, and terminating on the north side of Avenue 56 (Airport Boulevard) at the Coachella Valley Stormwater Channel.

The purpose and need of the CV Link is to facilitate and promote the use of alternative modes of transportation, reduce motor vehicle congestion, and minimize overall air pollutant emissions associated with motor vehicles.

Project History

The concept of a facility like CV Link was first considered in the Coachella Valley in the 1980s. In 2009 CVAG prepared the Whitewater River, All American Canal, Dillon road Regional Trails Study proposing what is now considered the basis for the CV Link pathway location. Building upon the 2009 study, the Whitewater River/Parkway 1e11 NEV/Bike/Pedestrian Corridor Preliminary Study Report (PSR) (2012) added the concept of Low Speed Electric Vehicles (LSEVs), a vehicle category that includes Neighborhood Electric Vehicles or NEVs. The PSR provided the starting point for the CV Link master plan process. In 2016 CVAG developed an Active Transportation Plan (ATP) with the goal to bring more recreational and transportation opportunities to valley, including a full network of bikeways serving nearly every neighborhood, improved pedestrian access to major transit hubs, expand the use of NEVs, safe paths to school for children in the area, and many other benefits. The CV Link is an integral component of the ATP.

Project Description

The CV Link Multi-Modal Transportation Project is located in Coachella Valley, Riverside County, primarily along portions of Highway 111 (Riv-111-, post mile ~ 19 to 55) and the regions principal watercourses. CV Link is proposed as a ±49-mile non-motorized, multi-modal transportation pathway that passes through some of the most developed and populated portions of the Coachella Valley, providing non-motorized access and connectivity between residential, commercial, recreational, institutional, and other land uses throughout the region, and providing recreational opportunities for pathway users. It is also anticipated that CV Link will contribute to local reductions in traffic volumes and associated air pollutants.

The pathway route largely follows and is to be built upon the channel and levee service roads of the region's principal watercourses, including Chino Wash, Tahquitz Creek, and the Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel. In some locations, the pathway shares right-of-way with roads and provides direct access to key commercial districts and recreational and institutional venues.

CV Link is a multi-jurisdictional project. The core alignment analyzed in this NES will extend across 11 jurisdictions, including seven incorporated cities and three Native

American tribes. This DEIR evaluates potential impacts associated with the near-term construction and operation of CV Link's core route, from Palm Springs to Coachella, and mid-term enhancements of the core route, which may include the addition and enhancement of other pathways, access points, and grade separations. Long-term future extensions of the core route to Desert Hot Springs and the Salton Sea, which would extend the pathway to a buildout length of 88± miles, are envisioned but not fully conceptualized and are not part of project analyzed in this NES.

The CV Link will also incorporate and expand the Tahquitz Creek Trail in Palm Springs between Belardo Road and the Whitewater Channel. The western termini are at Highway 111 (North Palm Canyon Drive) in northern Palm Springs (the Palm Springs Visitor Center at Tramway Road – access point for the Aerial Tram) and at Belardo Road in central Palm Springs (providing access to downtown Palm Springs and the Tahquitz Canyon Visitor Center).

The eastern terminus of the CV Link core alignment is at Airport Boulevard (Ave 56) and the Coachella Valley Stormwater Channel (CVSC) in the City of Coachella and the unincorporated community of Thermal. This terminus provides multi-modal access to the administrative offices of the Coachella Valley Unified School District, John Kelley Elementary School, the La Familia Continuing Education High School, a new Riverside County Sheriff's Station, US Post Office, the Jacqueline Cochran Airport, the Horses in the Sun (HITS) facility, and the Thermal Club Race Track (under construction).

To the extent practicable, CV Link will be constructed on top of flood control levees and service roads, and at the top of stormwater channel slopes of Tahquitz Creek, the Whitewater River Stormwater Channel (WWR) and the Coachella Valley Stormwater Channel (CVSC). Grade-separated crossings (bridges or under-crossings) of major roadways are proposed. In areas where these major drainage corridors are inaccessible, on-street routes are proposed. Route variations using the street network are considered in challenging areas and will provide options for near and long-term implementation.

Project Alternatives

Three project "build" alternatives, including the proposed project, are proposed for the CV Link. The Alternatives were developed based on jurisdictional preferences to participate or to no participate in the CV Link project, resulting in re-routing and/or the creation of additional termini. All project routes have been analyzed.

The proposed project does not include the City of Rancho Mirage segments. Alternative 1 includes all Rancho Mirage segments of the CV Link, which is approximately 8.29± miles of pathway, by creating two termini at the jurisdictional boundaries of Cathedral City to the west, and Palm Desert to the east. The Alternative 1 route will maintain the preferred alignment in the cities of Cathedral City and Palm Desert. Alternative 2 will eliminate all Rancho Mirage segments in addition to all Indian Wells segments, approximately 10.9± miles of pathway. Construction of the proposed project will include additional termini on the east and west sides of Rancho Mirage for the proposed project and Alternative 2, which also assumes that Indian Wells segments are not constructed. For Alternative 2, east and west CV Link termini have been selected.

Construction Schedule

The Implementation Plan presents a three-tier phasing plan for the core route between Palm Springs and Coachella.

Phase 1 is anticipated to begin construction in 2017 and involves the majority of construction for the core route between Palm Springs and Coachella. Phase 2 to be completed in the medium term (3 to 8 years) would involve enhancement of the core route with additional pathways and grade separations. Phase 3 to be completed in the longer term (10 to 15 years) is projected include the following elements:

- Extension to Mecca, North Shore, and Salton Sea
- Bridges at Gene Autry Trail and Indian Canyon Drive (Core Alignment Improvements)
- Two new bicycle/Low-speed electric vehicle (LSEV)/pedestrian bridges across the Whitewater River channel in Indian Wells Golf Course and connecting to the Tennis Garden (Core Alignment Improvements)

At full buildout of all Phases, CV Link will be approximately 74.47 miles long, depending on which route variations are selected during the next two years of development.

Preliminary Project Phasing

The project is proposed in a 3-tier phasing plan: Phases 1, 2, and 3, described below.

Phase 1: Near-term construction of the CV Link Core Alignment of this non-motorized, multi-modal transportation pathway, roughly following the alignment of Tahquitz Creek and the Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel. Portions will use and expand upon on-street facilities. The majority of construction of the core route between the cities of Palm Springs and Coachella and includes and expands the existing Tahquitz Creek Trail in Palm Springs from South Palm Canyon Drive on the west to the Whitewater River Stormwater Channel on the east. The City of Rancho Mirage is not included in the Preferred Alternative (Proposed Project) of the Core Alignment but is analyzed as a part of Alternative 1.

Phase 2: Mid-term enhancements of the core route, including additional pathways, access points, and grade separations.

Phase 3: Long-range future extension of the core route to Desert Hot Springs and the Salton Sea, which will expand the pathway to a buildout length of 74.47± miles. Detailed route delineation is not fully developed and will be evaluated in a separate CEQA analysis.

Source: Google Earth, 2016

07.11.16

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CV Link Project
Project Location Map
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY
CVAG

FIGURE
1

Please See Appendix A for Project Impact Area Maps

(Appendix A is provided on a CD at the back of this document)

Chapter 2 – Study Methods

The following section provides information pertaining to regulatory requirements associated with development of the CV Link project and studies required to assess potential impacts to biological resources.

Regulatory Requirements

REGIONAL

Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) – The Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) is a comprehensive, regional plan that addresses the conservation needs of 27 species of native flora and fauna (5 plants, 2 insects, 1 amphibian, 3 reptiles, 11 birds, and 5 mammals) and 27 natural communities occurring throughout the Coachella Valley region of western Riverside County, California. These include federal and state-listed species, federal and California Species of Concern (CSCs), and species on the CNPS sensitive species lists. Also included are species that are designated as sensitive by the Bureau of Land Management (BLM) regardless of their other federal, state, or regional conservation status. Conservation for the federally-listed state-listed Coachella Valley Fringe-toed Lizard (*Uma inornata*), was formerly covered by the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan finalized in 1985 but is now covered under the CVMSHCP.

Permits for the CVMSHCP were issued by the California Department of Fish and Wildlife (CDFW) on September 9, 2008 and by the United States Fish and Wildlife Service (USFWS) on October 1, 2008 (TE104604-0). The CVMSHCP balances environmental protection and economic development objectives in the CVMSHCP area, simplifying compliance with endangered species laws. The CVMSHCP accomplishes this by conserving unfragmented habitat to permanently protect and secure viable populations of the covered species. The covered species include plants and animals that are either currently listed as threatened or endangered, are proposed for listing, or have a high probability of being proposed for listing in the future if not provided protection by the CVMSHCP. The goal of the CVMSHCP is to meet the requirements of the state and federal endangered species acts, while at the same time allowing for the economic growth (land development) within the plan area without significant delay or hidden costs. Under the CVMSHCP, local development mitigation fees are collected from all new development projects occurring in the plan area. The purpose of this fee is to support the acquisition, monitoring and management of a preserve system for the covered species and natural communities within areas identified as having high conservation value.

FEDERAL

Endangered Species Act **(ESA)** – The USFWS and the National Marine Fisheries Service are the designated federal agencies accountable for administering the ESA. ESA defines species as “endangered” or “threatened” and provides regulatory protection at the federal level.

- Section 9 of the ESA prohibits the “take” of listed (i.e., endangered or threatened) species. The ESA definition of take is “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct.”

Recognizing that take cannot always be avoided, Section 10(a) includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Specifically, Section 10(a)(1)(A) permits (authorized take permits) are issued for scientific purposes. Section 10(a)(1)(B) permits (incidental take permits) are issued for the incidental take of listed species that does not jeopardize the species.

- Section 7 (a)(2) requires federal agencies to evaluate the proposed Project with respect to listed or proposed listed, species and their respective critical habitat (if applicable). Federal agencies must employ programs for the conservation of listed species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat."

As defined by the ESA, "individuals, organizations, states, local governments, and other non-federal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding.

Section 10(a) of the ESA authorizes the issuance of incidental take permits and establishes standards for the content of habitat conservation plans, such as the CVMSHCP. A Section 10(a) permit will also be required for the Casey's June Beetle HCP currently being prepared by the project proponent in conjunction with the CV Link project.

Migratory Bird Treaty Act **(MBTA)** – Treaties signed by the U.S., Great Britain, Mexico, Japan, and the countries of the former Soviet Union make it unlawful to pursue, capture, kill, and/or possess, or attempt to engage in any such conduct to any migratory bird, nest, egg or parts thereof listed in this document. The Secretary of the Interior can issue permits for incidental take of migratory bird species. As with the ESA, the MBTA also allows the Secretary of the Interior to grant permits for the incidental take of these protected migratory bird species.

National Environmental Policy Act **(NEPA)** – If portions of a proposed Project could fall under the jurisdiction of a federal agency (i.e., U.S. Army Corps of Engineers [USACE]). NEPA establishes certain criteria that must be adhered to for any Project that is "financed, assisted, conducted or approved by a federal agency. The federal lead agency is required to "determine whether the proposed action will significantly affect the quality of the human environment."

Section 404 of the Clean Water Act – This section of the Clean Water Act (CWA), administered by the USACE, regulates the discharge of dredged and fill material into "waters of the United States." The USACE has created a series of nationwide permits that authorize certain activities within waters of the U.S. provided that the proposed activity does not exceed the impact threshold for nationwide permits, takes steps to avoid impacts to wetlands where practicable, minimize potential impacts to wetlands, and provide compensation for any remaining, unavoidable impacts through activities to restore or create wetlands. For projects that exceed the threshold for nationwide permits, individual permits under Section 404 can be issued.

STATE

***California Endangered Species Act* (CESA)** – This legislation is similar to the federal ESA; however, it is administered by the CDFW. The CDFW is authorized to enter into "memoranda of understanding" with individuals, public agencies, and other institutions to import, export, take, or possess state-listed species for scientific, educational, or management purposes. CESA prohibits the take of state-listed species except as otherwise provided in state law. Unlike the federal ESA, CESA applies the take prohibitions to species currently petitioned for state-listing status (candidate species). State lead agencies are required to consult with CDFW to ensure that actions are not likely to jeopardize the continued existence of any state-listed species or result in the destruction or degradation of occupied habitat.

***California Environmental Quality Act* (CEQA)** – The basic goal of CEQA is to maintain a high-quality environment now and in the future and the specific goals are for California's public agencies to:

1. Identify the significant environmental effects of their actions; and, either
2. Avoid those significant environmental effects, where feasible; or
3. Mitigate those significant environmental effects, where feasible.

CEQA applies to "projects" proposed to be undertaken or requiring approval by State and local government agencies. Projects are activities which have the potential to have a physical impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps. Where a project requires approvals from more than one public agency, CEQA requires one of these public agencies to serve as the "lead agency."

A "lead agency" must complete the environmental review process required by CEQA. The most basic steps of the environmental review process are:

1. Determine if the activity is a "project" subject to CEQA;
2. Determine if the "project" is exempt from CEQA;
3. Perform an Initial Study to identify the environmental impacts of the project and determine whether the identified impacts are "significant". Based on its findings of "significance", the lead agency prepares one of the following environmental review documents:
    a. Negative Declaration if it finds no "significant" impacts;
    b. Mitigated Negative Declaration if it finds "significant" impacts but revises the project to avoid or mitigate those significant impacts;
    c. Environmental Impact Report (EIR) if it finds "significant" impacts.

While there is no ironclad definition of "significance", Article 5 of the State CEQA Guidelines provides criteria to lead agencies in determining whether a project may have significant effects.

The purpose of an EIR is to provide State and local agencies and the general public with detailed information on the potentially significant environmental effects which a proposed

project is likely to have and to list ways in which the significant environmental effects may be minimized and indicate alternatives to the project.

The Native Plant Protection Act **(NPPA)** – The NPPA includes measures to preserve, protect, and enhance rare and endangered native plant species. Definitions for "rare and endangered" are different from those contained in CESA. However, the list of species afforded protection in accordance with the NPPA includes those listed as rare and endangered under CESA. NPPA provides limitations on take as follows: "no person will import into this state, or take, possess, or sell within this state" any rare or endangered native plants, except in accordance with the provisions outlined in the act. If a landowner is notified by CDFW, pursuant to section 1903.5 that a rare or endangered plant is growing on their property, the landowner shall notify CDFW at least 10 days prior to the changing of land uses to allow CDFW to salvage the plants.

Natural Community Conservation Planning (NCCP) Program – The NCCP, which is managed by the CDFW, is intended to conserve multiple species and their associated habitats, while also providing for compatible use of private lands. Through local planning, the NCCP process is designed to provide protection for wildlife and natural habitats before the environment becomes so fragmented or degraded by development that species listings are required under CESA. Instead of conserving small, often isolated "islands" of habitat for just one listed species, agencies, local jurisdictions, and/or other interested parties have an opportunity through the NCCP to work cooperatively to develop plans that consider broad areas of land for conservation that would provide habitat for many species. Partners enroll in the programs and, by mutual consent, areas considered to have high conservation priorities or values are set aside and protected from development. Partners may also agree to study, monitor, and develop management plans for these high value "reserve" areas. The NCCP provides an avenue for fostering economic growth by allowing approved development in areas with lower conservation value The CVMSCHP is a Natural Community Conservation Plan under a state permit issued in September 2008.

Sections 1600-1603 of the State Fish and Game Code – The California Fish and Game Code, pursuant to Sections 1600 through 1603, regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources. Under state code, CDFW jurisdiction is assessed in the field based on one or a combination of the following criteria (CDFW 2005b):

1. At minimum, intermittent and seasonal flow through a bed or channel with banks and that also supports fish or other aquatic life.
2. A watercourse having a surface or subsurface flow regime that supports or that has supported riparian vegetation.
3. Hydrogeomorphically distinct top-of-embankment to top-of-embankment limits.
4. Outer ground cover and canopy extents of, typically, riparian associated vegetation species that would be sustained by surface and/or subsurface waters of the watercourse.

The CDFW requires that public and private interests apply for a "Streambed Alteration Agreement" for any project that may impact a streambed or wetland. The CDFW has

maintained a “no net loss” policy regarding impacts to streams and waterways and requires replacement of lost habitats on at least a 1:1 ratio.

Section 2081 of the State Fish and Game Code – Under Section 2081 of the California Fish and Game Code, the CDFW authorizes individuals or public agencies to import, export, take, or possess state endangered, threatened, or candidate species in California through permits or memoranda of understanding. These acts, which are otherwise prohibited, may be authorized through permits or “memoranda of understanding” if (1) the take is incidental to otherwise lawful activities, (2) impacts of the take are minimized and fully mitigated, (3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in question, and (4) the applicant ensures suitable funding to implement the measures required by the CDFW. The CDFW shall make this determination based on the best scientific information reasonably available and shall include consideration of the species’ capability to survive and reproduce.

State Fish and Game Code – Section 3505.5 makes it unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey, i.e.: owls, hawks, eagles, etc.) or to take, possess, or destroy the nest or eggs of any bird-of-prey. Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA.

Section 401 of the Clean Water Act – This section of the Clean Water Act (CWA), administered by the RWQCB regulates the discharge of dredged and fill material into “waters of the United States.” The RWQCB has created a series of permits that authorize certain activities within waters of the U.S. provided that the proposed activity does not exceed the impact threshold, takes steps to avoid impacts to wetlands where practicable, minimize potential impacts to wetlands, and provide compensation for any remaining, unavoidable impacts through activities to restore or create wetlands.

Studies Required

Literature Search

As previously discussed, the Biological Resources Assessment Report literature search included a review of the following documents:

- California Department of Fish and Wildlife (CDFW) Special Animals List (CDFW 2015a)
- CDFW California Natural Diversity Data Base (CNDDB) version 5 RAREFIND application (CDFW 2015b)
- California Native Plant Society's (CNPS) *Online Rare and Endangered Vascular Plants of California* (8^{Th} Ed.)
- Coachella Valley Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan (CVMSHCP) (CVAG 2008)
- Consortium of California Herbaria (CCH), individual plant locality records accessed through the Jepson eFlora website.

- The Jepson Herbarium eFlora (Jepson), an online database of California's plants, University of California Berkeley
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). Web Soil Survey (2016a)
- California Soil Resource Lab. Accessed 30 June 2016. Available at: http://casoilresource.lawr.ucdavis.edu/soil_web/ssurgo.php?action=list_mapunits&areasymbol=ca680
- USGS 7.5' *Cathedral City, Indio, La Quinta, Rancho Mirage,* and *Palm Springs Calif*. quadrangles.

The review also included an overview of other biological survey reports from the general vicinity based on CV Link project maps provided by the environmental consultants. Additionally, Amec Foster Wheeler biologists with experience in the Coachella Valley were consulted regarding reliable sightings and/or the potential for occurrence of special status species from the area.

The United States Fish and Wildlife Services (USFWS) Species List is attached as Appendix B of this report. Appendix B is provided on a CD at the back of this document.

Habitat Assessment

Field surveys for the CV Link Biological Resources Assessment Report were conducted on June 1, 2, 3, 6, and 6, 2016 by Amec Foster Wheeler senior biologist Michael D. Wilcox and subconsultant Phillip Clevinger. Amec Foster Wheeler senior biologist Nathan T. Moorhatch also performed surveys of the alignment on November 20, 2015 and June 16, 2016; as well as monitoring for a geotechnical boring site on the alignment between Dillon Road and Golf Center Parkway on May 17, 2016. Onsite habitats were assessed based on the presence or absence of suitable habitat components (e.g., soils, vegetation and topography) characteristic of the potentially occurring special-status species determined by the literature review.

Printed maps and exhibits provided by Terra Nova were used to create the biological survey map (BSA) used to survey the CV Link alignment. The BSA includes all areas that could potentially be impacted by the project plus a buffer to accommodate any changes to project limits and project design that may occur during project development. Binoculars were used to identify species of wildlife too distant to identify with the naked eye. A digital camera was used to take representative photographs of the existing site conditions, wildlife habitat, unique features and wildlife (Appendix D of the Biological Resources Assessment Report). A handheld anemometer, the Kestrel 2000, was used to record temperatures and wind speeds. Percent cloud cover was estimated.

All flora and fauna observed or otherwise detected (e.g., vocalizations, presence of scat, tracks, and/or bones) on and immediately adjacent to the Project alignment were recorded in field notes and are included in Appendices B and C of the Biological Resources Assessment Report.

Jurisdictional Determination and Delineation

Prior to conducting fieldwork associated with the jurisdictional determination and delineation, the following literature and materials were reviewed by Amec Foster and Wheeler:

- Aerial photographs of the project site at a scale of 1:4800 with 5-foot elevation contours to determine the potential locations of jurisdictional waters or wetlands;
- Literature search and review of previous AMEC and other jurisdictional delineations conducted along or near the subject CV Link core alignment.
- USGS topographic map to determine the presence of any “blue line” drainages or other mapped water features;
- USDA soil mapping data, and USFWS NWI maps to identify areas mapped as wetland features.

Field surveys in support of the jurisdictional determination and delineation were conducted by Amec Foster Wheeler biologists Nick Ricono and Tim Chumley, PhD, on 18 November 2015. Surveys consisted of walking the entire study area and identifying potentially jurisdictional water features. Visual observations of vegetation types and changes in hydrology were used to locate areas for evaluation.

USACE regulated WUS, including wetlands, and RWQCB WSC were delineated according to the methods outlined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE, 2008a). The extent of WUS was determined based on indicators of an OHWM. The OHWM width was measured at points wherever clear changes in width occurred.

Federally regulated wetlands were identified based on the *Wetlands Delineation Manual* (USACE, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008b). Additional data was recorded to determine if an area fulfilled the wetland criteria parameters. Criteria for wetlands under the jurisdiction of the USACE consist of the following: 1) a predominance of hydrophytic vegetation, 2) the presence of hydric soils, and 3) the presence of wetland hydrology.

CDFW jurisdiction was delineated by measuring the elevations of land that confine a stream to a definite course when its waters rise to their highest level and to the extent of associated riparian vegetation.

To determine jurisdictional boundaries, surveyors walked the perimeters of the drainages within the study area and recorded the boundary using Trimble GeoXH global positioning system with sub-meter accuracy. For smaller drainages (less than 20 feet wide) with relatively uniform width, the surveyor walked the centerline and the drainage width was buffered from that measurement. Other data recorded included bank height and morphology, substrate type, and all vegetation within the streambed and riparian vegetation adjacent to the streambed. Upon completion of fieldwork, all data collected in the field were incorporated into a Geographic Information System (GIS) along with basemap data. The GIS was then used to quantify the extent of jurisdictional waters within the project area.

Upstream and downstream connectivity of waterways was reviewed in the field and on aerial photographs and topographic maps to determine jurisdictional status according to the CWA, SWANCC, and Rapanos. Ephemeral washes with a physical connection to the Salton Sea were determined to be potential WUS as well as WSC and CDFW streambeds. Isolated waters were determined to potentially be limited to WSC under RWQCB jurisdiction.

Personnel and Survey Dates

- Michael D. Wilcox, Amec Foster Wheeler Senior Biologist. Survey dates: June 1, 2, 3, 6, and 7, 2016 (alignment field surveys).

- Nathan T. Moorhatch, Amec Foster Wheeler Senior Biologist. Survey dates: November 20, 2015 and June 16, 2016 (alignment field surveys); May 17, 2016 (geotechnical boring site monitoring).

- Scot Chandler, Amec Foster Wheeler Biologist. Survey Dates: June 21, 22, 27-30, 2016 and July 1, 7, 2016 (JD field surveys).

Agency Coordination and Professional Contacts

The project proponent is currently in consultation with the USFWS to develop a HCP for the Casey's June beetle, which was listed in 2011 under the federal Endangered Species Act (ESA). The USFWS will consider an ESA Section 10(a) incidental take permit, which is required to accompany an HCP when non-federal activities will result in take of threatened or endangered species. The HCP will provide analysis of mitigation, minimization and avoidance measures reviewed and approved by the USFWS.

Limitations That May Influence Results

There are no particular limitation or constraints associated with the assessment of biological resources that would affect the validity of the conclusions reached in the associated CV Link Biological Resources Assessment Report or this NES. Field surveys were conducted during different times of the year and allowed for the identification of a wide range of plant and wildlife species. Standard protocols were applied to the surveys for special status species, including the Casey's June beetle. Burrowing owl surveys were conducted after consultation with CDFW.

Chapter 3 – Results: Environmental Setting

The proposed Project (core alignment) is located in the Coachella Valley of central Riverside County, California. The various routes that make up the CV Link core alignment will "link" the Cities of Palm Springs, Cathedral City, Rancho Mirage, La Quinta, Palm Desert, Indian Wells, Indio, and Coachella, Riverside County, California. CV Link is a multi-jurisdictional project. It includes eight (8) incorporated cities, unincorporated county land, and reservations of three Native American tribes (Agua Caliente, Twenty-Nine Palms and Cabazon Bands).

Historically, (prior to 1960), large areas of the project alignment and surrounding general area was primarily covered with wind-deposited sands and hummocks. As urban development expanded throughout the greater Coachella Valley, the flow and deposition of aeolian sand deposits from the west and north has been interrupted and slowed by these manmade impediments. This has resulted in the gradual stabilization and compaction of sands that were once continuous, loose and dynamic (Cornett 2004).

Additionally, most of the proposed alignment has been directly and indirectly impacted by a variety of anthropomorphic influences. The most evident disturbance is co-terminus with the proposed footprint of the CV Link, which for a large portion of the alignment already consists of a graded, compacted dirt path that often runs along the top of the Tahquitz Creek Channel, and the Whitewater River/Coachella valley Stormwater Channel embankments and levees. Additionally, significant portions of the alignment are located within paved public roads and paths adjacent to golf courses and parks. Equally significant examples of disturbance include onsite and adjacent commercial, industrial, recreational (golf course), and residential development, limited agriculture landscaping (only on the southern end of the alignment), road shoulder disturbance, fragmentation caused by public roads, operation of off-road vehicles and/or golf carts (existing dirt and paved roads and trails), dumping of trash, debris and waste and the presence of domestic animals such as dogs and livestock. All of these onsite and adjacent human-related disturbances have had adverse impacts to the natural environment in the immediate vicinity of the Project alignment and has negatively affected the distribution, diversity and abundance of flora and fauna.

Description of the Existing Biological and Physical Conditions

STUDY AREA

The biological study area (BSA) is located in the cities of Cathedral City, Coachella, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage, Riverside County, California. The northwest end of the project begins at the intersection of Tram Way and North Palm Canyon Drive (State Route 111) in the city of Palm Springs, and the southeast end of the core alignment occurs where the Whitewater River crosses Airport Boulevard in the community of Thermal. Specifically, the study area is located within the following sections:

- Sections 33 through 36 of Township 3 South, Range 4 East,
- Sections 01 and 03 of Township 4 South, Range 4 East,
- Sections 01, 03 and 22 to 24 of Township 4 South, Range 4 East,
- Sections 06, 07, 19, and 30 of Township 4 South, Range 5 East

The CV Link alignments are all shown on the Palm Springs, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 2).

- Sections 06, 07, 19, and 30 of Township 4 South, Range 5 East as found on the Cathedral City quadrangle.

The study area is also located in:

- Sections 08, 17, 20, 21, 28, 29, and 32 to 35, of Township 4 South, Range 5 East,
- Sections 02 and 03 of Township 5 South, Range 5 East, and
- Sections 07, 11, and 12 of Township 5 South, Range 6 East, as shown on the Cathedral City quadrangle. Sections 07, 11, and 12 of Township 5 South, Range 6 East, and shown on the Rancho Mirage quadrangle.

The study area is also located in:

- Section 13, of Township 5 South, Range 5 East, and
- Sections 17 and 18 of Township 5 South, Range 6 East, as shown on the Rancho Mirage quadrangle.

The study area is also located in:

- Sections 13 to 15, of Township 5 South, Range 7 East, Sections 19, 22, 29, 30, and 32 of Township 5 South, Range 8 East, and Sections 04, 05, 09, 10, 15, and 22 of Township 6 South, Range 8 East, as shown on the Indio quadrangle.

The study area is also located in:

- Sections 15, 16, and 22 to 24, of Township 5 South, Range 6 East, and
- Sections 19, 21, and 28 to 30 of Township 5 South, Range 7 East, as shown on the La Quinta quadrangle.

The geographic coordinates near the middle of the project are 33.74261° North latitude and 116.39785° West longitude.

Please See Appendix A for Biological Study Area and

Project Impact Area Maps

Land Use (Private or Public Lands)

The CV Link is located primarily on public lands. The pathway route largely follows, and is to be built upon, the levees of the region's principal watercourses, including Chino Wash, Tahquitz Creek, and the Whitewater River Stormwater Channel/Coachella Valley Stormwater Channel. In some locations, the pathway shares right-of-way with roads and provides direct access to key commercial districts and recreational and institutional venues. Limited private lands, including Tribal Reservation lands, will require easements to secure access.

Aerial photos of the project area are provided in Appendix A.

PHYSICAL CONDITIONS

Topography and Soils

The existing topography along the majority of the project alignment is relatively level, gradually sloping down in elevation as one travels from the north end of the alignment near the intersection of South Palm Canyon Drive/Highway 111 and the Whitewater River channel (~733 feet above mean sea level [ABSL]) to the current southern end at Airport Boulevard (~-120 feet ABSL) with little drastic or abrupt elevational variation, and with most areas primarily occurring in drainages.

The review of the onsite soils resulted in the following soil types mapped throughout the CV-Link Project alignment:

CcC: CARRIZO STONY SAND, 2 TO 9 PERCENT SLOPES

Carrizo stony sand (CcC) –This excessively drained soil occurs on alluvial fans (Backslope) with 2 to 9 percent slopes. It is composed of stony sand and the parent material is composed of alluvium derived from granite.

CdC: CARSITAS GRAVELLY SAND, 0 TO 9 PERCENT SLOPES

Carsitas gravelly sand (CdC) – This excessively drained soil occurs on alluvial fans with 0 to 9 percent slopes. It is composed of gravelly sand with the parent material composed of gravelly alluvium derived from granite.

ChC: CARSITAS COBBLY SAND, 2 TO 9 PERCENT SLOPES

Carsitas cobbly sand (ChC) – This excessively drained soil occurs on alluvial fans (Summit) with 2 to 9 percent slopes. It is composed of gravelly sand on the surface and gravelly coarse sand below. The parent material is gravelly alluvium derived from granite.

CkB: CARSITAS FINE SAND, 0 TO 5 PERCENT SLOPES

Carsitas fine sand (CkB) – This excessively drained soil occurs on alluvial fans with 0 to 5 percent slopes. It is composed of fine sand on the surface and gravelly sand below. The parent material is composed of sandy alluvium derived from granite.

CpA: COACHELLA FINE SAND, 0 TO 2 PERCENT SLOPES

Coachella fine sand (CpA) – This well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of mostly fine sand with very fine sand 48 to 60 inches below the surface. The parent material is composed of alluvium derived from igneous rock.

CrA: COACHELLA FINE SAND, WET, 0 TO 2 PERCENT SLOPES

Coachella fine sand, wet (CrA) – This moderately well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of mostly fine sand with very fine sand 48 to 60 inches below the surface. The parent material is composed of alluvium derived from igneous rock.

CsA: COACHELLA FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES

Coachella fine sandy loam (CsA) – This well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of mostly fine sand with very fine sand 48 to 60 inches below the surface. The parent material is composed of alluvium derived from igneous rock.

Fe: FLUVENTS

Fluvents (Fe) – This more or less freely drained soil occurs on recent water-deposited sediments on flood plains (Toeslope) with parent material composed of alluvium.

GaB: GILMAN LOAMY FINE SAND, 0 TO 5 PERCENT SLOPES

Gilman loamy fine sand (GaB) – This wel- drained soil occurs on alluvial fans (Footslope) with 0 to 5 percent slopes. It is composed of loam on the surface and stratified very fine sandy loam below. The parent material is composed of alluvium.

GbA: GILMAN FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES

Gilman fine sandy loam (GbA) – This well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of loam on the surface and stratified very fine sandy loam below. The parent material is composed of alluvium.

GcA: GILMAN FINE SANDY LOAM, WET 0 TO 2 PERCENT SLOPES

Gilman fine sandy loam, wet (GcA) – This moderately well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of loam on the surface and stratified very fine sandy loam below. The parent material is composed of alluvium.

GeA: GILMAN SILT LOAM, 0 TO 2 PERCENT SLOPES

Gilman silt loam (GeA) – This well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of loam on the surface and stratified very fine sandy loam below. The parent material is composed of alluvium.

GfA: GILMAN SILT LOAM, WET, 0 TO 2 PERCENT SLOPES

Gilman silt loam (GfA) – This moderately well-drained soil occurs on alluvial fans (Footslope) with 0 to 2 percent slopes. It is composed of loam on the surface and stratified very fine sandy loam below. The parent material is composed of alluvium.

Ip: INDIO FINE SANDY LOAM

Indio fine sandy loam (Ip) – This well-drained soil occurs on alluvial fans (Footslope) on a less than 1 percent slope at an elevation of about 110 feet. It is composed of very fine sandy loam on the surface and stratified very fine sandy loam and silt loam below. The parent material is composed of alluvium.

Ir: INDIO FINE SANDY LOAM, WET

Indio fine sandy loam, wet (Ir) – This moderately well-drained soil occurs on alluvial fans (Footslope) on a less than 1 percent slope at an elevation of about 110 feet. It is

composed of very fine sandy loam on the surface and stratified very fine sandy loam and silt loam below. The parent material is composed of alluvium.

Is: INDIO VERY FINE SANDY LOAM

Indio very fine sandy loam (Is) – This well-drained soil occurs on alluvial fans (Footslope) on a less than 1 percent slope at an elevation of about 110 feet. It is composed of very fine sandy loam on the surface and stratified very fine sandy loam and silt loam below. The parent material is composed of alluvium.

It: INDIO VERY FINE SANDY LOAM, WET

Indio very fine sandy loam, wet (It) – This moderately well-drained soil occurs on alluvial fans (Footslope) on a less than 1 percent slope at an elevation of about 110 feet. It is composed of very fine sandy loam on the surface and stratified very fine sandy loam and silt loam below. The parent material is composed of alluvium.

MaB: MYOMA FINE SAND, 0 TO 5 PERCENT SLOPES

Myoma fine sand (MaB) – This somewhat excessively drained soil occurs on alluvial fans (Toeslope) with 0 to 5 percent slopes. It is composed of fine sand on the surface and very fine sand below. The parent material is composed of windblown sandy alluvium.

MaD: MYOMA FINE SAND, 5 TO 15 PERCENT SLOPES

Myoma fine sand (MaD) – This somewhat excessively drained soil occurs on alluvial fans (Footslope) with 5 to 15 percent slopes. It is composed of fine sand on the surface and very fine sand below. The parent material is composed of windblown sandy alluvium.

RA: RIVERWASH

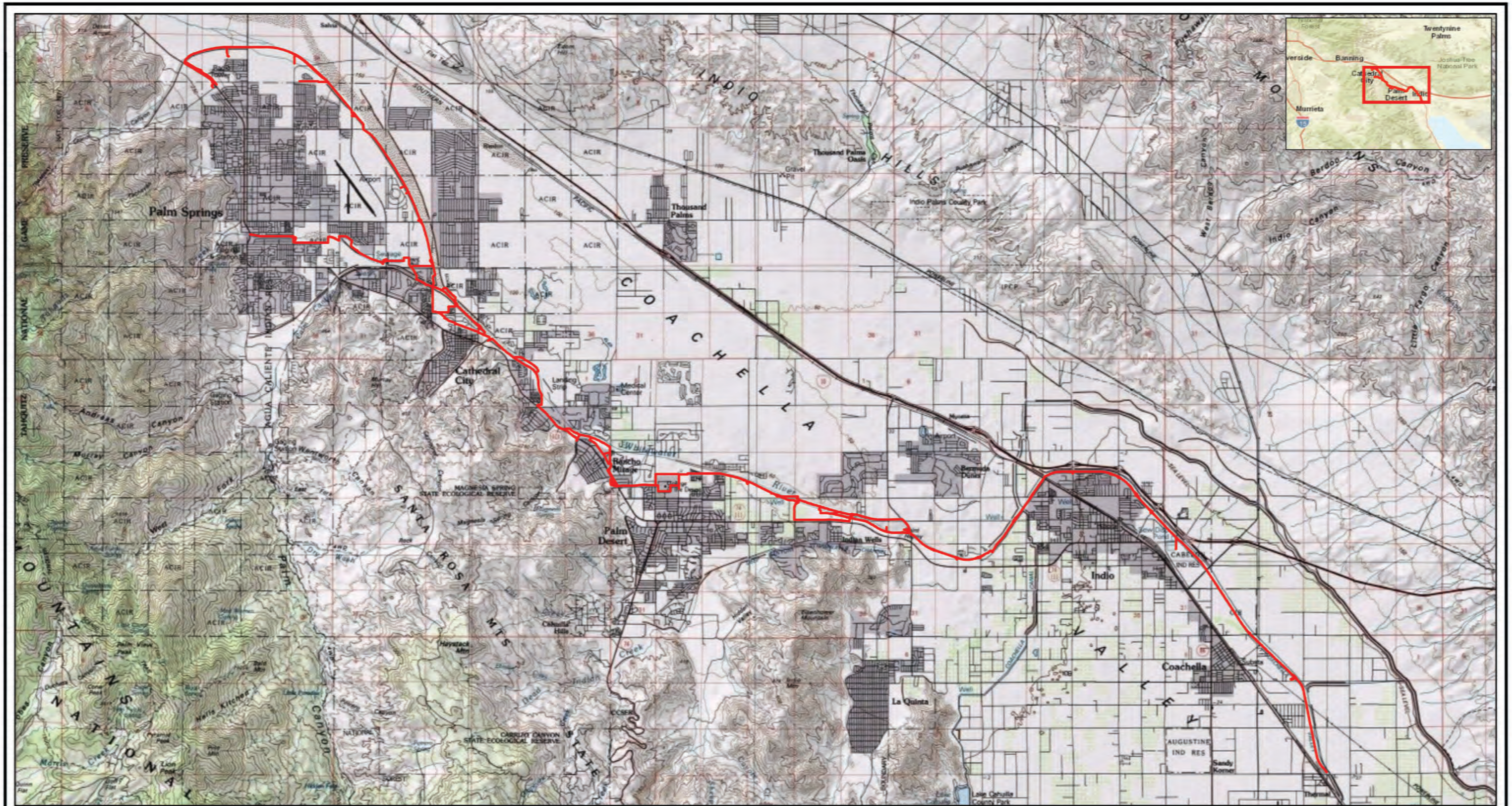
Riverwash (RA) – This excessively drained soil occurs in channels with 0 to 2 percent slopes. It is composed of gravelly sand and the parent material is composed of sandy and gravelly alluvium.

RO: ROCK OUTCROP

Rock outcrop (RO) –The parent material is composed of residuum weathered from igneous, metamorphic and sedimentary rock and produces very high runoff.

W: Water

(No horizon profile available)



Source: AMEC Foster Wheeler Jurisdictional Delineation Document, 2016

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CV Link Project
Topographic Map
Coachella Valley Association of Governments

CV LINK
CONNECTING THE COACHELLA VALLEY
CVAG

Figure
2

Hydrological Resources

Runoff from the study area generally flows in Chino Creek and Tahquitz Creek from west to east and in the Whitewater River from northwest to southeast. After runoff exits the study area at the southeast end, it flows for 10 miles southeast before reaching the Salton Sea.

The United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) NWI wetlands are shown in Appendix A. NWI wetlands occurring along Tahquitz Creek at the north end of the study are characterized as riverine and freshwater pond based on Cowardin Classification. Along the study area, adjacent to Calle Tecuala, are three freshwater pond wetlands; these are located approximately 2 miles southeast of where Tahquitz Creek flows into the Whitewater River and 1500 feet west of the closest reach of the Whitewater River.

NWI wetlands occurring along the Whitewater River, throughout the northern and southern study area, are characterized as riverine, freshwater pond, freshwater emergent wetland, and freshwater forested/ shrub wetland.

In addition, the study area contains jurisdiction associated with the Whitewater River and Tahquitz Creek. The Whitewater River and Tahquitz Creek are intermittent drainages that likely flows for more than 3 months per year. Therefore, the USACE will likely classify these as Relatively Permanent Waters (RPWs). The Whitewater River flows into the Salton Sea approximately 10 miles from the study area and exhibits both physical surface channel connectivity and hydrologic connectivity with the Salton Sea. The Salton Sea is classified as a Traditional Navigable Waters (TNW) as a result of a Supreme Court decision (Colvin v. United States). Therefore, the USACE will likely consider the on-site drainages to be jurisdictional under the CWA.

The following table provides summary of jurisdictional areas within the project study area.

Table 1
Summary of Jurisdictional Areas

Non-Wetland WUS, WSC (acres)	Wetlands (acres)	CDFW Jurisdiction (acres)
93.17	11.11	417.17

BIOLOGICAL CONDITIONS IN THE BIOLOGICAL STUDY AREA

The following section describes the natural communities associated with the CV Link project area, including vegetation and wildlife communities, aquatic resources, invasive species and habitat connectivity.

Vegetation Communities

Native vegetation, where present adjacent to the alignment, is mostly dominated by a mixture of the following vegetation communities: *Larrea tridentata/Ambrosia dumosa* shrubland alliance (Sawyer et. al 2009) (Sonoran creosote bush/mixed woody and

succulent scrub in the CVMSCHP); Creosote bush – white bursage scrub [Sandy association]/*Ambrosia salsola* alliance (ephemeral and stabilized shielded sand fields in the CVMSHCP); and *Atriplex canescens* alliance (desert saltbush scrub in the CVMSHCP). Dominant native perennial plant species representative of the Sonoran creosote bush/mixed succulent scrub communities observed during the assessment included creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), brittle bush (*Encelia farinosa*), California indigo-bush (*Psorothamnus arborescens* var. *simplicifolius*), Schott's indigo-bush (*Psorothamnus schottii*), and golden cholla (*Cylindropuntia echinocarpa*). Species representative of Ephemeral and Stabilized shielded sand fields included Emory dalea (*Psorothamnus emoryi*), California croton (*Croton californicus*), sand verbena (*Abronia villosa* var. *villosa*), and dune sunflower (*Helianthus petiolaris* ssp. *canescens*). Plants representative of Desert saltbush scrub included four-wing saltbush (*Atriplex canescens*), allscale (*Atriplex polycarpa*), cheesebush (*Ambrosia salsola*), and salt grass (*Distichlis spicata*).

The northern end of the alignment, adjacent to the Whitewater Floodplain Conservation area is mapped in the CVMSHCP as passing through/adjacent to a large area of mixed Ephemeral, Stabilized, and Stabilized shielded sand fields. That portion of the alignment that runs along North Palm Canyon Drive/Highway 111 from Tramway Road north to the alignment's intersection with the Whitewater Floodplain Conservation area is mapped in the CVMSHCP as Sonoran mixed woody and succulent scrub. Areas of Sonoran creosote bush scrub along or close to the alignment are present along Highway 111 between Sungate Way and Frank Sinatra Drive; between Paxton Drive and Mirage Road; and between Rio del Sol Road and Parkview Drive.

The only area of CVMSHCP-mapped Desert saltbush scrub habitat on the alignment is between Avenue 48 and Avenue 50. Lastly, there are some limited areas in the Whitewater River channel on the southern end of the alignment (adjacent to the alignment, not on the alignment) that support small stands of willows and cottonwoods. These fragmented and highly restricted stands are not truly representative of a natural willow woodland (such as Black willow thickets [Sawyer et. al 2009]) but are remnant "pockets" of riparian vegetation resulting from groundwater recharge, agricultural runoff and municipal wastewater treatment facility discharges into the channel. They also result from ongoing Coachella Valley Water District/Riverside County Flood Control and Water Conservation District channel maintenance activities.

Plants that were observed in the urban and residential portions of the transportation corridor included a mixture of nonnative and native landscaped trees and shrubs including gum trees (*Eucalyptus spp.*), Mexican bird-of-paradise (*Caesalpinia pulcherrima*), ocotillo (*Fourquieria splendens* ssp. *splendens*), Texas sage (*Leucophyllum frutescens*), various acacia (*Acacia sp.*), oleander (*Nerium oleander*), and bougainvillea (*Bougainvillea* sp.) .

A list of one hundred four (104) plant species observed during the surveys, including common and scientific names, is appended to this report (Appendix B of the Biological Resource Assessment Report).

Wildlife Communities

Vertebrate wildlife directly observed and/or otherwise detected through presence of sign (e.g., scat, bones, prints, feathers, burrows, etc.) during the assessments was not exceptionally diverse or abundant. Vertebrates that have been recorded along the

alignment by Amec Foster Wheeler biologists during the current and previous surveys include: one (1) fish, three (3) amphibians, nine (9) reptiles, thirty-three (33) birds, and eight (8) mammals. See Appendix C of the Biological Resources Assessment Report for a complete list of vertebrate species detected.

Reptiles detected included side-blotched lizard (*Uta stansburiana*), northern desert iguana (*Dipsosaurus dorsalis dorsalis*), common chuckwalla (*Sauromalus ater*), western zebra-tailed lizard (*Callisaurus draconoides rhodostictus*), desert spiny lizard (*Sceloporus magister*), long-tailed brush lizard (*Urosaurus graciosus*), western whiptail (*Aspidoscelis tigris tigris*), Mohave shovel-nosed snake (*Chionactis occipitalis occipitalis*), and Colorado Desert sidewinder (*Crotalus cerastes laterorepens*). Other common species such as, but not limited to, southern desert horned lizard (*Phrynosoma platyrhinos calidiarum*), red coachwhip (*Masticophis flagellum piceus*), desert glossy snake (*Arizona elegans eburnata*) and desert banded gecko (*Coleonyx variegatus variegatus*) are also expected to occur.

Representative birds observed onsite included Gambel's quail (*Callipepla gambelii*), mourning dove (*Zenaida macroura*), greater roadrunner (*Geococcyx californianus*), common raven (*Corvus corax*), northern mockingbird (*Mimus polyglottos*), great-tailed grackle (*Quiscalus mexicanus*) and verdin (*Auriparus flaviceps*). Other common desert and migrant bird species are also expected to occur. A complete list of the 33 birds detected during the course of the surveys is included in Appendix C of the Biological Resources Assessment Report.

Common mammals detected onsite (or immediately adjacent) included black-tailed jackrabbit (*Lepus californicus*), Audubon's cottontail (*Sylvilagus audubonii*), Calfornia ground squirrel (*Spermophilus beecheyi*) white-tailed antelope squirrel (*Ammospermophilus leucurus*), desert wood rat (middens) (*Neotoma lepida*), northern raccoon (tracks) (*Procyon lotor*), and coyote (*Canis latrans*). Other small mammals, particularly rodents, occur near the project corridor as burrows were observed; however the species that are present cannot be conclusively determined without a more intensive trapping effort.

Aquatic Resources

Aquatic resources are limited to sparse water pools located along the proposed alignment. One exotic fish species, mosquitofish (*Gambusia affinis*), was observed within the few areas of pooled water present along the alignment in the Whitewater River channel (such as west of Miles Avenue in Indian Wells). One non-native amphibian species, bullfrog (*Lithobates catesbeianus*) was also observed in the same area as the mosquitofish above. California toad (*Anaxyrus boreas halophilus*) and California chorus frog (*Pseudacris cadaverina*) tadpoles were observed adjacent to the South Palm Canyon Bridge crossing during a survey performed on April 14, 2015. None of these areas however are considered to be suitable habitat for the arroyo toad, desert pupfish or razorback sucker.

Invasive Species

There are no invasive plant or animal species observed within the CV Link project area. Landscape plans for development projects and land uses that are located adjacent to or within a conservation area are required to not use invasive, non-native plant species in their design. To the maximum extent feasible, Coachella Valley native plant species listed in Table 4-112 of the CVMSHCP will be incorporated into the project landscape design.

Habitat Connectivity

The conserved natural communities occurring in the project area are located within the Whitewater Floodplain Conservation Area and include: active desert sand fields, ephemeral desert sand fields, stabilized and partially stabilized desert sand fields, stabilized shielded desert sand fields, Sonoran creosote bush scrub, and Sonoran mixed woody and succulent scrub. The Whitewater River, after it joins the San Gorgonio River, provides fluvial sand transport to the existing Whitewater Floodplain Preserve.

The area along the Whitewater River floodplain provides a linkage and biological corridor for birds and a variety of other wildlife, between the Snow Creek/Windy Point Conservation Area to the northwest and the core habitat portion of the Whitewater Floodplain Conservation Area. Southeast along the CV Link route, the floodplain becomes channelized to form the Whitewater River Stormwater Channel, which is broad and with a sandy bottom with a variety of vegetative conditions along essentially its entire length. From east of Point Happy (Washington Street) the Whitewater channel becomes the Coachella Valley Stormwater Channel and has been purposefully directed and engineered to convey regional stormwater to the Salton Sea. This channel is also of varying wide and in various states of vegetation, including desert creosote scrub, riparian and spots and ribbons of wetlands created by nuisance and agricultural irrigation water.

The is one potential encroachment into the Whitewater Floodplain Conservation Area from 600 feet east of Sunrise Way (extended) and to a point 0.25 miles upstream of San Rafael Drive (extended), or a distance of approximately 2,800 feet. This encroachment would involve the construction of the CV Link pathway adjacent to the existing levee lining and extending into the adjoining floodplain for 14-20 feet.

The second western terminus of CV Link is at the juncture of Tahquitz Creek and South Palm Canyon Drive in central Palm Springs. From just west of Sunrise Way, the pathway enters the channel and passes under the roadway, following local streets eastward until it rejoins the Tahquitz Creek alignment east of Mesquite Country Club.

Regional Species and Habitats and Natural Communities of Concern

Plant or animal taxa may be considered "sensitive" or as having “special-status” due to declining populations, vulnerability to habitat change, or because they have restricted ranges. Some are listed as threatened or endangered by the USFWS or by the CDFW and are protected by the federal and state ESAs and the NPPA. Others have been identified as sensitive or as special-status species by the USFWS, the BLM, the CDFW, or by private conservation organizations, including the CNPS. Unlisted special-status species do not have formal state or federal status, but may nevertheless be considered significant under CEQA.

Special Status Plants

Forty-four (44) special-status plant species may occur within the vicinity of the project area. Of these, thirty-seven (37) are considered to be absent or remote due to combination of a lack of, or marginality of suitable habitat, or the Project alignment occurring outside or at the edge of the species geographic range or elevational range. The remaining seven (7) species are considered to have at least some (low [six species] to moderate [one species]) potential of occurrence due to the presence of suitable habitat and records from the vicinity of the CV Link alignment. One species, Coachella

Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*) is considered to have a moderate potential of occurrence on sandy habitats adjacent to the projected transportation corridor as this species is known to occur in the vicinity and is known to occur in either dynamic or highly disturbed, roadside areas and graded vacant lots which are present throughout much of the Project alignment. Coachella Valley milk-vetch is a federal-listed endangered species, but is also a "covered" species under the CVMSHCP.

The remaining six (6) species that are considered to have a low occurrence potential based on records from the vicinity and presence of at least marginally suitable habitat along or near the proposed CV Link alignment include: chaparral sand-verbena (*Abronia villosa* var. *aurita*), singlewhorl burrobush (*Ambrosia monogyra*), gravel milkvetch (*Astragalus sabulonum*), glandular ditaxis (*Ditaxis clariana*), Little San Bernardino Mountains linanthus (*Linanthus maculatus*), and slender cottonheads (*Nemacaulis denudata* var. *gracilis*). Little San Bernardino Mountains linanthus is not listed as threatened or endangered but designated as a List 1B.2 species by the CNPS, it is also covered species under the CVMSHCP. The other five (5) plant species are not covered under the CVMSHCP, and none are listed as threatened or endangered by the State or Federal government. All are considered List 2B.2 species by the CNPS, except Chaparral sand-verbena which is listed as a List 1B.1 by the CNPS.

Special Status Wildlife

Special status wildlife species identified in the Biological Resources Assessment Report include invertebrates, fish, amphibian and reptile, birds, and mammals.

Special Status Invertebrates

Four (4) special-status invertebrate species reported from the vicinity of the Project facilities. These include Casey's June beetle (*Dinacoma caseyi*), Coachella Valley giant sand-treader cricket (*Macrobaenetes valgum*), cheeseweed owlfly (*Oliarces clara*) and Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*). Casey's June beetle occurs along that portion of the alignment that runs from Demuth Park east to confluence of Tahquitz Creek and Whitewater River channel. An HCP for this Federal endangered species (Casey's June Beetle) is currently being prepared by the project proponent and are in negotiations with USFWS. The remaining three sensitive invertebrates are believed to have a low probability of occurrence in appropriate habitats adjacent to the Project alignment. The Coachella Valley Jerusalem cricket and Coachella Valley giant sand-treader cricket are covered species under the CVMSHCP.

The cheeseweed owlfly is not a covered species under the MSHCP, and is not listed as an endangered or threatened species by the State and Federal government. Amec Foster Wheeler biologists have observed this species in Palm Canyon Wash less than one mile south of the Tahquitz Creek segment of the project. Those portions of Tahquitz Creek along the alignment that are relatively undeveloped support habitat that is similar to that found in Palm Canyon Wash, and there is a low probability that cheeseweed owlfly could occur in such areas. Currently, this species has a CDFW CNDDB sensitivity ranking of S2.

Although modeled dune habitat for the Coachella Valley Jerusalem and giant sand-treader crickets is present along much of the northern portion of the CV Link alignment, these are Aeolian sand dune habitats are adjacent to alignments from Palm Springs east to Palm Desert and Indian Wells. These species are not expected on the actual transportation corridor footprint for the same reasons listed previously in the sensitive plant discussion: the majority of the actual CV Link footprint consists of a combination of

compacted dirt, concrete, and/or asphalt roads/paths that are wholly unsuitable for these sand specialists.

Special Status Fish

Two (2) special-status fish, the federally and state-listed endangered desert pupfish (*Cyprinodon macularius macularius*) and razorback sucker (*Xyrauchen texanus*). Although manmade ponds (i.e., golf course water hazards and other decorative water features) are present adjacent to parts of the alignment, these waters are not considered suitable for these species, and could not have been naturally colonized by them. None of these water features are expected to be impacted by any of the proposed Project activities. For these reasons, the desert pupfish and razorback sucker are considered to be absent and thus will not be impacted by implementation of the proposed Project.

Amphibian and Reptiles

Eight (8) special-status amphibian and reptile species have been previously reported to occur in the general vicinity of the Project (CNDDB). These include the desert slender salamander (*Batrachoseps major aridus*), California red-legged frog (*Rana draytonii*), southern mountain yellow-legged frog (*Rana muscosa*), arroyo toad (*Anaxyrus californicus)*, desert tortoise (*Gopherus agassizi*), flat-tailed horned lizard (*Phrynosoma mcallii*), Coachella Valley fringe-toed lizard (*Uma inornata*), and red-diamond rattlesnake (*Crotalus ruber ruber*).

The desert slender salamander is only known to occur in the seeps and talus slides from two remote canyons in Santa Rosa Mountains; therefore, this species is considered to be absent from the Project alignment. Similarly, the project alignment is not located in the currently understood range of the California red-legged frog, southern mountain yellow-legged frog, and arroyo toad; nor does it contain habitat for these species. None of these sensitive amphibians are expected to occur on or immediately adjacent to the project alignment.

Although there are records and modeled habitat for both the Coachella Valley fringe-toed lizard and flat-tailed horned lizard from the vicinity of the proposed CV Link corridor, neither of these species are expected to occur on the actual project alignment due to lack of required aeolian sand substrates and because much of this corridor has already been developed. Both the Coachella Valley fringe-toed lizard and flat-tailed horned lizard are “covered species” under the CVMSHCP, and potential impacts are typically mitigated through payment of the development fees. It should be noted that the flat-tailed horned lizard is currently a candidate for listing as endangered by the CDFW and thus will need to be treated as such under CESA until a final determination is made.

Desert tortoises are known to occur in the Little San Bernardino Mountains well to the north and in the Whitewater Hills to the northwest of the proposed Project. Potentially suitable habitat for the desert tortoise exists in the Whitewater Floodplain Conservation Area, but there are no recent records for the area adjacent to the CV Link alignment, and it is not considered Core Habitat for the species in the CVMSHCP.

Red-diamond rattlesnake is known from the vicinity of the Project alignment, and is expected to have a low probability of occurrence where the alignment approaches the “toe-of-slope” of the San Jacinto/Santa Rosa Mountains south /southwest of Highway 111 and Mirage Drive, and in the South Palm Canyon Bridge area. Due to the project alignment’s close proximity to Highway 111 in this area, this species is less likely to

occur due to potential road mortality and proximity to residential and commercial development.

Special Status Birds

Seventeen (17) special-status bird species reported from the vicinity of the Project facilities. These include the golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), burrowing owl (*Athene cunicularia*), California black rail (*Laterallus jamaicensis coturniculus*), Yuma Ridgway's rail (*Rallus obsoletus yumanensis*), black swift (*Cypseloides niger*), southwestern willow flycatcher (*Empidonax traillii extimus*), loggerhead shrike (*Lanius ludovicianus*), least Bell's vireo (*Vireo bellii pusillus*), gray vireo (*Vireo vicinior*), yellow-breasted chat (*Icteria virens*), black-tailed gnatcatcher (*Polioptila melanura*), vermillion flycatcher (*Pyrocephalus rubinus*), crissal thrasher (*Toxostoma crissale*), Le Conte's thrasher (*Toxostoma lecontei*), yellow warbler (*Setophaga petechia brewsteri*), and summer tanager (*Piranga rubra cooperi*).

Most of these species have been reported from the greater vicinity of the various segments of the proposed Project and therefore potential for these species to occur (at least during migration or while foraging) is present (low for some, high for others). Four of these species, the burrowing owl, vermilion flycatcher, loggerhead shrike, and yellow warbler were detected adjacent to or on the Project alignment during the current or previous surveys of the area.

Burrows with burrowing owl sign (whitewash, pellets and feathers) and one live burrowing owl were observed on Segment 9 of the proposed CV Link route on 29 Palms Tribal lands located between Dillon Road (to the south) and Golf Center Parkway (to the north) on November 20, 2015 and May 17, 2016. Live burrowing owls or burrows with definitive burrowing owl sign were not observed elsewhere along the alignment, but several burrows capable of supporting owls were observed along various portions of the project. The drought has lowered their numbers significantly but there is still a very high probability of finding them occupying burrows and erosional crags in the stormwater channel.

Loggerhead shrike was observed at several locations along the alignment during both current and previous surveys performed by Amec Foster Wheeler biologists. There is a moderate to high potential for loggerhead shrike to nest at various locations along or immediately adjacent to the proposed project route. This species is considered a CDFW "Species of Special Concern" (CSC), and is not covered under the CVMSHCP.

Yellow warblers were heard calling in the remnant willows in the Coachella Valley Storm Drain north of the area where the burrowing owl was observed on Segment 9 on May 17, 2016. Since yellow warblers can breed in relatively small stands of willows and riparian vegetation there is a high probability that this species could breed in this area of the alignment. Yellow warblers are a "covered" species under the CVMSHCP, and are considered a CDFW CSC when nesting.

Amec Foster Wheeler biologists observed a juvenile vermilion flycatcher near the alignment just north of Ramon Road during a survey of that area in 2012. The fact that this was a young bird suggests that breeding had taken place up- or downstream of this location. Vermilion flycatcher has a moderate potential to nest along the project route in several areas of the Whitewater River channel with appropriate vegetation, as well as along golf course and park areas adjacent to CV Link. This species is also considered a CDFW CSC when nesting, and is not a "covered" species under the CVMSHCP.

Nine of the remaining thirteen sensitive bird species are not expected to have any potential to breed on or adjacent to the CV Link route, either due to a lack of habitat or due to the presence of poor quality habitat that suffers ongoing human disturbance. These include golden eagle, prairie falcon, California black rail, Yuma Ridgway's rail, black swift, southwestern willow flycatcher, gray vireo, yellow-breasted chat, and summer tanager. With the exception of the golden eagle, prairie falcon, and black swift; all of these birds are "covered" species under the CVMSHCP.

There is a moderate potential for black-tailed gnatcatcher to occur and nest along portions of the CV Link alignment, especially along Segment 1 adjacent to the Whitewater Floodplain Conservation Area. Black-tailed gnatcatchers are not listed as threatened, endangered, or even as a CDFW CSC, and are not a "covered" species under the CVMSHCP. This species has a CDFW CNDDB ranking of S3S4.

Modeled habitat for crissal thrasher is only present along the southern end of the alignment, mainly between Golf Center Parkway and Avenue 52. However, this habitat is narrow with a high edge to area ratio (providing less of the dense vegetative cover preferred by this species). There is a low potential for crissal thrasher to nest and/or forage in this portion of the project.

Most of modeled habitat for Le Conte's thrasher is along the northern section of the project (Whitewater Floodplain Conservation Area), but there are also areas in the central and southern portions of the alignment. Le Conte's thrasher has a low probability of nesting in the habitat adjacent to the aforementioned areas of the project route, and a moderate potential for foraging in these same areas. Both thrasher species are "covered" species under the CVMSHCP.

Lastly, modeled habitat for least Bell's vireo has been mapped along the alignment between Golf Center Parkway and Avenue 52. This habitat is limited, consisting mostly of a narrow swath of riparian vegetation that has been left remaining after water district clearing activities. It is for this reason that this State and Federal endangered species is believed to have a very low (to absent) status as a breeder in this area, and to have a low potential to forage in this area of the alignment (potentially only in migration). No least Bell's vireos were detected along the CV Link alignment during the surveys. Least Bell's vireo is a "covered" species under the CVMSHCP.

Special Status Mammals

Thirteen (13) special-status mammals reported as occurring in the vicinity of the Project features. These include: pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), Spotted bat (*Euderma maculatum*), western mastiff bat (*Eumops perotis californicus*), western (southern) yellow bat (*Lasiurus [ega] xanthinus*), Colorado valley woodrat (*Neotoma albigula venusta*), San Diego desert woodrat (*Neotoma lepida intermedia*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), Peninsular bighorn sheep (*Ovis canadensis nelson*), Palm Springs pocket mouse (*Perognathus longimembris bangsi*), American badger (*Taxidea taxus*), and Palm Springs round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus*).

The only one of these sensitive mammals observed by Amec Foster Wheeler biologists in the CV Link alignment vicinity is the Palm Springs round-tailed ground squirrel. Amec Foster Wheeler biologists have observed this species within 500 feet west of the proposed route approximately 350 feet north of Ramon Road on April 16, 2012. Palm

Springs round-tailed ground squirrels are not State or Federal listed as threatened or endangered but are California Species of Special Concern, and are a “covered” species under the CVMSHCP. The Whitewater Floodplain Conservation Area is listed as Core habitat for Palm Springs round-tailed ground squirrel.

Two of the remaining mammals listed have a moderate to high potential of occurrence immediately adjacent to some of the proposed segments of the proposed CV Link route. Habitat suitable for San Diego desert woodrat and Palm Springs pocket mouse is present along or adjacent to portions of the CV Link alignment. The majority of the alignment (or more precisely the immediately adjacent areas) has been mapped as modeled habitat for Palm Springs pocket mouse. However, this small rodent is unlikely to occur on the actual proposed CV-Link project footprint due to compaction of soils and lack of native habitat. The Whitewater Floodplain Conservation Area is classified as Core habitat for Palm Springs pocket mouse in the CVMSHCP. This species is “covered” under the CVMSHCP. Woodrat middens (not identified to species) were observed adjacent to the project route during the current surveys of the alignment, and are believed to have better potential to belong to San Diego desert woodrat than Colorado Valley woodrat due to lack of habitat (areas of mesquite and beavertail cactus) for the latter species. Neither woodrat species is “covered” under the CVMSHCP, and neither are listed as threatened or endangered by the State or Federal governments.

Mature landscaped palm trees suitable for roosting western yellow bat are also intermittently present at private residences, businesses, parks, and golf courses along or immediately adjacent to the proposed CV Link route. There is a moderate possibility that western yellow bats could roost and/or forage in such areas along the alignment. This is the only bat species “covered” under the CVMSHCP. Although roosting habitat (cliffs with rock crevices, caves, abandoned mines, etc.) for the spotted bat, western mastiff bat and pocketed free-tailed bat is not present anywhere on the Project alignment, there is a low to moderate potential for these bat species to forage over portions of the alignment. None of these bats are State or Federal listed as threatened or endangered, and all have a CDFW CNDDB ranking of S3 or S3S4, with the spotted bat also considered a CDFW CSC. Townsend’s big-eared bat is a Candidate for listing as threatened by the State of California. This species prefers caves or abandoned mines for roost sites, but also rarely uses abandoned buildings, bridges, and culverts. There is a low potential for this bat to occur along the project route, both for foraging and roosting. Townsend’s big-eared bats are not a “covered” species under the CVMSHCP.

The American badger is known from a 1949 CNDDB record near the Indio segment of alignment (now developed). This species is highly unlikely to utilize the project alignment due to its proximity to development and ongoing human disturbance. There is a low potential for pallid San Diego pocket mouse and a remote potential for earthquake Merriam’s kangaroo rat to occur along the CV Link alignment since the project area is on the edge of these species known range. Similarly, Peninsular bighorn sheep are considered to be absent from the proposed alignment due to a lack of suitable habitat and/or the location of the Project outside of the species known range.

Tables 2 through 8 summarize information on all special-status species that were detected during the field visits, have been reported within the vicinity (5-mile radius), or are considered to have some potential to occur onsite based on geographic distribution and presence of potentially suitable habitat. These tables provide the names, legal or conservation status, general habitat associations, and the probability of occurrence for each of these species.

Table 2 Special Status Plant Species				
Species	**Protective Status**	**Habitat**	**Flowering Period**	**Occurrence Probability**
Abronia villosa var. *aurita* chaparral sand-verbena	F: None C: None CNPS: List 1B.1 Global Rank: G5T2T3 State Rank: S2 CVMSHCP: No	Sandy areas in chaparral and coastal sage scrub; 75-1600 m (262-5,249 ft)	January - September	Low (*C.v.* var. *aurita* not common on the floor of the Coachella Valley)
Acmispon haydonii pygmy lotus	F: ND C: ND CNPS: List 1B.3 State Rank: S3 CVMSHCP: No	Rocky sites in creosote bush scrub to pinyon-juniper woodland, 590 – 4,200 feet	January - June	Absent (No habitat present, site below elevation range of species, two closest CCH records from 1930, both developed now)
Ambrosia monogyra (singlewhorl burrobush)	F: ND C: ND CNPS: List 2B.2 State Rank: S2 CVMSHCP: No	Occurs in chaparral and Sonoran desert scrub in sandy soils, 32 – 1,640 feet	August - November	Low (Only two area CCH records are from Tahquitz Canyon west of alignment)
Astragalus lentiginosus var. *coachellae* Coachella Valley milk-vetch	F: END C: None CNPS List: 1B.2 Global Rank: G5T1 State Rank: S1 CVMSHCP: Yes	Sandy flats, washes, alluvial fans, sand field, dunes and dune edges; 40-655 m (130-2,150 ft), a CA endemic	February - May	Moderate (Most of project footprint lacking wind-blown sands, potential near 34th and Dinah Shore Drive, also between Airport Blvd. and Golf Center Parkway, CCH records in project vicinity, many lost to development), Core Habitat in Whitewater Floodplain Conservation Area
Astragalus sabulonum gravel milk-vetch	F: None C: None CNPS: List 2B.2 Global Rank: G5 State Rank: S2 CVMSHCP: No	Sandy, sometimes gravelly flats, washes, and roadsides, desert dunes, Mojavean desert scrub and Sonoran desert scrub; -60-930 m (-197-3051 ft)	February - June	Low (In habitat adjacent to northern portion of alignment adjacent to Whitewater River channel, only two CCH records (old) near project, from Indio and Coachella and both have been developed)

Table 2 Special Status Plant Species				
Species	**Protective Status**	**Habitat**	**Flowering Period**	**Occurrence Probability**
Astragalus tricarinatus triple-ribbed milk-vetch	F: END C: None CNPS List: 1B.2 Global Rank: G1 State Rank: S1 CVMSHCP: Yes	Rocky canyon slopes, edges of boulder-strewn desert washes; 427-792 m (1400-2,600 ft)	February – May	Absent (project below elevation range, habitat lacking on proposed pathway)
Atriplex parishii Parish's brittlescale	F: ND C: ND CNPS: List 1B.1 State Rank: S1 CVMSHCP: No	Alkali meadows, vernal pools, chenopod scrub, playas, 82 – 6,230 feet	June - October	Absent (No habitat present, single CCH record from general area [1901] is from San Jancinto Mtns. ~5 mi. SW of Demuth Park area of project)
Ayenia compacta California ayenia	F: None C: None CNPS List: 2B.3 Global Rank: G4 State Rank: S2? CVMSHCP: No	Rocky Sonoran and Mojavean desert scrub; 150-1095 m (492-3593 ft)	March - April	Absent (most records are from rocky areas west of alignment, not likely on valley floor)
Bursera microphylla little-leaf elephant tree	F: None C: None CNPS List: 2B.3 Global Rank: G4 State Rank: S2 CVMSHCP: No	Rocky Sonoran desert scrub; 200-700 m (656-2297 ft)	June - July	Absent (habitat not present, species would not be overlooked if present)
Caulanthus simulans Payson's jewelflower	F: ND C: ND CNPS List: 4.2 State Rank: S4 CVMSHCP: No	Often found in burned or disturbed areas such as stream beds and rocky steep slopes. Favors sandy, granitic soils 1,300 – 7,200 feet	March - May	Absent (Alignment below elevation range of species, single CCH record from vicinity is from La Quinta 1935, now a golf course)
Chamaesyce abramsiana Abram's spurge	F: None C: None CNPS List: 2B.2 Global Rank: G4 State Rank: S2 CVMSHCP: No	Sandy Sonoran Desert scrub; 9-915 m (30-3,000 ft)	September - November	Remote (only 1 1968 CNDDB record mapped as best guess)
Chorizanthe parryi var. *parryi* Parry's spineflower	F: ND C: ND CNPS List: 1B.1 State Rank: S3 MSHCP: No	On dry, sandy soils in coastal scrub, chaparral, cismontane woodland, and valley and foothill grassland, 738 – 4,000 feet	April - June	Absent (No habitat present, site is largely below elevation range of species, no CCH records near project, closest is in mouth of Whitewater Canyon well N of alignment)

Table 2 Special Status Plant Species				
Species	**Protective Status**	**Habitat**	**Flowering Period**	**Occurrence Probability**
Chorizanthe xanti var. *leucotheca* white-bracted spineflower	F = None C = None CNPS List: 1B.2 CNDDB element rank: Global = G4T2 State = S2.2 CVMSHCP: No	Mojavean desert scrub, pinyon and juniper woodland, sandy or gravelly; 299-1200 m (984 – 3,937 ft)	April - June	Absent (Mojavean desert scrub habitat lacking, site below elevation range of species)
Cuscuta californica var. apiculata pointed dodder	F: None C: None CNPS List: 3 Global Rank: G5T2T4 State Rank: S3? MSHCP: No	Mojavean Desert scrub, Sonoran desert scrub/sandy; 0-500 m (0-1640 ft)	February - August	Absent (no dodder species observed during surveys, No CCH records in project vicinity, known from Mojave Desert near Colorado River)
Ditaxis clariana glandular ditaxis	F: None C: None CNPS List: 2B.2 Global Rank: G3G4 State Rank: S2 CVMSHCP: No	Sandy Sonoran Desert scrub and Mojavean desert scrub; 0-465 m (0-1526 ft)	October - March	Low (No Ditaxis observed during surveys, CCH records are from south and west of southern end of alignment; Jackson St. and Indio Blvd. record now a parking lot)
Ditaxis serrata var. *californica* California ditaxis	F: None C: None CNPS List: 3.2 Global Rank: G5T3T4 State Rank: S2? CVMSHCP: No	Sonoran Desert scrub; 30-1000 m (98-3281 ft)	March - December	Absent (3 of 4 CCH record locations now developed, remaining site is >5 mi. south of Palm Desert portion of alignment)
Eremothera boothii ssp. *boothii* Booth's evening-primrose	F: None C: None CNPS List: 2B.3 Global Rank: G5T4 State Rank: S2 CVMSHCP: No	Rocky alluvial slopes in open creosote bush scrub, Joshua tree and pinyon-juniper woodlands; 815-2400 m (2,674-7,875 ft)	April - September	Absent (habitat not present on alignment, project below elevation range of species)
Eriastrum harwoodii Harwood's eriastrum	F: None C: None CNPS List: 1B.2 CNDDB element rank: Global Rank: G2 State Rank: S2 CVMSHCP: No	Desert dunes;125-915 m (410-3002 ft)	March - June	Absent (No CCH records in project area, nearest record is 30 miles northeast of Indio portion of alignment)

Table 2 Special Status Plant Species				
Species	**Protective Status**	**Habitat**	**Flowering Period**	**Occurrence Probability**
Euphorbia arizonica Arizona spurge	F: ND C: ND CNPS List: 2B.3 State Rank: S2 CVMSHCP: No	Sandy soils in Sonoran Desert Scrub, 164 – 1,000 feet elevation,	March - April	Absent (No CCH records near project, closest are from Anza Borrego Desert State Park)
Euphorbia misera cliff spurge	F: ND C: ND CNPS List: 2B.2 CNDDB element rank: Global Rank: G5 State Rank: S2 CVMSHCP: No	Rocky coastal bluff, coastal scrub, Mohaveave desert scrub; 10-500 m (33-1640 ft)	December - October	Absent (rocky coastal bluff and Mojave desert scrub habitat [cliffs] lacking, only inland records are from Whitewater Canyon)
Euphorbia platysperma flat-seeded spurge	F: ND C: ND CNPS List: 1B.2 State Rank: S1 MSHCP: No	Sonoran desert scrub, sandy habitats/dunes, ~210 – 328 feet elevation	February - September	Absent (Only 2 CCH records in vicinity; 1926 record is now I-10 near Monterey Ave., 1964 record is in wind farm ~3.22 mi. N. of N. Indian Canyon Drive crossing. Species extremely rare in CA)
Heuchera hirsutissima shaggy-haired alumroot	F: ND C: ND CNPS List: 1B.3 State Rank: S3 MSHCP: No	Subalpine coniferous forest and upper montane coniferous forest, often near large rocks, 4,980 – 11,500 feet	June - July	Absent (habitat not present, site is far below elevation range of species)
Imperata brevifolia California satintail	F: ND C: ND CNPS List: 2B.1 State Rank: S3 CVMSHCP: No	Coastal scrub, chaparral, riparian scrub, Mojavean scrub, meadows and seeps, 0 – 4,000 feet	September - May	Absent (habitat not present, All three CCH records from area [Palm Springs] are from 1965, all developed now)
Lilium parryi lemon lily	F: ND C: ND CNPS List: 1B.2 State Rank: S3 CVMSHCP: No	Upper and lower montane coniferous forest, riparian forest, meadows and seeps, 4,000 – 9,000 feet	July - August	Absent (habitat not present, site is far below elevation range of species)
Linanthus jaegeri San Jacinto linanthus	F: ND C: ND CNPS List: 1B.2 State Rank: S2 CVMSHCP: No	Subalpine coniferous forest and upper montane coniferous forest, often on sheer granitic outcrops, 7,200 – 10,000 feet	July - September	Absent (habitat not present, site is far below elevation range of species)

Table 2 Special Status Plant Species				
Species	**Protective Status**	**Habitat**	**Flowering Period**	**Occurrence Probability**
Linanthus maculatus Little San Bernardino Mts. linanthus	F = BLM Sensitive C = None CNPS List: 1B.2 Global Rank: G2 State Rank: S2 CVMSHCP: Yes	Desert dunes, Sonoran desert scrub, Mojavean desert scrub, Joshua tree woodland; occurs most often on low benches along washes or bajadas where substrate shows evidence of water flow; 640-6,808' elev	March-May	Low (Alignment is largely below elevation range of species, closest CCH record is >1.5 mi. northeast of north end of alignment)
Marina orcuttii var. orcuttii California marina	F: None C: None CNPS List: 1B.3 Global Rank: G2G3T1T2 State Rank: S2? CVMSHCP: No	Chaparral, pinyon and juniper woodland, Sonoran desert scrub/rocky; 1050-2073 m (3445-3,806 ft)	May-October	Absent (alignment well below elevation range of species)
Matelea parvifolia spearleaf	F: None C: None CNPS List: 2B.3 Global Rank: G5? State Rank: S2.2 CVMSHCP: No	Mojavean desert scrub, Sonoran desert scrub/rocky; 440-1095 m (1444-3,593 ft)	March-May	Absent (alignment below elevation range of species, closest CCH record >11 mi. southwest of Indian Wells portion of project)
Mentzelia tridentata creamy blazing star	F: None C: None CNPS List: 1B.3 Global Rank: G3 State Rank: S3 CVMSHCP: No	Mojavean desert scrub/rocky, gravelly, sandy; 700-1175 m (2297-3855 ft)	March-May	Absent (Mojavean desert habitat not present, alignment below elevation range of species, no CCH records near project)
Nemacaulis denudata var. *gracilis* slender cottonheads	F: None C: None CNPS: List 2B.2 Global Rank: G3G4T3? State Rank: S1 CVMSHCP: No	Coastal and desert dunes in Sonoran Desert scrub; -15- 564 m (-50-1,850 ft)	April – May (rarely March)	Low (most CCH records are from west of alignment, the few that were "nearby" have been developed)
Phaseolus filiformis slender-stem bean	F: None C: None CNPS: List 2B.1 Global Rank: G5 State Rank: S1 CVMSHCP: No	Sonoran Desert scrub; 125 m (410 ft)	April	Absent (Only CCH record in general project vicinity is from southwest of Mecca)

Table 2 Special Status Plant Species				
Species	**Protective Status**	**Habitat**	**Flowering Period**	**Occurrence Probability**
Pseudorontium cyathiferum Deep Canyon snapdragon	F: None C: None CNPS: List 2B.3 Global Rank: G4? State Rank: S1 CVMSHCP: No	Sonoran desert scrub (rocky); 0-800 m (0-2625 ft)	February - April	Absent (exceedingly rocky habitat not present, closest CCH record is from ~5 mi. south of Palm Desert portion of alignment)
Saltugilia latimeri Latimer's woodland-gilia	F: None C: None CNPS: List 1B.2 Global Rank: G2 State Rank: S2 CVMSHCP: No	Rocky, sandy, often granitic, sometimes washes in chaparral, Mojavean desert scrub, pinyon and juniper woodland; 400-1900 m (1312-6234 ft)	March-June	Absent (alignment below elevation range of species, closest CCH record is from >7 mi. south of Palm Desert portion of alignment on Highway 74)
Salvia greatae Orocopia sage	F: None C: None CNPS: List 1B.3 Global Rank: G2G3 State Rank: S2S3 CVMSHCP: Yes	Known from Orocopia and Chocolate Mountains; 100-1,475 feet	March-April	Absent (All CCH records from well east and south of alignment, closest is ~14 miles southeast of Airport Blvd. access point)
Selaginella eremophila desert spike-moss	F: None C: None CNPS: List 2B.2 Global Rank: G4 State Rank: S2S3 CVMSHCP: No	Shady sites on gravelly soils; crevices or among rocks in Sonoran desert scrub, chaparral, 200-899 m (655-2,950 ft)	June (uncommon May & July)	Absent (shady and crevice habitat lacking, most of alignment below elevation range of species, CCH records are mostly from rocky areas west of alignment)
Senna covesii Coves' cassia	F: None C: None CNPS: List 2B.2 Global Rank: G5 State Rank: S3 CVMSHCP: No	Sonoran desert scrub (sandy), 285-1070 m (935-3510 ft)	March-June	Absent (alignment below elevation range of species, CCH records west and south of alignment, 1931 Coachella record is developed)
Stemodia durantifolia purple stemodia	F: None C: None CNPS: List 2B.1 Global Rank: G5 State Rank: S2 CVMSHCP: No	Mesic sites on sandy soils in Sonoran Desert scrub; 180-299 m (590-980 ft)	January - December	Absent (Alignment below elevation range of species, CCH records all west of alignment, closest record ~ 2 mi. SW of project)

Table 2 Special Status Plant Species				
Species	**Protective Status**	**Habitat**	**Flowering Period**	**Occurrence Probability**
Streptanthus campestris southern jewelflower	F: ND C: ND CNPS: List 1B.3 State Rank: S3 CVMSHCP: No	Chaparral, lower montane coniferous forest, pinyon-juniper woodland with open, rocky areas, 2,950 – 7,550 feet	May - July	Absent (No habitat present, alignment too low in elevation, all CCH records well west and south of alignment, closest record ~ 10 mi. S. of Palm Desert section of project)
Thelypteris puberula var. *sonorensis* Sonoran maiden fern	F: None C: None CNPS: List 2B.2 Global Rank: G5T3 State Rank: S2 CVMSHCP: No	Streams, meadows & seeps; 50-610 m (164-2001 ft)	January - September	Absent (All CCH records west of alignment, closest record is 1 mile SW of alignment in Tahquitz Cyn.)
Thysanocarpus rigidus rigid fringepod	F: None C: None CNPS: List 1B.2 Global Rank: G1G2 State Rank: S1S2 CVMSHCP: No	Pinyon and juniper woodland/Dry rocky slopes; 600-2200 m (1969-7218 ft)	February - May	Absent (Project below elevation range of species, closest CCH record is 12.5 mi. SW of Bermuda Dunes portion of alignment)
Wislizenia refracta ssp. palmeri Palmer's jackass clover	F: None C: None CNPS: List 2B.2 Global Rank: G5T2T4 State Rank: S1 CVMSHCP: No	Chenopod scrub, desert dunes, Sonoran desert scrub, Sonoran thorn woodland; 0-300 m (0-984 ft)	January - December	Absent (All CCH records are from Anza Borrego Desert State Park)
Wislizenia refracta ssp. refracta jackass clover	F: None C: None CNPS: List 2B.2 Global Rank: G5T5? State Rank: S1 MSHCP: No	Desert dunes, Mojavean desert scrub, playas, Sonoran desert scrub; 600-800 m (1969-2625 ft)	April - November	Absent (Alignment below elevation range of species, all CCH records well north or east of project, closest one ~7.3 mi. east/northeast of Airport Blvd. access point)
Xylorhiza cognata Mecca-aster	F: None C: None CNPS: List 1B.2 Global Rank: G2 State Rank: S2 CVMSHCP: Yes	Grows on steep canyon slopes on sandstone and clay substrates; 20-305 m (65-1,000 ft)	January - June	Absent (canyon slope habitat not present, site lacks favored substrates)

Table 3
Special Status Vegetation Communities

Community	Status	Habitat	Probability
desert fan palm oasis woodland	F=None C= None NDDB Element Global – G3 State – S3.2 CVMSHCP: Yes	Natural *Washingtonia filifera* groves	Absent (not observed)

Table 4
Special Status Invertebrates

Species	Status	Habitat	Probability
Dinacoma caseyi Casey's june beetle	F=END C=None Global: G1 State rank: S1 CVMSHCP: No Critical habitat: No Species Survey Area: No	Sandy soils; flightless females live below ground and come to surface only for mating. Known only from two populations in a small area of southern Palm Springs	Present (Present along alignment from Demuth Park east to confluence of Tahquitz Creek and Whitewater River channel [AMEC 2014])
Macrobaenetes valgum Coachella giant sand treader cricket	F=None C= None NDDB Element Rank: Global: G1G2 State: S1S2 CVMSHCP = Yes	Active sand dune hummocks and ridges, sites favorable to permanent habitation include spring-moistened sand.	Low (Not expected on alignment as substrates are too compacted, but could occur in appropriate sandy areas adjacent to pathway; e.g. Habitat north of 34th Ave. and Marguerite Street near Dinah Shore Drive. Modeled habitat present on north and south portions of alignment). Core Habitat in Whitewater Floodplain Conservation Area
Oliarces clara cheeseweed owlfly	F: None C: None Global: G1G3 State: S2 MSHCP: No	Known from lower Colorado River drainage, creosote is suspected larval host. Found under rocks or in flight over streams in canyons	Low (Amec Foster Wheeler biologists have observed this species < in Palm Canyon Wash <1 mile south of the Tahquitz Creek segment of the project)

Stenopelmatus cahuilaensis Coachella Valley Jerusalem cricket	F=None C= None NDDB Element Rank: Global - G1G2 State - S1S2 CVMSHCP = Yes	Wind-deposited (aeolian) sand dunes, drift sands and water deposited (alluvial) gravelly/sandy soils	Low (Modeled habitat primarily along northern third of alignment. Only potential in adjacent sandy habitat, actual footprint too compacted and lacking suitable habitat characteristics)

Table 5
Special Status Fish

Community	Status	Habitat	Probability
Cyprinodon macularius macularius desert pupfish	F=END C= END NDDB Element Rank: Global – G1 State – S1 CVMSHCP = Yes	Able to adapt to a variety of aquatic habitats, including those having high temperatures and salinities	Absent (suitable permanent aquatic habitat lacking)
Xyrauchen texanus razorback sucker	F=END C= END NDDB Element Rank: Global – G1 State – S1S2 CVMSHCP = No	Medium and large streams and rivers with sand, mud, or gravel bottoms.	Absent (aquatic riverine habitat lacking)

Table 6
Special Status Amphibians & Reptiles

Species	Status	Habitat	Probability
Batrachoseps major aridus desert slender salamander	F = END C = END NDDB Element Rank: Global = G4T1 State = S1 CVMSHCP = No	Known only from rocky seeps, crevices in Hidden Palm Canyon and Guadalupe Canyon on the eastern slope of the Santa Rosa Mountains	Absent (suitable habitat lacking, alignment not within known range of species)
Rana draytonii California red-legged frog	F: THR C: CSC State rank: S2S3 CVMSHCP: No	Requires sources of permanent water, usually deep pools or ponded areas in foothill and lowland areas	Absent (no habitat present, not in species' range)
Rana muscosa southern mountain yellow-legged frog	F: END C: END State rank: S1 CVMSHCP: No	Sandy areas of the Coachella Valley (dunes and sand field habitats)	Absent (no habitat present, not in species' range)

Species	Status	Habitat	Probability
Anaxyrus californicus arroyo toad	F: END C: None State rank: S2S3 CVMSHCP: Yes	Washes, arroyos, sandy riverbanks, riparian with willows, sycamores, oaks, and cottonwoods west of the desert in coastal areas. Former records from Whitewater canyon, San Felipe Creek, Vallecito Creek, and Pinto Canyon have been shown to be based on errors.	Absent (a habitat specialist, required breeding habitat not present, alignment is not within known range of species)
Crotalus ruber ruber red-diamond rattlesnake	F = None C = CSC NDDB Element Rank: Global = G4 State = S2? CVMSHCP = No	Chaparral, woodland, grassland, desert areas from coastal SD Co to eastern slopes of mountains; rocky areas and dense vegetation, needs rodent burrows, cracks in rocks or surface cover objects	Low (Limited to area adjacent to rocky toe of slope NW of Highway 111 & Mirage Drive, also some potential in South Palm Canyon Bridge area)
Gopherus agassizi desert tortoise	Fed: THR Cal: THR NDDB Element Rank: Global = G3 State = S2 CVMSHCP = Yes	Various desert communities and habitats (Mojavean creosote bush scrub, Joshua tree woodland, saltbush scrub); washes, arroyos, bajadas, rocky hillsides, open flat desert	Absent-Very Low (No habitat <u>on</u> alignment, very low potential in Whitewater Floodplain Conservation Area adjacent to northern portion of project. This area is not classified as Core Habitat in the CVMSHCP)
Phrynosoma mcallii flat-tailed horned lizard	F = BLM Sensitive C = CAN END NDDB Element Rank: Global = G3 State = S2 CVMSHCP = Yes	Restricted to desert washes and desert flats in central Riverside, eastern San Diego and Imperial Counties; critical habitat is fine sand, requires vegetative cover and ants	Low (Modeled habitat south of Vista Chino, Dinah Shore and 34th St. area, and in that part of the alignment adjacent to the Whitewater Floodplain Conservation Area. Very unlikely on actual project footprint)
Uma inornata Coachella Valley fringe-toed lizard	F = THR C = END NDDB Element Rank: Global = G1Q State = S1 CVMSHCP = Yes	Restricted to sandy areas in the Coachella Valley; requires fine, loose, windblown sand interspersed with hardpan and widely spaced desert shrubs	Low-Moderate (Modeled habitat in same areas as flat-tailed horned lizard. Very unlikely on actual project footprint). Core Habitat in Whitewater Floodplain Conservation Area

Table 7
Special Status Birds

Species	Status	Habitat	Probability
Aquila chrysaetos golden eagle	F: BCC C: FP, WL State rank: S3 CVMSHCP: No	Forages over a wide range of open habitats, nesting habitat is often cliff walls or large trees in open areas	Breeding: Absent Foraging: very low (no nesting habitat, not likely to forage over site due to proximity to development)
Laterallus jamaicensis coturniculus California black rail	F: BCC C: THR, FP State rank: S1 CVMSHCP: Yes	Dense coastal and inland marsh habitat with shallow water (<2.5cm) dominated by California bulrush (Scirpus californicus) and three square bulrush (S. americanus). Do not prefer areas dominated by cattails.	Absent (breeding & foraging) (Although habitat has been modeled along the southern portion of the alignment [Indio to Thermal], highly unlikely to occupy these areas due to ongoing maintenance activities [vegetation removal] by water district, and lack of suitable marsh habitat)
Rallus obsoletus yumanensis Yuma Ridgway's rail	F: END C: THR, FP Global: G5 State rank: S1 CVMSHCP: Yes	Found in well-developed marsh habitats of cattails (*Typha domingensis*) and bullwhip/California bulrush (*Scirpus californicus*). Also requires water depths varying from 6.5 cm to 20 cm. Whitewater River habitats are potentially impacted by chemical contaminants, salt cedar infestations, and flood control channel maintenance.	Breeding: Absent Foraging: very low (Suitable well-developed marsh habitat not present along alignment, no modeled habitat along alignment, closest populations are at the Salton Sea State Recreation Area at the mouth of Salt Creek and Dos Palmas marsh)
Athene cunicularia burrowing owl	F = BLM Sensitive, BCC C = CSC (burrows) NDDB Element Rank: Global: G4 State: S3 CVMSHCP: Yes	Open, dry annual or perennial grassland, deserts & scrublands characterized by low-growing vegetation	Occurs (An owl observed in the segment of the alignment north of Dillon Road and south of Golf Center Parkway in both 2015 & 2016) Breeding: Moderate Foraging: Occurs
Cypseloides niger black swift	F: BCC C: SSC State rank: S2 CVMSHCP: No	Breeds in small colonies on cliffs behind or near waterfalls in deep canyons, forages widely	Absent (no breeding habitat, not commonly seen foraging in desert areas)

Species	Status	Habitat	Probability
Empidonax traillii extimus southwestern willow flycatcher	F = END C = END NDDB Element Global = G5T2 State = S1 CVMSHCP = Yes	Nests in large areas of riparian forests and woodlands	Breeding: Absent (suitable riparian forest habitat lacking) Foraging: Low (during migration)
Falco mexicanus prairie falcon	F = None, BCC C = CSC (nesting) NDDB Element Global = G5 State = S4 CVMSHCP = No	Breeding sites located on cliffs, forages far afield	Breeding: Absent (habitat lacking) Foraging: Moderate (may nest on nearby cliffs and forage over portions of project alignment)
Lanius ludovicianus loggerhead shrike	F = None, BCC C = CSC (nesting) NDDB Element Global = G4 State = S4 CVMSHCP = No	A variety of open habitats, nests in trees and shrubs	Breeding: Moderate-High (All areas of Project alignment with appropriate vegetation). Foraging: Occurs (observed)
Vireo bellii pusillus least Bell's vireo	F: END C: END Global rank: G5 State rank: S2 CVMSHCP: Yes	Riparian woodland habitats along the riverine systems of Southern California, primarily in San Diego, Santa Barbara, and Riverside Counties. Needs dense shrub cover within 1 to 2 meters (3 to 6 feet) off the ground for nesting, and stratified canopy for foraging.	Breeding: Absent-Very Low (Modeled habitat between Golf Center Parkway and Avenue 52, habitat limited and subject to water district maintenance activities.) Foraging: Low (during migration)
Vireo vicinior gray vireo	F: None C: None Global rank: G4 State rank: S2 CVMSHCP: Yes	Arid, shrub-covered slopes in pinyon-juniper, juniper, and chamise-redshank chaparral, Habitats on foothills and mesas. Suitable Habitat typically occurs from 2,000 to 6,500 feet (600-2,000 m)	Breeding: Absent (Habitat not present, alignment well below elevation range of species.) Foraging: Absent (rarely observed during migration, no records on project alignment)
Icteria virens yellow-breasted chat	F = None C = CSC (nesting) NDDB Element Rank: Global = G5 State = S3 CVMSHCP = Yes	Riparian forest and woodland; nests along many river systems in southern CA	Breeding: Absent (riparian forest habitat lacking, impacted by maintenance activities in river channel). Foraging: Low (during migration)

Species	Status	Habitat	Probability
Setophaga petechia brewsteri yellow warbler	F = None, BCC C = CSC (nesting) NDDB Element Rank: Global = G5 State = S3S4 CVMSHCP = Yes	Although prefers wetlands and mature riparian woodlands dominated by cottonwoods, alders, and willows, will also use well-watered, second growth woodlands and even gardens.	Breeding: High (suitable habitat present on southern end of alignment, between Golf Center Parkway and Airport Boulevard). Foraging: Occurs (observed between Dillon road and Golf Center Parkway on 5/17/16)
Piranga rubra cooperi summer tanager	F = None C = CSC (nesting) NDDB Element Rank: Global = G5 State = S1 CVMSHCP = Yes	Summer resident that nests in mature riparian groves dominated by cottonwoods and willows. Usually prefers canyon riparian in our area.	Breeding: Absent (Although habitat has been modeled along alignment between Dillon Road and Avenue 52, suitable riparian forest habitat lacking, impacted by maintenance activities in river channel, species highly unlikely to breed there). Foraging: Very Low (during migration)
Polioptila melanura black-tailed gnatcatcher	F = None C = None NDDB Element Rank: Global = G5 State = S3S4 CVMSHCP = No	Primarily inhabits wooded desert wash habitats, desert scrub habitat, esp. in winter; nests in desert washes containing mesquite, palo verde, ironwood, acacia, absent from areas where salt cedar introduced	Breeding: High (In adjacent undeveloped areas of Whitewater River channel) Foraging: High (same areas listed above)
Pyrocephalus rubinus vermilion flycatcher	F: ND C: CSC (nesting) Global: G5 State rank: S2S3 MSHCP: No	Usually associated with desert riparian habitats, forages from open perch	Breeding: Moderate (Potential in several areas of the Whitewater River channel with appropriate vegetation, as well as along golf course and park areas. Amec Foster Wheeler biologists have observed a juvenile near the alignment just north of Ramon Road in 2012) Foraging: Occurs

Species	Status	Habitat	Probability
Toxostoma crissale crissal thrasher	F = None, BCC C = CSC NDDB Element Ranks: Global = G5 State = S3 CVMSHCP = Yes	Resident of southeastern deserts in desert riparian and desert wash habitats; nests in dense vegetation along streams/washes; honey mesquite, screwbean mesquite, ironwood, catclaw, acacia, arrowweed	Breeding: Low (Modeled habitat only along southern end of alignment, mainly between Golf Center Parkway and Avenue 52, however habitat is narrow with high edge to area ratio) Foraging: Low - (same as above)
Toxostoma lecontei Le Conte's thrasher	F = BLM Sensitive, BCC C = CSC (San Joaquin population only) NDDB Element Ranks: Global = G4 State = S3 CVMSHCP = Yes	Desert resident, primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats; commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground	Breeding: Low (Most of modeled habitat is along the N section of project [Whitewater Floodplain Conservation Area], but there are also areas in the central and southern portions, best potential in the north) Foraging: Moderate (same areas listed above)

Table 8
Special Status Mammals

Species	Status	Habitat	Probability
Chaetodipus fallax pallidus pallid San Diego pocket mouse	F = None C = CSC NDDB Element Global = G5T3 State = S3S4 CVMSHCP = No	Desert border areas in eastern SD Co. in desert wash, desert scrub, desert succulent scrub, pinon-juniper, etc.; sandy herbaceous areas usually in association with rocks or coarse gravel.	Low (Alignment on edge of known range)
Corynorhinus townsendii Townsend's big-eared bat	F = None C = CAN THR NDDB Element Global = G3G4 State = S2 WBWG = H CVMSHCP = No	Generally viewed as a cave dwelling species, but the western subspecies are also found in human-made structures (e.g. old mine workings and buildings)	Roosting: Low (Prefers caves or abandoned mines, but rarely uses abandoned buildings, bridges, and culverts) Foraging: Low (especially around lighting and adjacent water features)

Species	Status	Habitat	Probability
Euderma maculatum Spotted bat	F = None C = CSC NDDB Element Global = G4 State = S3 WBWG = H CVMSHCP = No	Wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Feeds on moths over water and along washes. Roosts in rock crevices in cliffs and caves.	Roosting: Absent (rock crevices, cliffs and caves lacking) Foraging: Low (especially over washes, over surface waters on golf courses or parks, around lights)
Eumops perotis californicus western mastiff bat	F = None C = None NDDB Element Global = G5T4 State = S3S4 WBWG = H CVMSHCP = No	Roosts in rock crevices on high cliffs with vertical faces	Roosting: Absent (rock crevices and cliffs lacking) Foraging: Low (especially over surface waters on golf courses or parks, around lights)
Lasiurus (ega) xanthinus western (southern) yellow bat	F = None C = CSC NDDB Element Global = G5 State = S3 WBWG = H CVMSHCP = Yes	Valley foothill riparian, desert riparian, desert wash and palm oasis habitats; roosts in trees, particularly palms, forages over water and among trees.	Roosting: Moderate (in landscaped palms with aprons at businesses, parks, golf courses, and residences along alignment) Foraging: Moderate (especially around palms and adjacent water features)
Neotoma albigula venusta Colorado Valley woodrat	F: None C: None Global: G5T3T4 State rank: S1S2 MSHCP: No	Associated with beavertail cactus & mesquite in the Colorado Desert.	Absent (habitat limited)
Neotoma lepida intermedia San Diego desert woodrat	F: None C: None Global: G5T3T4 State rank: S3S4 MSHCP: No	Often in coastal scrub habitats, but enters desert areas. Usually prefers moderate to dense canopies near rocky areas.	High (woodrat middens observed during alignment surveys)
Nyctinomops femorosaccus pocketed free-tailed bat	F: None C: None Global = G4 State rank: S3 WBWG = M MSHCP: No	Roosts in crevices on rugged cliffs, on high rocky outcrops and slopes. May also roost in buildings, caves, and under roof tiles.	Roosting: Absent-Low (rock crevices, cliffs and caves lacking) Foraging: Moderate (especially over washes, around lights and adjacent water features)
Ovis canadensis nelsoni pop. 2 Peninsular bighorn sheep DPS	F: END C: THR Global = G4T3Q State rank: S1 MSHCP: Yes	Desert rocky slopes of the Peninsular Ranges in San Diego, Riverside, and Imperial Counties	Absent (suitable habitat lacking)

Species	Status	Habitat	Probability
Perognathus longimembris bangsi Palm Springs pocket mouse	F = BLM Sensitive C = CSC NDDB Element Global = G5 State = S2S3 CVMSHCP = Yes	Sonoran Desert habitats with level to gently sloping topography, sparse to moderate vegetative cover, and loosely packed or sandy soils.	Moderate (The majority of the alignment [or immediate adjacent areas] has been mapped as modeled habitat for this species. However, unlikely to occur on proposed CV-Link pathway due to compacted soils and extensive disturbance/clearing of native habitat). Core Habitat in Whitewater Floodplain Conservation Area
Taxidea taxus American badger	F = None C = CSC NDDB Element Global = G5 State = S3 CVMSHCP = No	Grasslands, a variety of open arid land habitats	Absent-Very Low (1949 CNDDB record exists near Indio segment of alignment (now developed), species highly unlikely to utilize alignment due to proximity to development and ongoing human disturbance)
Xerospermophilus tereticaudus chlorus Palm Springs round-tailed ground squirrel	F = None C = CSC NDDB Element Global = G5 State = S1S2 CVMSHCP = Yes	Restricted to the Coachella Valley, prefers desert succulent scrub, desert wash, desert scrub, alkali scrub and levees; prefers open, flat, grassy areas in fine-textured, sandy soil.	Occurs (Observed by author in Stabilized Shielded Sand Field habitat adjacent to west side of alignment ~350 feet north of Ramon Road on April 16, 2012). Core Habitat in Whitewater Floodplain Conservation Area

Chapter 4 – Results: Biological Resources, Discussion of Impacts and Mitigation

Habitats and Natural Communities of Special Concern

Natural communities and habitats are considered to be of special concern based on (1) federal, State, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status plants or animals occurring on site. One special status vegetation community/habitat was identified in the literature review of the project area, however no such resources were present in the project area. However jurisdictional wetlands were found to be present within the BSA. Jurisdictional waters are shown in Appendix A, Project Maps.

DISSCUSSION OF THE NATURAL COMMUNITY

Survey Results

Special Status Habitat Communities

The literature review associated with the Biological Resources Assessment Report for the project resulted in the identification of one (1) special status vegetation community (habitat) in the general project area. Desert fan palm oasis woodlands community, also known as natural *Washintonia filifera* groves habitat, is covered under the CVMSHCP but does not have a federal or state status. This habitat is generally located within the Santa Rosa and San Jacinto Mountains Conservation Area, as described below.

Santa Rosa and San Jacinto Mountains Conservation Area

The 211,070-acre Santa Rosa and San Jacinto Mountains Conservation Area includes nearly all of the desert slopes of the Santa Rosa and San Jacinto Mountains, below the upper elevational limits of Peninsular bighorn sheep habitat, in addition to much of the higher elevation areas of the Santa Rosa Mountains which is known habitat for the gray vireo.

The Santa Rosa and San Jacinto Mountains Conservation Area provides essential habitat for the Peninsular bighorn sheep. This conservation area also contains other conserved habitat and known locations for burrowing owl and nearly 70,000 acres of potential habitat for the gray vireo. Low-density desert tortoise habitat also occurs throughout the mountains (CVAG 2007).

The desert fan palm oasis woodlands also provide nearly 1,000 acres of Habitat for the southern yellow bat. There are known records of or habitat for triple-ribbed milk-vetch, Coachella Valley milk-vetch, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, Coachella Valley fringe-toed lizard, flat-tailed horned lizard, burrowing owl, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse in the Santa Rosa and San Jacinto Mountains Conservation Area. The Santa Rosa and San Jacinto Mountains Conservation Area also contributes to the biodiversity of the CVMSHCP and provides habitat for an array of large predators that may also use adjoining areas such as the Snow Creek/Windy Point Conservation Area (CVAG 2007).

The desert dry wash woodland, desert fan palm oasis woodland, and riparian Habitats in this Conservation Area are maintained by hydrological processes such as flooding,

groundwater from springs, and the availability of perennial water (essential ecological process for this Conservation Area). Protection of these hydrological processes is achieved through the Conservation Objectives for this area. Portions of the San Jacinto Mountains above Snow Creek and westward are sand source for the blowsand ecosystems in the Snow Creek/Windy Point Conservation Area. No biological corridors have been defined within the Santa Rosa and San Jacinto Mountains Conservation Area (CVAG 2008).

Whitewater Floodplain Conservation Area

The Whitewater Floodplain Conservation Area encompasses portions of the Whitewater River floodplain south of I-10 eastward to the existing Whitewater Floodplain Preserve, established by the Coachella Valley Fringe-toed Lizard (CVFTL) Habitat Conservation Plan (HCP). The Conservation Area includes additional Habitat east and southeast of the existing Whitewater Floodplain Preserve on the west and east sides of Gene Autry Trail, south and east of CVWD's groundwater recharge basins, the Garnet Hill area north of the existing preserve, and Biological Corridor and sand transport areas south of I-10 along Mission Creek, and Willow washes, which connect this area to the Willow Hole Conservation Area north of I-10. To the northwest of this Conservation Area is the Whitewater Canyon Conservation Area. To the west is the Highway 111/I-10 Conservation Area. The Whitewater Floodplain Conservation Area connects to the Snow Creek/Windy Point Conservation Area near Windy Point, where the San Gorgonio River joins the Whitewater River. The Whitewater Floodplain Conservation Area contains a total of approximately 7,400 acres (CVAG 2007).

This Conservation Area provides Core Habitat for the Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. While there is modeled Habitat for the Coachella Valley Jerusalem cricket, it has not been found in this area based on limited surveys. The area also provides some Other Conserved Habitat for the Coachella Valley milkvetch, triple-ribbed milkvetch, desert tortoise, flat-tailed horned lizard, burrowing owl, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse (CVAG 2007).

Wetlands

Runoff from the study area generally flows in Chino Creek and Tahquitz Creek from west to east and in the Whitewater River from northwest to southeast. After runoff exits the study area at the southeast end, it flows for 10 miles southeast before reaching the Salton Sea.

USFWS NWI wetlands in the project area that occur along Tahquitz Creek at the north end of the study are characterized as riverine and freshwater pond based on Cowardin Classification. Along the study area, adjacent to Calle Tecuala, are three freshwater pond wetlands; these are located approximately 2 miles southeast of where Tahquitz Creek flows into the Whitewater River and 1500 feet west of the closest reach of the Whitewater River. NWI wetlands occurring along the Whitewater River, throughout the northern and southern study area, are characterized as riverine, freshwater pond, freshwater emergent wetland, and freshwater forested/ shrub wetland.

Jurisdictional Delineation

The study area contains jurisdiction associated with the Whitewater River and Tahquitz Creek. The CV Link pathway was considered permanent impacts. Temporary impacts were assessed for an area 10 feet beyond any permanent impacts. The following table summarizes the proposed impacts to jurisdictional waters in the on-site drainages. Project impacts and discussion of avoidance and minimization measures are addressed later in this section.

Table 9
Impacts to Jurisdictional Areas

Temporary Impacts to non-wetland WUS (acres)	Permanent Impacts to non-wetland WUS (acres)	Temporary Impacts to Wetlands (acres)	Permanent Impacts to Wetlands (acres)	Temporary Impacts to CDFW Jurisdiction (acres)	Permanent Impacts to CDFW Jurisdiction (acres)
5.08	2.83	0.061	0.047	29.65	15.98

Project Impacts

Special Status Habitat Communities

Results of the Biological Resources Assessment Report indicate that this habitat was absent (not observed) from the project area. Therefore the proposed project will have no impact on special status habitat communities.

Wetlands

The NWI program was neither designed nor intended to produce legal or regulatory products; therefore, wetlands identified by the NWI program are not the same as wetlands defined by the USACE. The following section discusses potential impacts to wetlands defined by the USACE.

Jurisdictional Delineation

The proposed project requires temporary and permanent impacts to a jurisdictional drainage (Table 9 above) and therefore, authorizations from the USACE, RWQCB, and CDFW are required.

The two most common types of permits issued by USACE under Section 404 of the CWA to authorize the discharge of dredged or fill material into WUS are: a nation-wide permit (NWP) or an individual permit (IP).

NWPs are general permits for specific categories of activities that result in minimal impacts to aquatic resources.

NWP 42 can be used for the construction or expansion of recreational facilities including bike paths. This NWP also authorizes the construction or expansion of small support facilities, such as maintenance and storage buildings that are directly related to the recreational activity. The discharge must not cause the loss of greater than ½ acre of non-tidal WUS, including the loss of no more than 300 linear feet of streambed, unless for intermittent and ephemeral streambeds the district engineer waives the 300 foot limit by making a written determination concluding that the discharge will result in minimal adverse effects.

For project impacts that do not meet the provisions of an existing NWP, the USACE would require an IP. An IP requires detailed analysis and compliance with the USACE formal review process. This process includes preparation of an alternatives analysis as required by EPA Section 404(b)(1) Guidelines and the National Environmental Policy Act (NEPA), and requires compliance with NEPA's environmental review process. This process provides opportunities for public notice and comment.

The USACE must comply with the federal Endangered Species Act and Section 106 of the National Historic Preservation Act when issuing a NWP or IP.

Regional Water Quality Control Board

The project area is within the jurisdiction of the Colorado River RWQCB (Region 7). Under Section 401 of the CWA, the RWQCB must certify that the discharge of dredged or fill material into WUS does not violate state water quality standards.

The RWQCB also regulates impacts to WSC under the Porter Cologne Water Quality Control Act through issuance of a Construction General Permit, State General Waste Discharge Order, or Waste Discharge Requirements, depending upon the level of impact and the properties of the waterway.

The project proponent would need to obtain a Water Quality Certification. In addition to the formal application materials and fee (based on area of impact), a copy of the appropriate California Environmental Quality Act (CEQA) documentation must be included with the application.

California Department of Fish and Wildlife

A 1602 Streambed Alteration Agreement is required for all activities that alter streams and lakes and their associated riparian habitat. Therefore, the project proponent would need to obtain a Streambed Alteration Agreement. In addition to the formal application materials and fee (based on cost of the project), a copy of the appropriate CEQA documentation must be included with the application.

Avoidance and Minimization Efforts

Drainage

Development projects adjacent to or within jurisdictional lands shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent jurisdictional lands are not altered in an adverse way when compared with existing conditions. Stormwater systems shall be designed to prevent the release of pollutants (e.g., toxins, chemicals, petroleum products, exotic plant materials) or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent jurisdictional lands.

Compensatory Mitigation

The need for compensatory mitigation is expected to be limited to that required to mitigate for impacts to waters of the state and the US. Impacts to waters of the state are frequently found to be satisfied by participation in the Coachella valley MSHCP. Mitigation of impacts to waters of the US shall be through the existing USACE/CVCC In-Lieu Fee Program.

Cumulative Impacts

The project has been designed to adhere to local, state, and federal regulations related to the protection of biological resources; therefore, the project would not make a considerable contribution to cumulative impacts to biological resources. The geographic scope for the analysis of potential cumulative biological impacts includes the immediate vicinity surrounding the CV Link alignment. Impacts have been assessed on both a regional and local level. The project is expected to permanently impact 2.91 acres of non-WUS wetlands, 0.05 acres of WUS, and 14.63 acres of CDFW wetlands. All impacts associated with jurisdictional wetlands will require state and federal permitting to allow the proposed development activities. Potential cumulative impacts to conserved habitat within the Whitewater Floodplain Conservation Area are limited to 1.25± acres

Special Status Plant Species

The plants listed in this section are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by the special-status plants occurring on site. Forty-four (44) special-status plant species were reported from the vicinity of the greater project area, or BSA. These occurrences are shown in the Biological Resources Map in Appendix A Project Maps.

DISCUSSION OF PLANT SPECIES

Survey Results

Forty-four (44) special-status plant species were reported from the vicinity of the greater project area. Of these, thirty-seven (37) are considered to be absent or remote due to combination of a lack of, or marginality of suitable habitat, or the Project alignment occurring outside or at the edge of the species geographic range or elevational range. The remaining seven (7) species are considered to have at least some (low [six species] to moderate [one species]) potential of occurrence due to the presence of suitable habitat and records from the vicinity of the CV Link alignment. One species, Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*) is considered to have a moderate potential of occurrence on sandy habitats adjacent to the projected transportation corridor as this species is known to occur in the vicinity and is known to occur in either dynamic or highly disturbed, roadside areas and graded vacant lots which are present throughout much of the Project alignment. Coachella Valley milkvetch is a federal-listed endangered species, but is also a “covered” species under the CVMSHCP.

The remaining six (6) species that are considered to have a low occurrence potential based on records from the vicinity and presence of at least marginally suitable habitat along or near the proposed CV Link alignment include: chaparral sand-verbena (*Abronia villosa* var. *aurita*), singlewhorl burrobush (*Ambrosia monogyra*), gravel milk-vetch (*Astragalus sabulonum*), glandular ditaxis (*Ditaxis clariana*), Little San Bernardino Mountains linanthus (*Linanthus maculatus*), and slender cottonheads (*Nemacaulis denudata* var. *gracilis*). Little San Bernardino Mountains linanthus is not listed as threatened or endangered but designated as a List 1B.2 species by the CNPS, it is also “covered species” under the CVMSHCP. The other five (5) plant species are not covered under the MSHCP, and none are listed as threatened or endangered by the State or Federal government. With the exception of the chaparral sand-verbena, all are

considered List 2B.2 species by the CNPS. Chaparral sand-verbena is listed as a List 1B.1 by the CNPS.

Project Impacts

Approximately 88% of the route is completely bordered by residential, commercial, recreational or agricultural development; with approximately 12% of the route bordered by open lands containing native vegetative communities. The majority of the proposed CV Link route has been previously cleared of vegetation (dirt levee roads maintained by CVWD), or is located with paved roads and/or golf cart paths completely devoid of vegetation. Most of the area's native plants cannot use such areas. However, portions of the proposed CV Link route are partially located on and/or immediately adjacent to undeveloped lands supporting native vegetation communities that are habitat for a variety of special-status species that are both CVMSHCP-covered species as well as species that are not covered. CVMSHCP-covered plant species potentially occurring on these adjacent lands include the Coachella Valley milkvetch and Little San Bernardino Mountains linanthus. Although potential (remote to high) for these species to occur on and/or immediately adjacent to the Project route, the CVMSHCP provides full coverage for plan participants. CVAG is a signatory to the CVMSHCP, and therefore all impacts associated with special status plant species will be mitigated through payment of the CVMSHCP development fee.

Avoidance and Minimization Efforts

Toxics

Land use including development adjacent to or within a conservation area that use chemicals or generate toxic or potentially toxic bioproducts (e.g., manure) or may adversely impact native wildlife and plant species, their habitat, or water quality are required to incorporate measures to ensure that application of such chemicals does not result in any discharge to the adjacent conservation area.

Invasives

Landscape plans for development projects and land uses that are located adjacent to or within a conservation area are required to not use invasive, non-native plant species in their design. Prohibited invasive ornamental plant species are listed in Table 4-113 of the CVMSHCP. To the maximum extent feasible, Coachella Valley native plant species listed in Table 4-112 of the CVMSHCP will be incorporated into landscape design within or adjacent to conservation areas.

With the implementation of the recommendations, requirements and guidelines summarized above, including requisite participation in the CVMSHCP below, Project-related impacts to the CVMSHCP-covered species, and special-status species not covered by the CVMSHCP, are expected to be minimized.

Compensatory Mitigation

CVMSHCP

The CV Link will be subject to the local development mitigation fee to offset potential impacts to covered plant species within the plan area. The purpose of this fee is to

support the assembly of a preserve system for the covered species and natural communities within areas identified as having high conservation value.

Cumulative Impacts

The project has been designed to adhere to local, state, and federal regulations related to the protection of biological resources; therefore, the project would not make a considerable contribution to cumulative impacts to biological resources. The geographic scope for the analysis of potential cumulative biological impacts includes the immediate vicinity surrounding the CV Link alignment. Impacts have been assessed on both a regional and local level. All special status plans identified in the area are either absent from the project site or covered under the MSHCP development fee program.

Special Status Animal Species Occurrences

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status animals occurring on site. Four (4) invertebrates, two (2) fish, eight (8) amphibians and reptiles, seventeen (17) birds, and thirteen (13) mammals were reported to occur in the project area, or BSA. This occurrence is shown in Appendix A, Project Maps.

DISCUSSION OF ANIMAL SPECIES

Survey Results

Special Status Invertebrates

Four (4) special-status invertebrate species reported from the vicinity of the Project facilities. These include Casey's June beetle (*Dinacoma caseyi*), Coachella giant sand treader cricket (*Macrobaenetes valgum*), cheeseweed owlfly (*Oliarces clara*) and Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*). Casey's June beetle occurs along that portion of the alignment that runs from Demuth Park east to confluence of Tahquitz Creek and Whitewater River channel. An HCP for this Federal endangered species (Casey's June Beetle) is currently being prepared by the project proponent and are in negotiations with USFWS. The remaining three sensitive invertebrates are believed to have a low probability of occurrence in appropriate habitats adjacent to the Project alignment. The Coachella Valley Jerusalem cricket and Coachella giant sand-treader cricket are covered species under the CVMSHCP.

The cheeseweed owlfly is not a covered species under the MSHCP, and is not listed as an endangered or threatened species by the State and Federal government. Amec Foster Wheeler biologists have observed this species in Palm Canyon Wash less than one mile south of the Tahquitz Creek segment of the project. Those portions of Tahquitz Creek along the alignment that are relatively undeveloped support habitat that is similar to that found in Palm Canyon Wash, and there is a low probability that cheeseweed owlfly could occur in such areas. Currently, this species has a CDFW CNDDB sensitivity ranking of S2.

Although modeled habitat for the Coachella Valley Jerusalem and giant sand-treader crickets is present along much of the northern portion of the CV Link alignment (and near Indian Wells for the giant sand treader cricket), these species are not expected on the actual transportation corridor footprint for the same reasons listed previously in the

sensitive plant discussion: the majority of the actual CV Link footprint consists of a combination of compacted dirt, concrete, and/or asphalt roads/paths that are wholly unsuitable for these sand specialists.

Special Status Fish

Two (2) special-status fish, the federally and stated-listed as endangered desert pupfish (*Cyprinodon macularius macularius*) and razorback sucker (*Xyrauchen texanus*). Although manmade ponds (i.e., golf course water hazards and other decorative water features) are present adjacent to parts of the alignment, these waters are not considered suitable for these species, and could not have been naturally colonized by them. None of these water features are expected to be impacted by any of the proposed Project activities. For these reasons, the desert pupfish and razorback sucker are considered to be absent and thus will not be impacted by implementation of the proposed Project.

Special Status Amphibian and Reptiles

Eight (8) special-status amphibian and reptile species previously reported to occur in the general vicinity of the Project. These include the desert slender salamander (*Batrachoseps major aridus*), California red-legged frog (*Rana draytonii*), southern mountain yellow-legged frog (*Rana muscosa*), arroyo toad (*Anaxyrus californicus)*, desert tortoise (*Gopherus agassizi*), flat-tailed horned lizard (*Phrynosoma mcallii*), Coachella Valley fringe-toed lizard (*Uma inornata*), and red-diamond rattlesnake (*Crotalus ruber ruber*).

The desert slender salamander is only known to occur in the seeps and talus slides from two remote canyons in Santa Rosa Mountains; therefore, this species is considered to be absent from the Project alignment. Similarly, the project alignment is not located in the currently understood range of the California red-legged frog, southern mountain yellow-legged frog, and arroyo toad; nor does it contain habitat for these species. None of these sensitive amphibians are expected to occur on or immediately adjacent to the project alignment.

Although there are records and modeled habitat for both the Coachella Valley fringe-toed lizard and flat-tailed horned lizard from the vicinity of the proposed CV Link corridor, neither of these species are expected to occur on the actual project alignment due to lack of required aeolian sand substrates and because much of this corridor has already been developed. Both the Coachella Valley fringe-toed lizard and flat-tailed horned lizard are “covered species” under the CVMSHCP, and potential impacts are typically mitigated through payment of the development fees. It should be noted that the flat-tailed horned lizard is currently a candidate for listing as endangered by the CDFW and thus will need to be treated as such under CESA until a final determination is made.

Desert tortoises are known to occur in the Little San Bernardino Mountains well to the north and in the Whitewater Hills to the northwest of the proposed Project. Potentially suitable habitat for the desert tortoise exists in the Whitewater Floodplain Conservation Area, but the author is unaware of any recent records for this area adjacent to the CV Link alignment, and it is not considered Core Habitat for the species in the CVMSHCP. Red-diamond rattlesnake is known from the vicinity of the Project alignment, and is expected to have a low probability of occurrence where the alignment approaches the “toe-of-slope” of the San Jancinto/Santa Rosa Mountains northwest of Highway 111 and Mirage Drive, and in the South Palm Canyon Bridge area. Due to the project alignment’s close proximity to Highway 111 in this area, this species is less likely to

occur due to potential road mortality and proximity to residential and commercial development.

Special Status Birds

Seventeen (17) special-status bird species reported from the vicinity of the Project facilities. These include the golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), burrowing owl (*Athene cunicularia*), California black rail (*Laterallus jamaicensis coturniculus*), Yuma Ridgway's rail (*Rallus obsoletus yumanensis*), black swift (*Cypseloides niger*), southwestern willow flycatcher (*Empidonax traillii extimus*), loggerhead shrike (*Lanius ludovicianus*), least Bell's vireo (*Vireo bellii pusillus*), gray vireo (*Vireo vicinior*), yellow-breasted chat (*Icteria virens*), black-tailed gnatcatcher (*Polioptila melanura*), vermillion flycatcher (*Pyrocephalus rubinus*), crissal thrasher (*Toxostoma crissale*), Le Conte's thrasher (*Toxostoma lecontei*), yellow warbler (*Setophaga petechia brewsteri*), and summer tanager (*Piranga rubra cooperi*). Most of these species have been reported from the greater vicinity of the various segments of the proposed Project and therefore potential for these species to occur (at least during migration or while foraging) is present (low for some, high for others).

Four of these species, the burrowing owl, vermilion flycatcher, loggerhead shrike, and yellow warbler were detected adjacent to or on the Project alignment during the current or previous surveys of the area. Burrows with burrowing owl sign (whitewash, pellets and feathers) and one live burrowing owl were observed on Segment 9 of the proposed CV Link route on 29 Palms Tribal lands located between Dillon Road (to the south) and Golf Center Parkway (to the north) on November 20, 2015 and May 17, 2016. Live burrowing owls or burrows with definitive burrowing owl sign were not observed elsewhere along the alignment, but several burrows capable of supporting owls were observed along various portions of the project.

Loggerhead shrike was observed at several locations along the alignment during both current and previous surveys performed by Amec Foster Wheeler biologists. There is a moderate to high potential for loggerhead shrike to nest at various locations along or immediately adjacent to the proposed project route. This species is considered a CDFW "Species of Special Concern" (CSC), and is not covered under the CVMSHCP.

Yellow warblers were heard calling in the remnant willows in the Coachella Valley Storm Drain north of the area where the burrowing owl was observed on Segment 9 on May 17, 2016. Since yellow warblers can breed in relatively small stands of willows and riparian vegetation there is a high probability that this species could breed in this area of the alignment. Yellow warblers are a "covered" species under the CVMSHCP, and are considered a CDFW CSC when nesting.

Amec Foster Wheeler biologists observed a juvenile vermilion flycatcher near the alignment just north of Ramon Road during a survey of that area in 2012. The fact that this was a young bird suggests that breeding had taken place up- or downstream of this location. Vermilion flycatcher has a moderate potential to nest along the project route in several areas of the Whitewater River channel with appropriate vegetation, as well as along golf course and park areas adjacent to CV Link. This species is also considered a CDFW CSC when nesting, and is not a "covered" species under the CVMSHCP.

Nine of the remaining thirteen sensitive bird species are not expected to have any potential to breed on or adjacent to the CV Link route, either due to a lack of habitat or due to the presence of poor quality habitat that suffers ongoing human disturbance. These include golden eagle, prairie falcon, California black rail, Yuma Ridgway's rail, black swift, southwestern willow flycatcher, gray vireo, yellow-breasted chat, and

summer tanager. With the exception of the golden eagle, prairie falcon, and black swift; all of these birds are "covered" species under the CVMSHCP.

There is a moderate potential for black-tailed gnatcatcher to occur and nest along portions of the CV Link alignment, especially along Segment 1 adjacent to the Whitewater Floodplain Conservation Area. Black-tailed gnatcatchers are not listed as threatened, endangered, or even as a CDFW CSC, and are not a "covered" species under the CVMSHCP. This species has a CDFW CNDDB ranking of S3S4. Modeled habitat for crissal thrasher is only present along the southern end of the alignment, mainly between Golf Center Parkway and Avenue 52. However, this habitat is narrow with a high edge to area ratio (providing less of the dense vegetative cover preferred by this species). There is a low potential for crissal thrasher to nest and/or forage in this portion of the project. Most of modeled habitat for Le Conte's thrasher is along the northern section of the project (Whitewater Floodplain Conservation Area), but there are also areas in the central and southern portions of the alignment. Le Conte's thrasher has a low probability of nesting in the habitat adjacent to the aforementioned areas of the project route, and a moderate potential for foraging in these same areas. Both thrasher species are "covered" species under the CVMSHCP.

Lastly, modeled habitat for least Bell's vireo has been mapped along the alignment between Golf Center Parkway and Avenue 52. This habitat is limited, consisting mostly of a narrow swath of riparian vegetation that has been left remaining after water district clearing activities. It is for this reason that this State and Federal endangered species is believed to have a very low (to absent) status as a breeder in this area, and to have a low potential to forage in this area of the alignment (potentially only in migration). No least Bell's vireos were detected along the CV Link alignment during the surveys. Least Bell's vireo is a "covered" species under the CVMSHCP.

Mammals

Thirteen (13) special-status mammals reported as occurring in the vicinity of the Project features. These include: pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), earthquake Merriam's kangaroo rat (*Dipodomys merriami collinus*), Spotted bat (*Euderma maculatum*), western mastiff bat (*Eumops perotis californicus*), western (southern) yellow bat (*Lasiurus [ega] xanthinus*), Colorado valley woodrat (*Neotoma albigula venusta*), San Diego desert woodrat (*Neotoma lepida intermedia*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), Peninsular bighorn sheep (*Ovis canadensis nelson*), Palm Springs pocket mouse (*Perognathus longimembris bangsi*), American badger (*Taxidea taxus*), and Palm Springs round-tailed ground squirrel (*Xerospermophilus tereticaudus chlorus*). The only one of these sensitive mammals observed by Amec Foster Wheeler biologists in the CV Link alignment vicinity is the Palm Springs round-tailed ground squirrel. Amec Foster Wheeler biologists have observed this species within 500 feet west of the proposed route approximately 350 feet north of Ramon Road on April 16, 2012. Palm Springs round-tailed ground squirrels are not State or Federal listed as threatened or endangered, and are a "covered" species under the CVMSHCP. The Whitewater Floodplain Conservation Area is listed as Core habitat for Palm Springs round-tailed ground squirrel.

Two of the remaining mammals listed have a moderate to high potential of occurrence immediately adjacent to some of the proposed segments of the proposed CV Link route. Habitat suitable for San Diego desert woodrat and Palm Springs pocket mouse is present along or adjacent to portions of the CV Link alignment. The majority of the alignment (or more precisely the immediately adjacent areas) has been mapped as

modeled habitat for Palm Springs pocket mouse. However, this small rodent is unlikely to occur on the actual proposed CV-Link project footprint due to compaction of soils and lack of native habitat.

The Whitewater Floodplain Conservation Area is classified as Core habitat for Palm Springs pocket mouse in the CVMSHCP. This species is "covered" under the CVMSHCP. Woodrat middens (not identified to species) were observed adjacent to the project route during the current surveys of the alignment, and are believed to have better potential to belong to San Diego desert woodrat than Colorado Valley woodrat due to lack of habitat (areas of mesquite and beavertail cactus) for the latter species. Neither woodrat species is "covered" under the CVMSHCP, and neither are listed as threatened or endangered by the State or Federal governments.

Mature landscaped palm trees suitable for roosting western yellow bat are also intermittently present at private residences, businesses, parks, and golf courses along or immediately adjacent to the proposed CV Link route. There is a moderate possibility that western yellow bats could roost and/or forage in such areas along the alignment. This is the only bat species "covered" under the CVMSHCP. Although roosting habitat (cliffs with rock crevices, caves, abandoned mines, etc.) for the spotted bat, western mastiff bat and pocketed free-tailed bat is not present anywhere on the Project alignment, there is a low to moderate potential for these bat species to forage over portions of the alignment. None of these bats are State or Federal listed as threatened or endangered, and all have a CDFW CNDDB ranking of S3 or S3S4, with the spotted bat also considered a CDFW CSC. Townsend's big-eared bat is a Candidate for listing as threatened by the State of California. This species prefers caves or abandoned mines for roost sites, but also rarely uses abandoned buildings, bridges, and culverts. There is a low potential for this bat to occur along the project route, both for foraging and roosting. Townsend's big-eared bats are not a "covered" species under the CVMSHCP.

The American badger is known from a 1949 CNDDB record near the Indio segment of alignment (now developed). This species is highly unlikely to utilize the project alignment due to its proximity to development and ongoing human disturbance. There is a low potential for pallid San Diego pocket mouse and a remote potential for earthquake Merriam's kangaroo rat to occur along the CV Link alignment since the project area is on the edge of these species known range. Similarly, Peninsular bighorn sheep are considered to be absent from the proposed alignment due to a lack of suitable habitat and/or the location of the Project outside of the species known range.

Project Impacts

Portions of the proposed CV Link route are partially located on and/or immediately adjacent to undeveloped lands supporting native vegetation communities that are habitat for a variety of special-status species that are both CVMSHCP-covered species as well as species that are not covered. Of the 4,140 acres to be conserved in the Whitewater Floodplain Conservation area, approximately 1.25 acres of habitat could be permanently impacted by project development. CVMSHCP-covered species potentially occurring on these adjacent lands include: Coachella giant sand treader cricket, Coachella Valley Jerusalem cricket, flat-tailed horned lizard, Coachella Valley fringe-toed lizard, burrowing owl, least Bell's vireo, yellow warbler, crissal thrasher, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, western yellow bat and Palm Springs round-tailed ground squirrel. Although potential (remote to high) for these species to occur on and/or immediately adjacent to the Project route, the CVMSHCP

provides full coverage for plan participants. CVAG is a signatory to the CVMSHCP. Participants generally pay a standard development fee prior to receiving requisite grading or development permits with some exceptions and special provisions or requirements (i.e., burrowing owl, projects within Conservation Areas and nesting birds).

Much of Segment 1 of the proposed CV Link route is located within the boundaries and/or along the very edge of the Whitewater Floodplain Conservation area as depicted by the CVMSHCP. This area has mapped core habitat for Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. Avoidance and minimization measures are provided below.

Avoidance and Minimization Efforts

CVMSHCP

The CVMSHCP states that permittees, including the Project proponent, will conserve 96,400 acres in the conservation areas (4,140 acres in the Whitewater Floodplain Conservation Area) and establish an endowment to fund monitoring and management programs for those lands in perpetuity. The CVMSHCP also states that local permittees must also comply with all other terms and conditions of the CVMSHCP and Implementing Agreement (See Section 13.0 of the CVMSHCP Implementing Agreement), including, but not limited to:

Within Conservation Areas

- Ensure achievement of CVMSHCP conservation goals and objectives and required measures in each conservation area identified in Section 4.3 and attainment of the species conservation goals and objectives identified in Section 9.
- As described in Sections 4.1.2 and 4.2.2.2.1, conserve permittee-owned land in the conservation areas. Except as otherwise set forth in this section, the permittee shall commit their currently not-conserved lands to conservation in perpetuity within 3 years of permit issuance.
- Existing and future lands on which the Riverside County Flood Control has take authorization for construction, operation, and maintenance of facilities that are covered activities will be conserved only to the extent compatible with the construction, operation, and maintenance of the facilities.
- Participate in the Joint Project Review Process for projects within conservation areas as described in Section 6.6.1.1 and implement the “Land Use Adjacency Guidelines” described in Section 4.5.
- Upon request from the wildlife agencies, the permittees shall provide (a) an analysis and determination of consistency with the CVMSHCP at the time of, and along with, certification of applicable CEQA documents for approval of development projects within conservation areas and (b) a copy of the final project approval documents within 30 days.
- Applicable permittees will employ HANS as described in Section 6.6.1.2 as appropriate.

- Jurisdictions that received take authorization for the Coachella Valley fringe-toed lizard pursuant to the incidental take permit issued for that species pursuant to the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan will relinquish the permit and comply with Section 6.6.1.3 and IA Section 16.2.

Within and Outside Conservation Areas

- Ensure that habitat preservation is occurring in rough proportionality with development and that reserve assembly occurs as contemplated in the MSHCP.
- Ensure compliance for public and private projects with all applicable required
- Measures in Section 4.4. If a project shares a common boundary with a conservation area, require compliance with the "Land Use Adjacency Guidelines" set forth in Section 4.5.
- Ensure compliance with plan requirements for public projects.
- Impose adopted local development mitigation fees. The permittee shall be responsible for collecting all revenues generated within their respective jurisdictional boundaries for CVMSHCP implementation and transferring those revenues to the Coachella Valley Conservation Commission (CVCC) within thirty (30) days of collection.
- Adopt an appropriate CVMSHCP implementation mechanism as set forth in Section 11.1 of the Implementing Agreement.
- Maintain a record of total acres and location of development within its jurisdiction and transmit this information to CVCC monthly. The undeveloped portions of parcels in conservation areas on which development is approved by the permittee shall count toward meeting the CVMSHCP's conservation objectives only when the undeveloped portion of the parcel is legally described and permanently protected through an appropriate legal instrument, and provision is made for the land to be monitored and managed pursuant to the CVMSHCP's Monitoring Program and Management Program. Review of individual development projects will occur in accordance with the Implementation Manual.
- At the end of each calendar year, convey any changes in City boundaries or general plan land use designations to CVCC for inclusion in its annual report to the wildlife agencies.
- Take will be allocated by the permittee.
- On parcels approved for development, the permittee shall encourage the opportunity to salvage covered sand-dependent species in accordance with the Implementation Manual.

Of the approximately 7,000 acres that CVWD owns in the conservation areas, CVWD shall cooperate with CVCC toward the conservation of those lands, as follows:

- Approximately 1,200 acres of the 7,000 acres are in the Whitewater Floodplain

- Conservation Area and are currently conserved pursuant to the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan. These lands will be permanently committed to conservation under the CVMSHCP.
- Lands on which CVWD has take authorization for "operations and maintenance (O&M)" of facilities that are covered activities, will be conserved only to the extent compatible with the O&M of the facilities.
- Future facilities (Dike 4 and Martinez recharge basins and future water- related facilities) that are covered activities requiring a "minor plan amendment with criteria" will be mitigated by commitment of CVWD lands within essential Peninsular bighorn sheep habitat to conservation at a 1:1 ratio of conservation to development. If, in addition to these covered activities, CVWD develops any of its land in a conservation area consistent with the conservation objectives, CVWD may commit an equivalent dollar value of its lands in the conservation areas to permanent conservation in lieu of paying the development mitigation fee. CVCC will continue to be responsible for ensuring that the conservation area conservation objectives are met.
- For future projects outside the conservation areas, CVWD may commit an equivalent dollar value of its lands in the conservation areas to permanent conservation in lieu of paying the local development mitigation fee. These lands are not subject to the requirement that local permittee-owned lands that are not currently conserved must be committed to conservation in perpetuity within 3 years of permit issuance. If before year 50 of plan implementation, CVWD still owns land in the conservation areas that has not been conserved by any of the foregoing methods, CVWD shall cooperate with CVCC in the conservation of these lands through acquisition by CVCC or other means. Conservation will be accomplished through conveyance of fee title to CVCC, recordation of a conservation easement, or entering into an MOU for cooperative management with CVCC. CVWD will contribute $3,583,400 toward the endowment fund for the Monitoring Program, the Management Program, and adaptive management. This may be paid in full the first full fiscal year after permit issuance, or it may be paid in installments over a maximum of five years, beginning in the first full fiscal year after permit issuance. Interest shall be paid by CVWD at the annual rate of 5.14% on the outstanding balance.

Burrowing Owl

Although the burrowing owl is a covered species under the CVMSHCP, additional survey and conservation requirements apply. Amec Foster Wheeler Senior Biologist Nathan Moorhatch observed a live burrowing owl and burrows with owl sign (pellets, whitewash and feathers) on Segment 9 of the proposed CV Link route on 29 Palms Tribal Reservation lands located between Dillon Road and Golf Center Parkway. CVMSHCP Surveys (noted above) documented and monitored several occupied burrows with wildlife camera traps on the stormwater channel from Ave 50- Ave 52 in 2015 (CVMSHCP 2015 Annual Report). Additionally, the Whitewater Floodplain Conservation Area provides "Other Conserved Habitat" for the burrowing owl. The portion of the CV Link route that passes through this area has suitable habitat for burrowing owl, although none were observed during the current field surveys (it must be noted that protocol presence/absence burrowing owl surveys were not performed as a part of this effort). A

"take avoidance survey" for the burrowing owl no less than 14 days (in accordance with the Staff Report on Burrowing Owl Mitigation [CDFW 2012]) and no more than 30 days (in accordance with CVWD's Operations and Maintenance Manual) prior to ground breaking activities may also be required within and outside of conservation areas that contain suitable habitat for this species. Additionally, a final survey must be conducted within 24 hours of the initiation of ground disturbance activities in accordance with the CDFW 2012 protocol. If no burrowing owls are detected during those surveys, implementation of ground disturbance activities could proceed without further consideration of this species assuming there is no lapse between the surveys and construction as the protocol states "time lapses between Project activities trigger subsequent take avoidance surveys including but not limited to a final survey conducted within 24 hours prior to ground disturbance." If burrowing owls are detected during the take avoidance surveys, avoidance and minimization measures would then be required and the need for mitigation for unavoidable impacts triggered.

Casey's June Beetle

Casey's June beetle occurs along that portion of the alignment that runs from Demuth Park east to confluence of Tahquitz Creek and Whitewater River channel (AMEC 2014). The Project proponents are aware of this, and are currently preparing an HCP for this Federal endangered species and are in negotiations with USFWS. CVAG will be required to adhere to conditions set forth in the final HCP.

MBTA Nesting Birds

Significant portions of the alignment pass through or adjacent to areas (including golf courses, park lands, areas of landscaped trees and shrubs, and undeveloped natural habitats) that contain habitat for a variety of nesting birds. Bird nests were observed in landscaped trees and shrubs, and on several of the existing bridges along the proposed CV Link route. Although some of the birds potentially nesting along the Project route are CVMSHCP-covered species, this coverage does not allow for take of the individual birds or their active nests. Additionally, the CVMSHCP does not provide coverage or conservation for many other bird species potentially occurring or nesting onsite that are protected by the MBTA. Therefore, impacts to native birds and their nests are not permitted under any part of the CVMSHCP. Because impacts to nesting birds are not covered by the CVMSHCP or MBTA, any activities that could potentially cause disruption of natural nesting behavior or directly disturb an active nest or nesting bird must be avoided. Although there is no established protocol for nest avoidance, regulatory agencies generally recommend avoidance buffers of about 500 feet for birds-of-prey, and 100–300 feet for songbirds, however this is often determined on a case by case, or project by project basis. The nesting season for most species in the Coachella Valley is generally from approximately 1 February to 31 August. Avoidance of Project activities that have the potential to disturb nesting birds during the nesting season is the easiest way to avoid impacts. If it is not feasible to avoid such Project activities during the nesting season, nesting bird surveys conducted by a qualified biologist should be completed prior to any such activities. If active nests are found, they should be avoided and adequate no disturbance buffer zones established and observed by Project activities until after the young have fledged.

Drainage

Development projects adjacent to or within a conservation area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent conservation area is not altered in an adverse way when compared with existing conditions. Stormwater systems shall be designed to prevent the release of pollutants (e.g., toxins,

chemicals, petroleum products, exotic plant materials) or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent conservation area.

Toxics

Land use including development adjacent to or within a conservation area that use chemicals or generate toxic or potentially toxic bioproducts (e.g., manure) or may adversely impact native wildlife species, their habitat, or water quality are required to incorporate measures to ensure that application of such chemicals does not result in any discharge to the adjacent conservation area.

Lighting

Lighting in areas proposed for development that are adjacent to or located within conservation areas, shall be shielded and directed away from the conservation area, toward the developed areas. Landscape shielding or other appropriate methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent conservation area in accordance with the guidelines included in the Implementation Manual.

Noise

Noise generated from development projects adjacent to or within a conservation area in excess of 75 dBA shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent conservation area according to Implementation Manual guidelines.

Additional Recommended Mitigation Measures

The following mitigation measures are not Land Use Adjacency Guidelines, but rather are based on Amec Foster Wheeler biologists' experience on the project alignment and on similar linear projects.

- **Fencing** – As a means to protect the adjacent lands of the Whitewater Floodplain Conservation Area present on Segment 1 of the CV Link alignment and to the extent practicable, it is recommended that fencing be employed near the "toe-of-slope" of the levee to prevent people and their pets (particularly dogs being walked by their owners) from straying off the designated CV Link pathway and into the adjacent natural habitat. Domestic dogs (and cats) are capable of harming native wildlife, and degrade natural areas through digging activities and deposition of waste. Installing an appropriate fence (such as chain link) along that portion of the alignment adjacent to the Whitewater Floodplain Conservation Area could help prevent this impact.
- **Pet Control** – In addition to, or in lieu of fencing, all dogs should be required to be on a leash while traversing CV Link. Aside from preventing individual animals from entering native habitat, the benefits of such a mandate are numerous including facilitating personal safety for other users of the Link, preventing altercations with other dogs present on the pathway, and increased safety for the individual pet in question (i.e. preventing collisions with bicyclists and LSEV users).
- **Interpretive Signage** – Interpretive signs are part of a suite of associated structures that are planned for CV Link. Currently, most of these signs are likely to provide "wayfinding" information or illustrations of various points on the CV

Link route. Amec Foster Wheeler biologists believe that it would be beneficial to include a few interpretive signs adjacent to areas of native habitat (such as the Whitewater Floodplain Reserve) that illustrate and educate the public on some of the native wildlife, plant, or vegetation communities present adjacent to CV Link. This can help foster respect and/or create interest and admiration for some of the native flora and fauna that make the Coachella Valley unique.

With the implementation of the recommendations, requirements and guidelines summarized above, including requisite participation in the CVMSHCP below, Project-related impacts to the CVMSHCP-covered species, special-status species not covered by the CVMSHCP, nesting birds protected under the MBTA and USACE and/or CDFW jurisdictional areas are expected to be minimized.

Compensatory Mitigation

CVMSHCP

The CV Link will be subject to the local development mitigation fee to offset potential impacts to covered species within the plan area. The purpose of this fee is to support the assembly of a preserve system for the covered species within areas identified as having high conservation value.

Cumulative Impacts

The project has been designed to adhere to local, state, and federal regulations related to the protection of biological resources; therefore, the project would not make a considerable contribution to cumulative impacts to biological resources. The geographic scope for the analysis of potential cumulative biological impacts includes the immediate vicinity surrounding the CV Link alignment, including those resources located within and/or adjacent to Conservation Areas established by the CVMSHCP. Impacts have been assessed on both a regional and local level. In the vicinity of the proposed project sites there are two MSHCP Conservation Areas, which include the Whitewater Floodplain Conservation Area and the Santa Rosa and San Jacinto Mountains Conservation Area. The proposed project would have no direct impacts on the biological resources within the Santa Rosa and San Jacinto Mountains Conservation Area. A small portion of the project alignment (approximately 1.25 acres in area) passes through the Whitewater Floodplain Conservation Area; however, impacts will be confined to previously disturbed lands. In addition, payment of the CVMSHCP development fee covers impacts to covered species and natural communities identified in the project area.

Chapter 5 – Conclusions and Regulatory Determinations

Federal Endangered Species Act Consultation Summary

The USFWS provided a list of threatened and endangered species with potential to occur in the project area on October 6, 2016 in accordance with Section 7(c) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.).* Species identified on this list with the potential to be impacted by the proposed project have been discussed and assessed as part of the Biological Resources Assessment, as presented in this document.

The project proponent is currently in consultation with the USFWS to develop a HCP for the Casey's June beetle, which is currently listed under the federal Endangered Species Act (ESA). Casey's June beetle occurs along that portion of the alignment that runs from Demuth Park east to confluence of Tahquitz Creek and Whitewater River channel (AMEC 2014). The USFWS will undertake an ESA Section 10 incidental take permit, which is required to accompany and HCP when non-Federal activities will result in take of threatened or endangered species.

The HCP will provide analysis of mitigation, minimization and avoidance measures reviewed and approved by the USFWS. CVAG will be required to adhere to the approved conditions set forth in the final HCP.

The proposed project may affect threatened or endangered species. However, adherence to mitigation measures set forth in the CVMSHCP and Casey's June Beetle HCP will ensure that impacts are mitigated to less than significant levels.

Essential Fish Habitat Consultation Summary

There are no essential fish habitats located within the CV Link project area. Therefore, consultation was not required, and there will be no adverse effect.

California Endangered Species Act Consultation Summary

The CV Link project will have no take of state-listed species. Therefore, consultation was not required.

Wetlands and Other Waters Coordination Summary

The proposed project requires temporary and permanent impacts to a jurisdictional drainage and therefore, authorizations from the USACE, RWQCB, and CDFW may be required as described below.

U.S. Army Corps of Engineers

The two most common types of permits issued by USACE under Section 404 of the CWA to authorize the discharge of dredged or fill material into WUS are: a nation-wide permit (NWP) or an individual permit (IP).

NWPs are general permits for specific categories of activities that result in minimal impacts to aquatic resources.

NWP 42 can be used for the construction or expansion of recreational facilities including bike paths. This NWP also authorizes the construction or expansion of small support facilities, such as maintenance and storage buildings that are directly related to the recreational activity. The discharge must not cause the loss of greater than ½ acre of non-tidal WUS, including the loss of no more than 300 linear feet of streambed, unless for intermittent and ephemeral streambeds the district engineer waives the 300-foot limit by making a written determination concluding that the discharge will result in minimal adverse effects.

For project impacts that do not meet the provisions of an existing NWP, the USACE would require an IP. An IP requires detailed analysis and compliance with the USACE formal review process. This process includes preparation of an alternatives analysis as required by EPA Section 404(b)(1) Guidelines and the National Environmental Policy Act (NEPA), and requires compliance with NEPA's environmental review process. This process provides opportunities for public notice and comment. The USACE must comply with the federal Endangered Species Act and Section 106 of the National Historic Preservation Act when issuing a NWP or IP.

The applicant has already filed Clean Water Act 404 Nationwide Permit application following consultation with Corps staff. At this time, it is the Corps' intent to accept each encroachment into jurisdictional waters to qualify as a Nationwide Permit if total permanent impacts fall below one-half acre. At this time, none of the CV Link encroachments meet or exceed this threshold.

Regional Water Quality Control Board

The project area is within the jurisdiction of the Colorado River RWQCB (Region 7). Under Section 401 of the CWA, the RWQCB must certify that the discharge of dredged or fill material into WUS does not violate state water quality standards.

The RWQCB also regulates impacts to WSC under the Porter Cologne Water Quality Control Act through issuance of a Construction General Permit, State General Waste Discharge Order, or Waste Discharge Requirements, depending upon the level of impact and the properties of the waterway.

The project proponent would need to obtain a Water Quality Certification. In addition to the formal application materials and fee (based on area of impact), a copy of the appropriate California Environmental Quality Act (CEQA) documentation must be included with the application.

California Department of Fish and Wildlife

A 1602 Streambed Alteration Agreement is required for all activities that alter streams and lakes and their associated riparian habitat. Therefore, the project proponent would need to obtain a Streambed Alteration Agreement. In addition to the formal application materials and fee (based on cost of the project), a copy of the appropriate CEQA documentation must be included with the application.

Invasive Species

There were no invasive species identified during the biological assessment for the CV Link. Landscape plans for development projects and land uses that are located adjacent

to or within a conservation area are required to not use invasive, non-native plant species in their design. Prohibited invasive ornamental plant species are listed in Table 4-113 of the CVMSHCP. To the maximum extent feasible, Coachella Valley native plant species listed in Table 4-112 of the CVMSHCP will be incorporated into landscape design.

Other:

Migratory Bird Treaty Act

Significant portions of the alignment pass through or adjacent to areas (including golf courses, park lands, areas of landscaped trees and shrubs, and undeveloped natural habitats) that contain habitat for a variety of nesting birds. Bird nests were observed in landscaped trees and shrubs, and on several of the existing bridges along the proposed CV Link route. Although some of the birds potentially nesting along the Project route are CVMSHCP-covered species, this coverage does not allow for take of the individual birds or their active nests.

The CVMSHCP does not provide coverage or conservation for many other bird species potentially occurring or nesting onsite that are protected by the MBTA. Therefore, impacts to native birds and their nests are not permitted under any part of the CVMSHCP. Because impacts to nesting birds are not covered by the CVMSHCP or MBTA, any activities that could potentially cause disruption of natural nesting behavior or directly disturb an active nest or nesting bird must be avoided. Although there is no established protocol for nest avoidance, regulatory agencies generally recommend avoidance buffers of about 500 feet for birds-of-prey, and 100–300 feet for songbirds, however this is often determined on a case by case, or project by project basis. The nesting season for most species in the Coachella Valley is generally from approximately 1 February to 31 August. Avoidance of Project activities that have the potential to disturb nesting birds during the nesting season is the easiest way to avoid impacts. If it is not feasible to avoid such Project activities during the nesting season, nesting bird surveys conducted by a qualified biologist should be completed prior to any such activities. If active nests are found, they should be avoided and adequate no disturbance buffer zones established and observed by Project activities until after the young have fledged.

Coachella Valley Multiple Species Conservation Plan (CVMSHCP)

Portions of the proposed CV Link route are partially located on and/or immediately adjacent to undeveloped lands supporting native vegetation communities that are habitat for a variety of special-status species that are both CVMSHCP-covered species as well as species that are not covered.

CVMSHCP-covered plant species potentially occurring on these adjacent lands include the Coachella Valley milkvetch and Little San Bernardino Mountains linanthus. Although potential (remote to high) for these species to occur on and/or immediately adjacent to the Project route exists, the CVMSHCP provides full coverage for plan participants. CVAG is a signatory to the CVMSHCP, and therefore all impacts associated with special status plant species will be mitigated through payment of the CVMSHCP development fee.

CVMSHCP-covered species potentially occurring on these adjacent lands include: Coachella giant sand treader cricket, Coachella Valley Jerusalem cricket, flat-tailed

horned lizard, Coachella Valley fringe-toed lizard, burrowing owl, least Bell's vireo, yellow warbler, crissal thrasher, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, western yellow bat and Palm Springs round-tailed ground squirrel. Although potential (remote to high) for these species to occur on and/or immediately adjacent to the Project route exists, the CVMSHCP provides full coverage for plan participants. CVAG is a signatory to the CVMSHCP. Participants generally pay a standard development fee prior to receiving requisite grading or development permits with some exceptions and special provisions or requirements (i.e., burrowing owl, projects within Conservation Areas and nesting birds).

Of the 4,140 acres to be conserved in the Whitewater Floodplain Conservation area, approximately 1.25 acres of habitat could be permanently impacted by project development. This area has mapped core habitat for Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. Avoidance and minimization measures include participation in the Joint Project Review Process for projects within conservation areas as described in Section 6.6.1.1; implementation the "Land Use Adjacency Guidelines" described in Section 4.5; employing HANS as described in Section 6.6.1.2 as appropriate; and permanent preservation of conservation lands.

Chapter 6 – References

Amec Foster Wheeler Environment and Infrastructure, Inc., July 2016, *Habitat Assessment Report and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Analysis for the CV Link Project.*

Amec Foster Wheeler Environment and Infrastructure, Inc., July 2016, *Jurisdictional Delineation Report for the CV Link Project.*

Appendix A – Project Maps

Project Maps are derived from the Biological Resources Assessment Report and The Jurisdictional Delineation Report for the CV Link Project. Attached are the following:

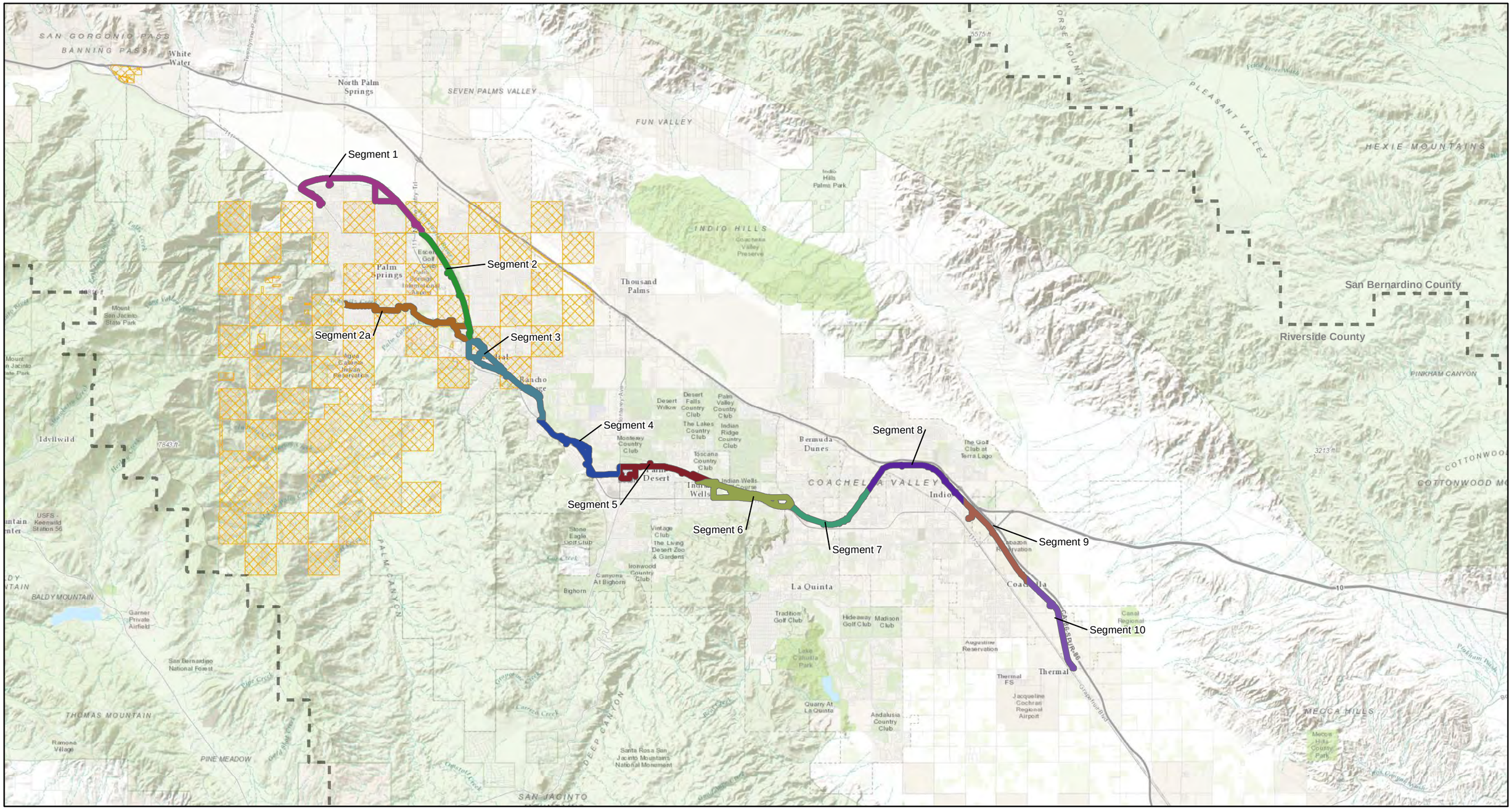
Biological Resources Assessment Report:

- Figure 1: Project Overview Map (1 map)
- Figure 2: CVMSHCP Conservation Areas Map (1 map)
- Figure 3: CNDDB & Critical Habitat (1 map)
- Figure 4: Special Status Biological Resources Wildlife Survey Results Maps include: Biological Study Area (BSA), aerial photos of project area, staging areas (temporary impacts), and current alignment (permanent impacts) (24 maps)
- Figure 5: Soils Maps include Biological Study Area (BSA) boundary, aerial photos of project area, staging areas (temporary impacts), and current alignment (permanent impacts) (10 maps)
- Figure 6: Vegetation Community Maps include: Biological Study Area (BSA) boundary, aerial photos of project area, staging areas (temporary impacts), and current alignment (permanent impacts) (10 maps)
- Figure 7-A thru 7-M: CV Link Model Habitats (12 maps)

Jurisdictional Delineation Report:

- Figure 3A: NWI Overview (1 map)
- Figure 3B: NWI Maps (9 maps)
- Appendix 3A: JD Overview (1 map)
- Appendix 3B: Jurisdictional Delineation Maps (79 maps)

Biological Resources Assessment Report Maps



LEGEND

- Segment 1
- Segment 2
- Segment 2a
- Segment 3
- Segment 4
- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- U.S. Bureau of Land Management

NAME

- Agua Caliente Indian Reservation
- Coachella Valley MSHCP

0 1 2 3
Miles

Source: CV Link_Construction Documents_ 30% Plan Set, Bing Maps

FIGURE 1

CV/LINK
MSHCP Compliance Report

Project Overview

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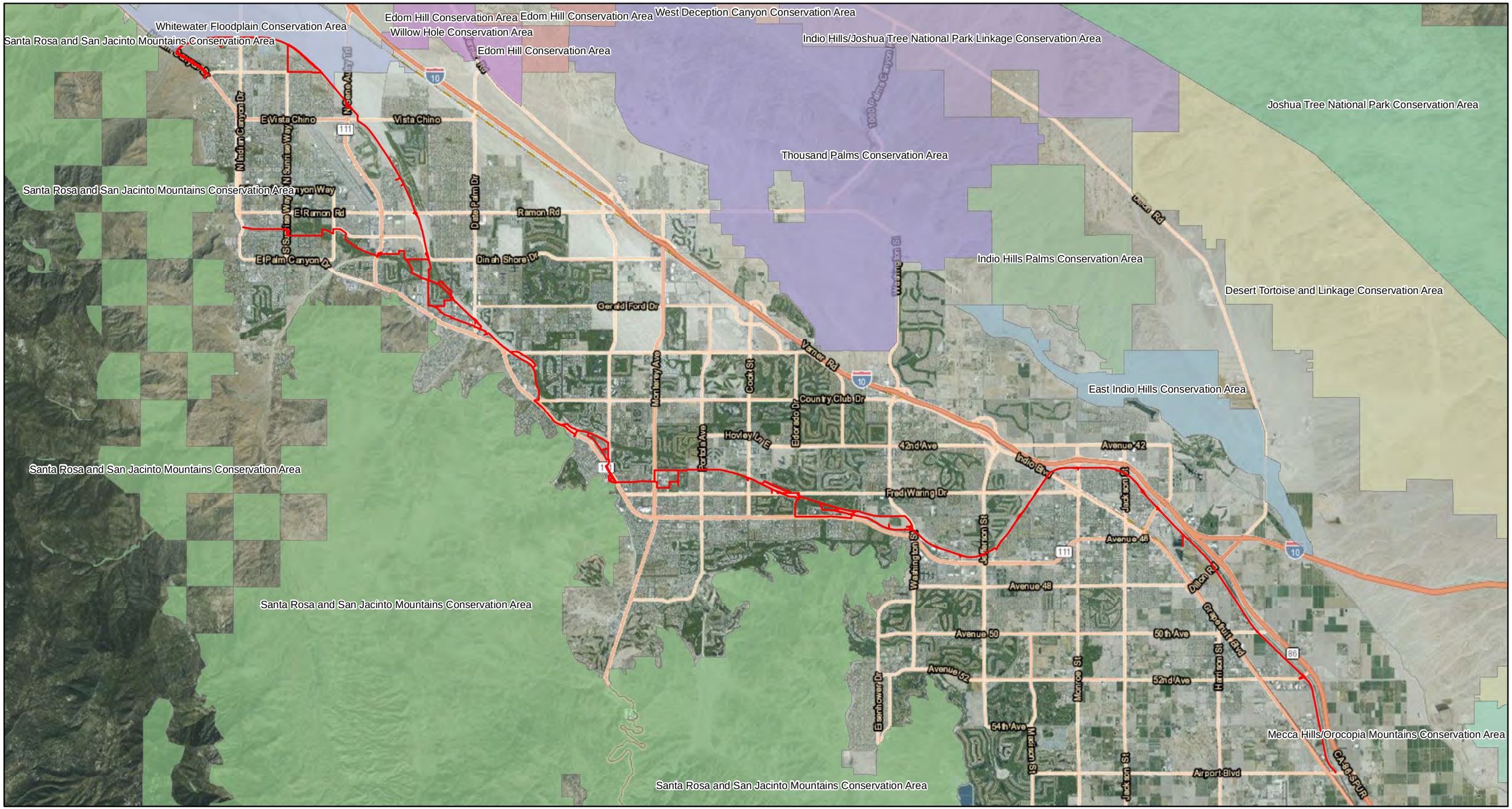

CVAG

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Miles

N

LEGEND

- Current alignment 2016
- Desert Tortoise and Linkage Conservation Area
- East Indio Hills Conservation Area
- Edom Hill Conservation Area
- Indio Hills Palms Conservation Area
- Indio Hills/Joshua Tree National Park Linkage Conservation Area
- Joshua Tree National Park Conservation Area
- Mecca Hills/Orocopia Mountains Conservation Area
- Santa Rosa and San Jacinto Mountains Conservation Area
- Thousand Palms Conservation Area
- West Deception Canyon Conservation Area
- Whitewater Floodplain Conservation Area
- Willow Hole Conservation Area

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

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FIGURE 2

CV/LINK
MSHCP Compliance Report

CVMSHCP Conservation Areas

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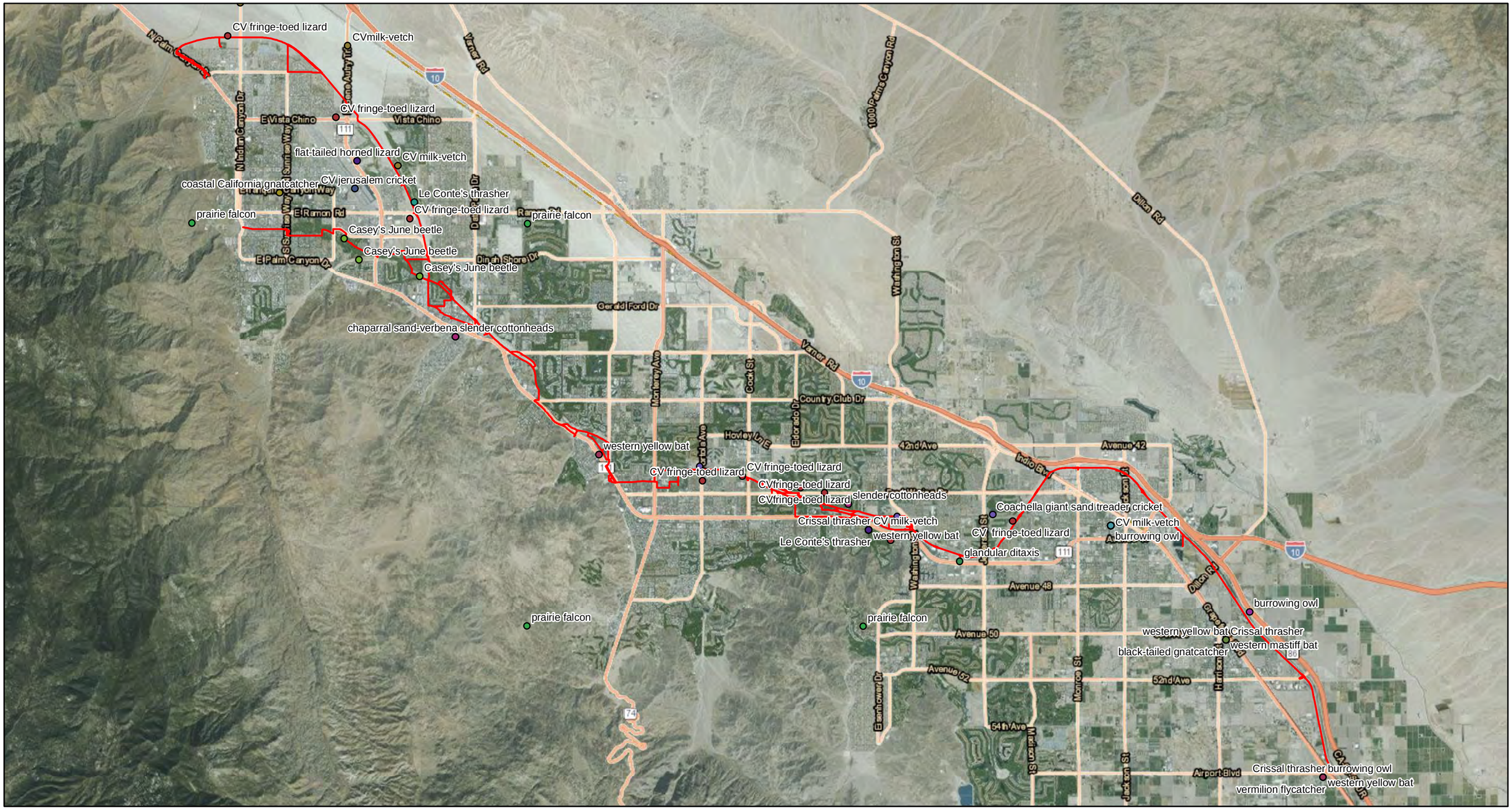

CVAG

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LEGEND

Current Alignment 2016

CNDDB

Casey's June beetle
Coachella Valley jerusalem cricket
Coachella Valley milk-vetch
Coachella giant sand treader cricket
chaparral sand-verbena
glandular ditaxis
gravel milk-vetch
slender cottonheads
American badger
Coachella Valley fringe-toed lizard
Crissal thrasher
Le Conte's thrasher
Palm Springs round-tailed ground squirrel
black-tailed gnatcatcher
burrowing owl
flat-tailed horned lizard
prairie falcon
vermilion flycatcher
western mastiff bat
western yellow bat

Source: CV Link_Construction Documents_ 30% Plan Set, CNDDB july, Bing Maps

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FIGURE 3

Animals
Plants & Insects

CV/LINK
MSHCP Compliance Report

CNDDB & Critical Habitat

amec foster wheeler

CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 1
- Staging Areas
- Cliff Swallow nests (active)
- Potiential Burrowing Owl Burrows
- Cooper's Hawk
- House Finch nest
- Verdin nest

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

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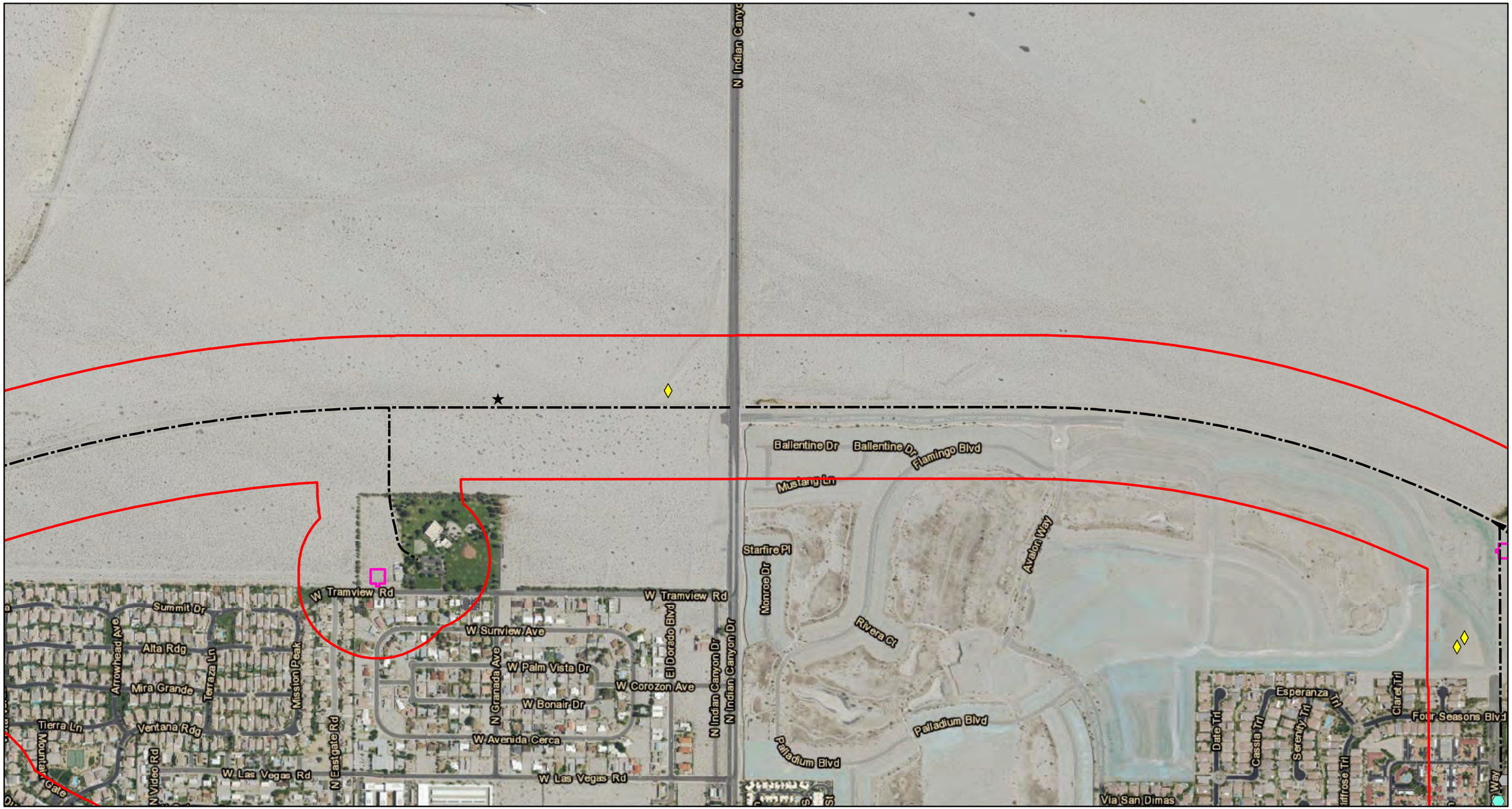

CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 1
- Staging Areas
- Bird nest in landscaped Paloverde
- Potiential Burrowing Owl Burrows
- Loggerhead Shrike
- Verdin nest

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources
Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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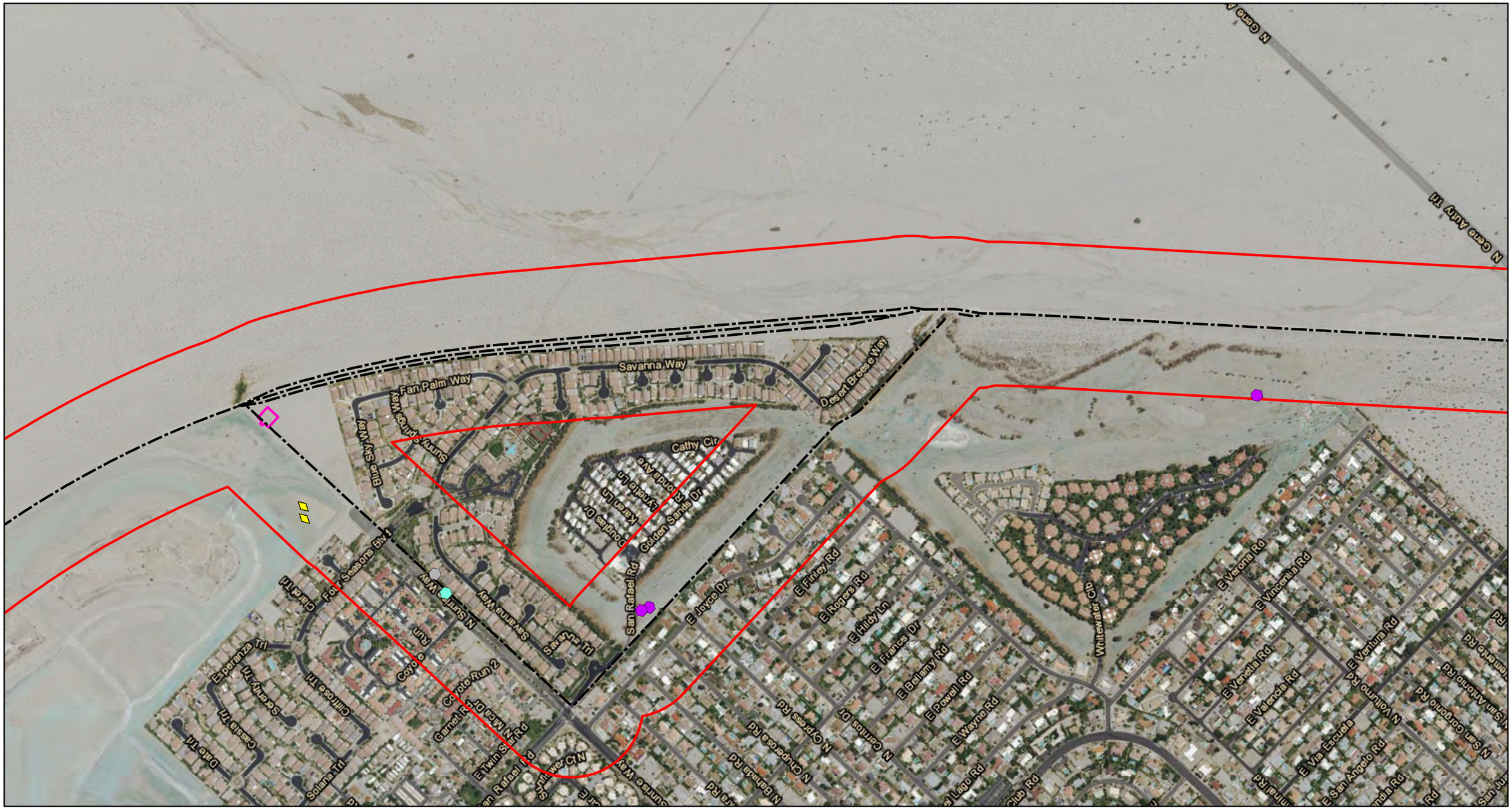

LEGEND

- Current Alignment 2016
- Segment 1
- Staging Areas
- Bird nest in landscaped Paloverde
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows
- Verdin nest

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Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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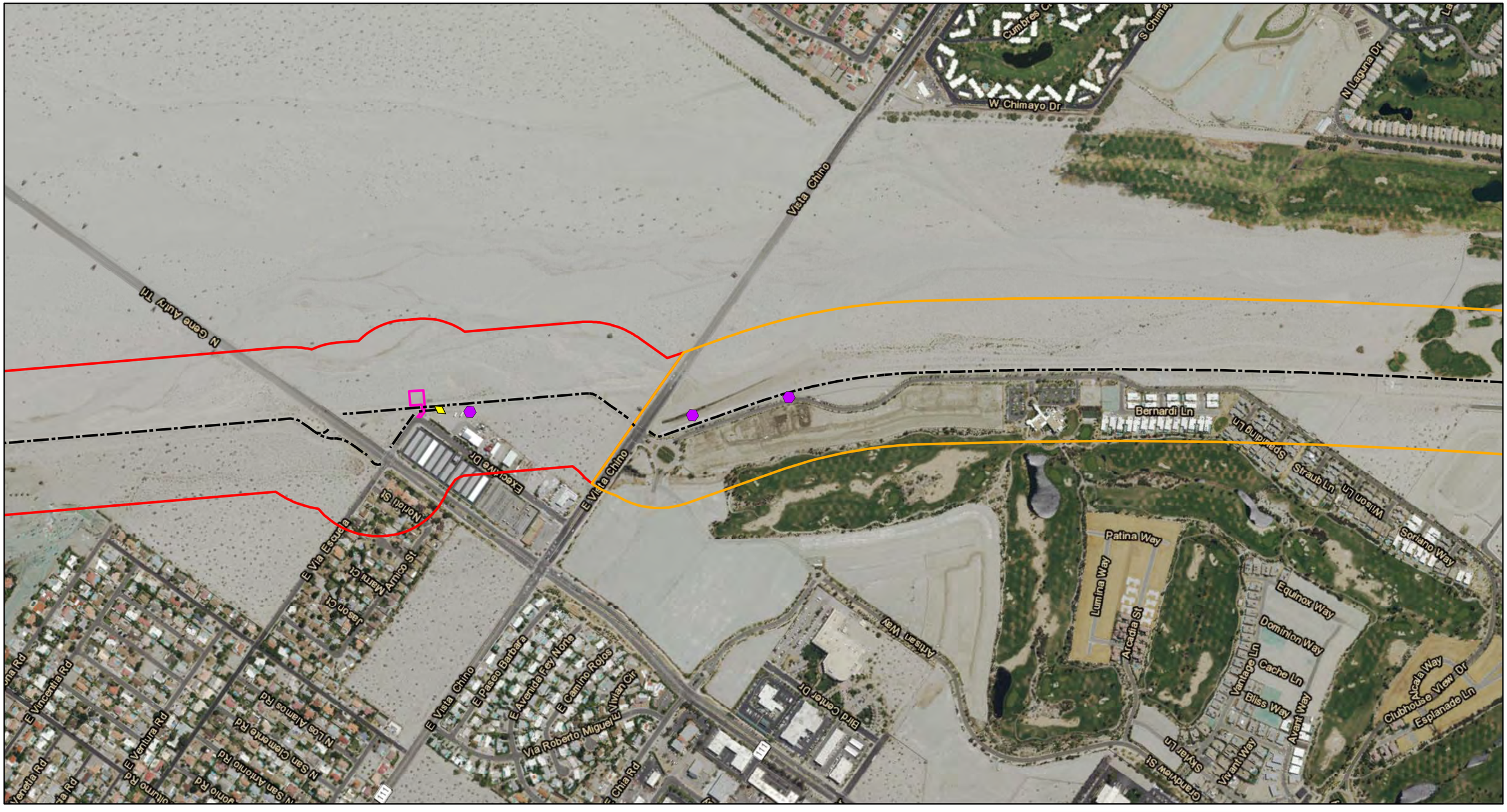
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 1
- Segment 2
- Staging Areas
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows

0 650
Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

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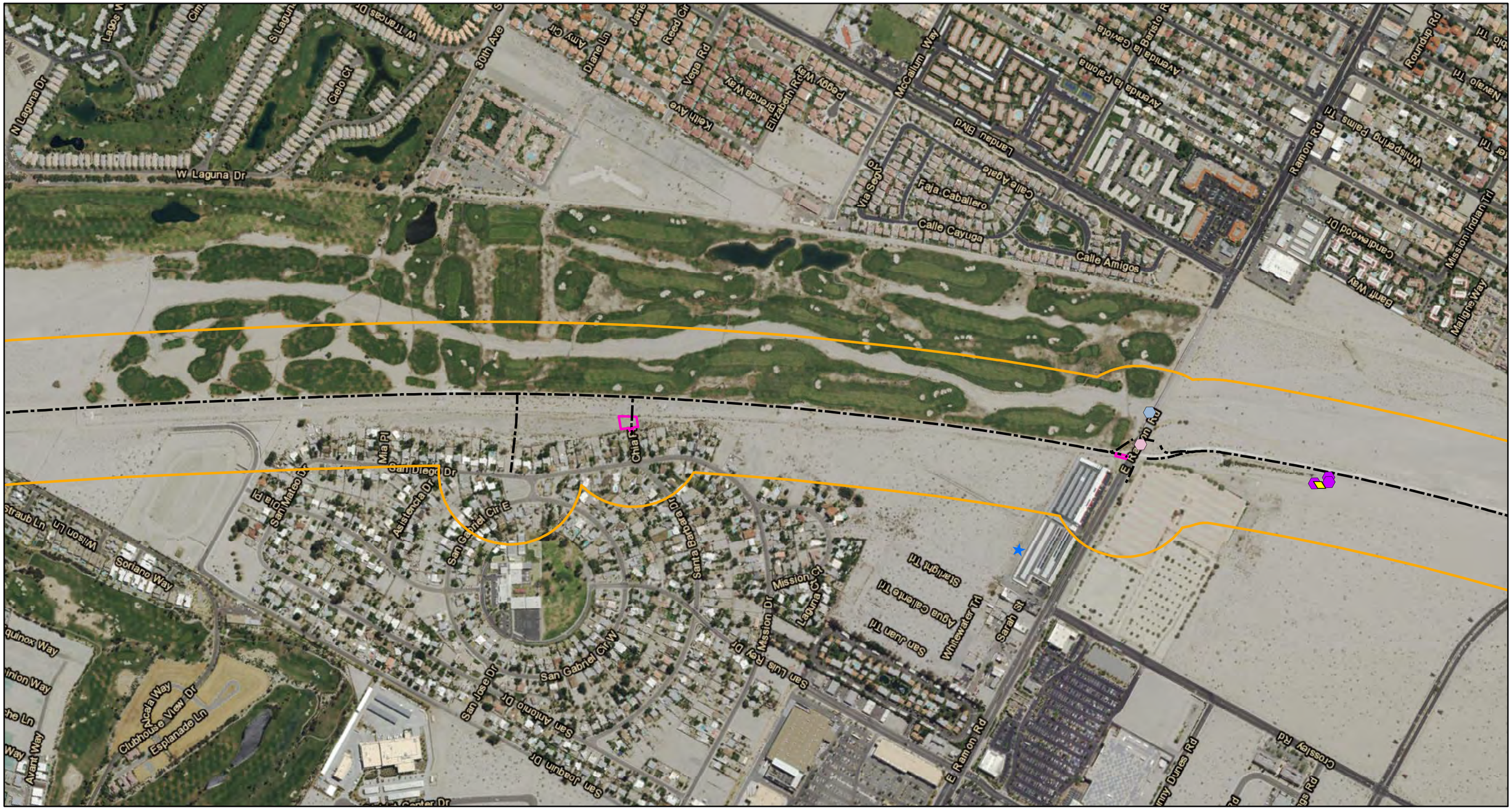
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results



LEGEND

- Current Alignment 2016
- Segment 2
- Staging Areas
- Cliff Swallow nests (active)
- Common Raven nest (active)
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows
- Palm Springs Round-tailed Ground Squirrel

CVAG

0 650
Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler

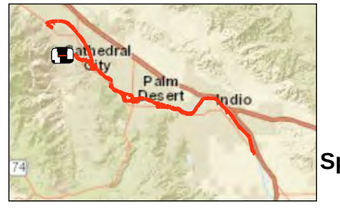
LEGEND

- Current Alignment 2016
- Segment 2A
- Staging Areas
- Cliff Swallow nests (active)
- Verdin nest

0 650
Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)



Special Status Biological Resources Wildlife Survey Results

CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 2A
- Staging Areas
- Positive Results for Casey's June Beetle (2014)

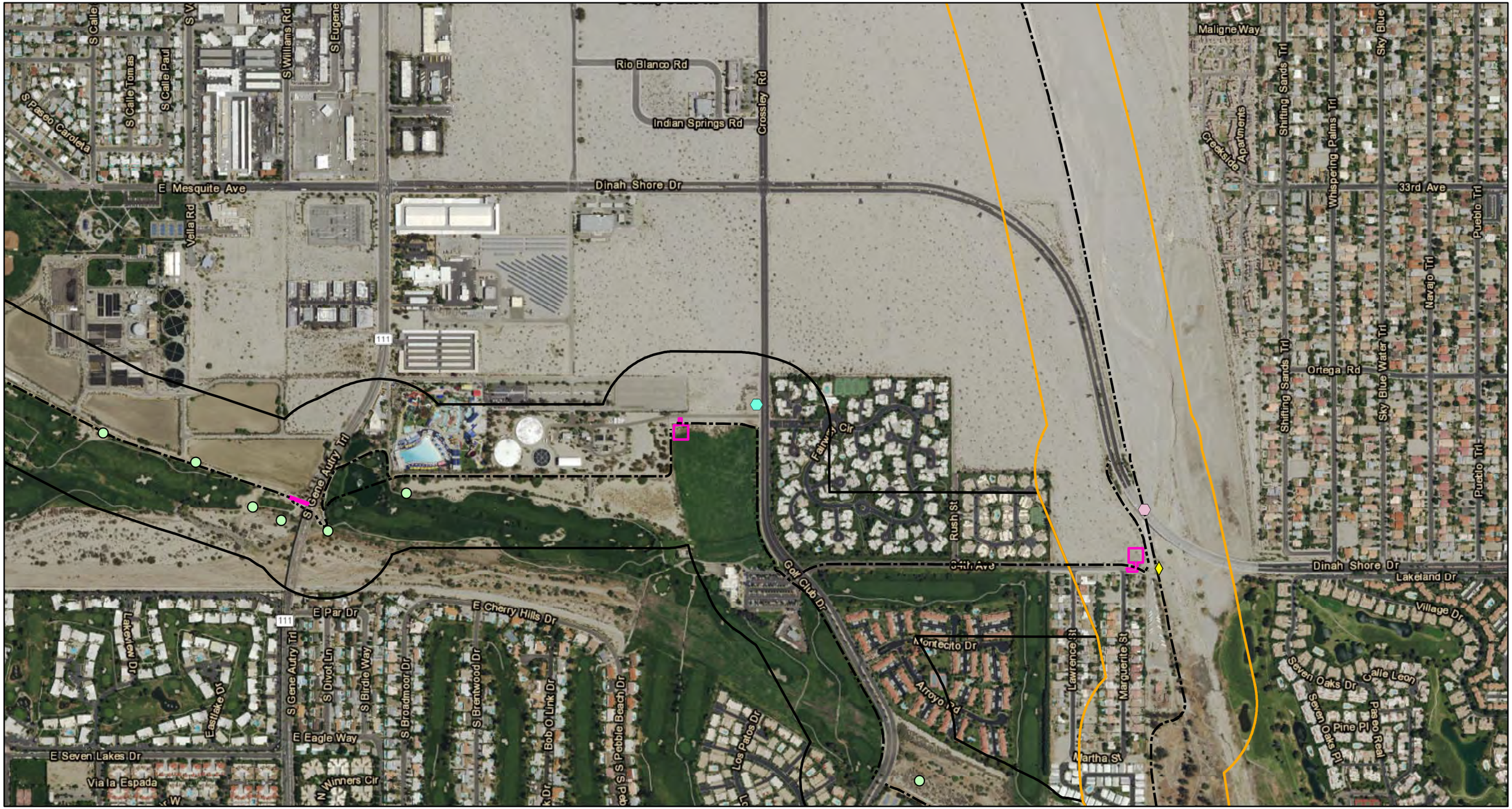
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)



LEGEND

- Current Alignment 2016
- Segment 2A
- Segment 2
- Staging Areas
- Cliff Swallow nests (active)
- Potiential Burrowing Owl Burrows
- Verdin nest
- Positive Results for Casey's June Beetle (2014)

CVAG

0 650
Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

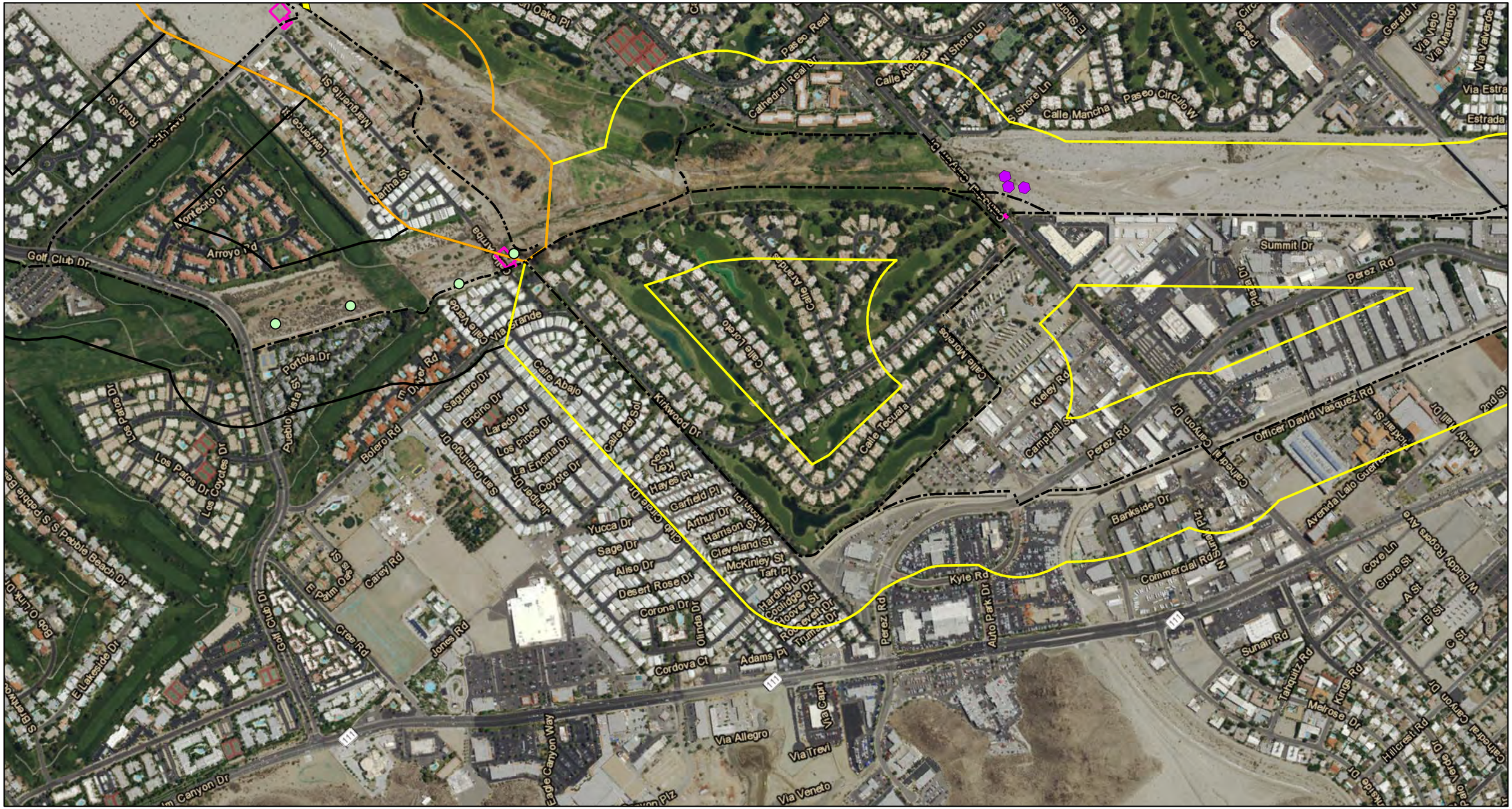
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources
Wildlife Survey Results

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 2A
- Segment 2
- Segment 3
- Staging Areas
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows
- Positive Results for Casey's June Beetle (2014)

CVAG

0 650

Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler

LEGEND

- Current Alignment 2016
- Segment 3
- Staging Areas
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows
- Verdin nest

CVAG

0 650

Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

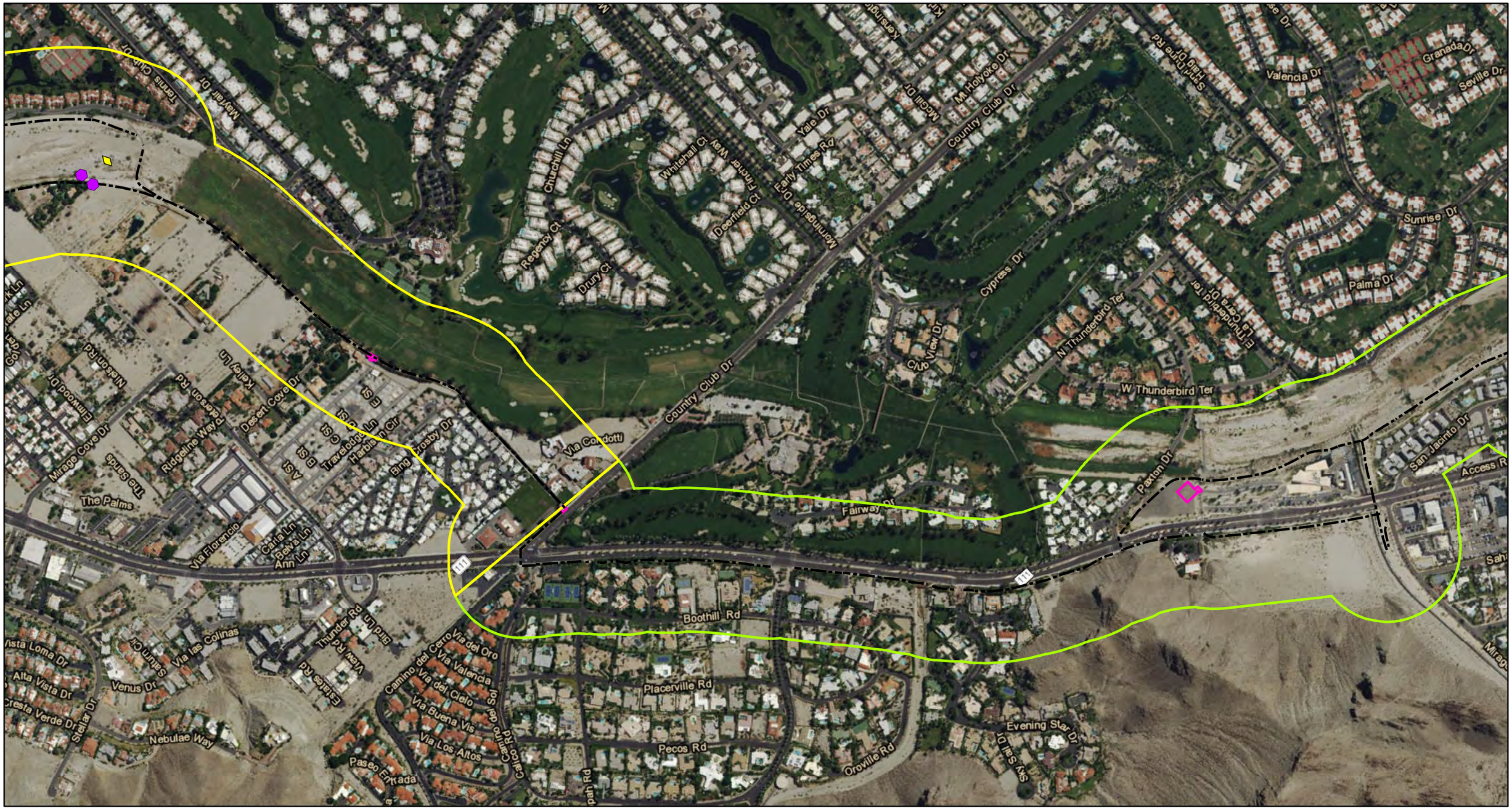
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 3
- Segment 4
- Staging Areas
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows

CVAG

0 650

Feet

FIGURE 4

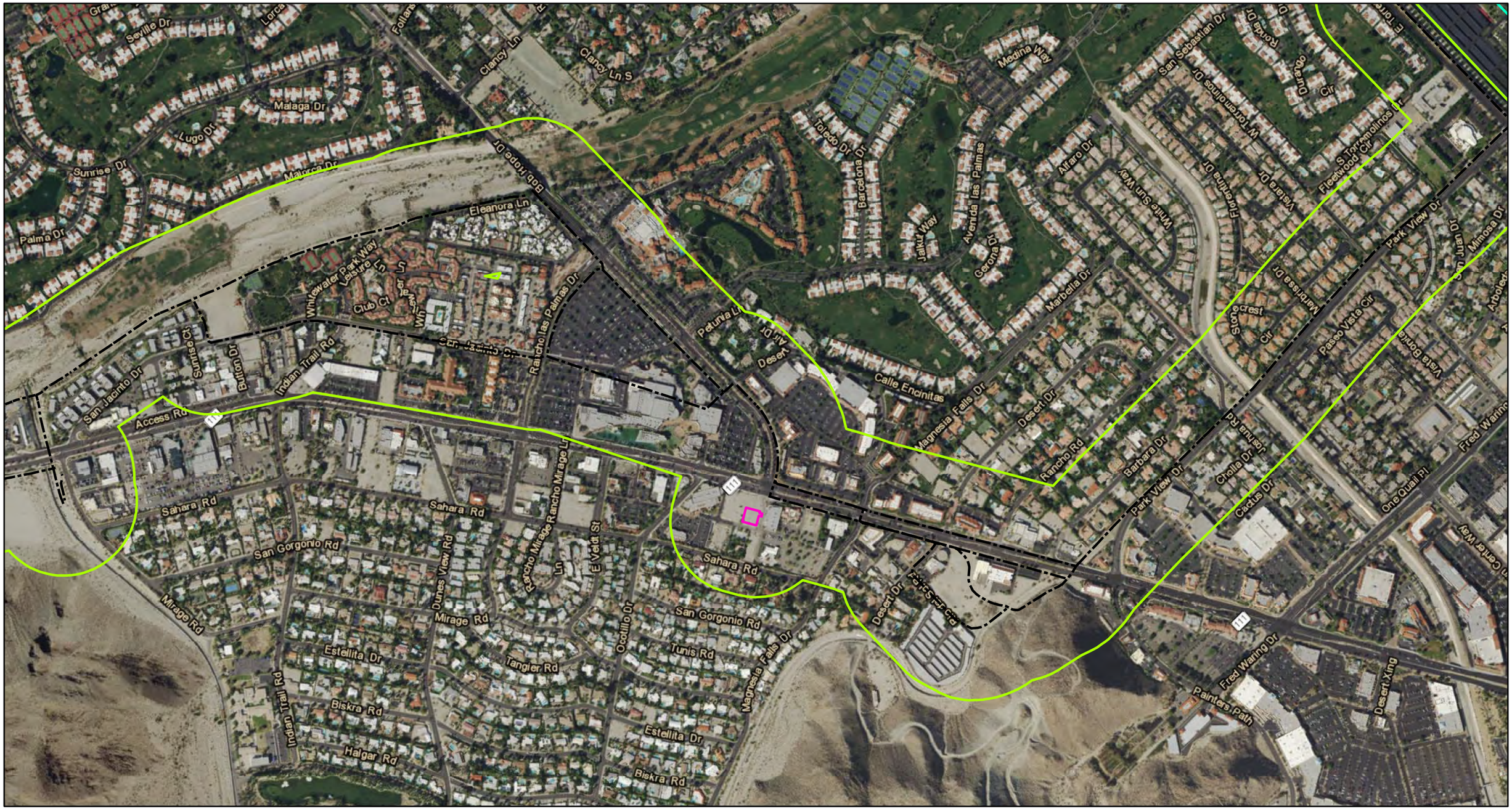
CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 4
- Segment 5
- Staging Areas

0 650

Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

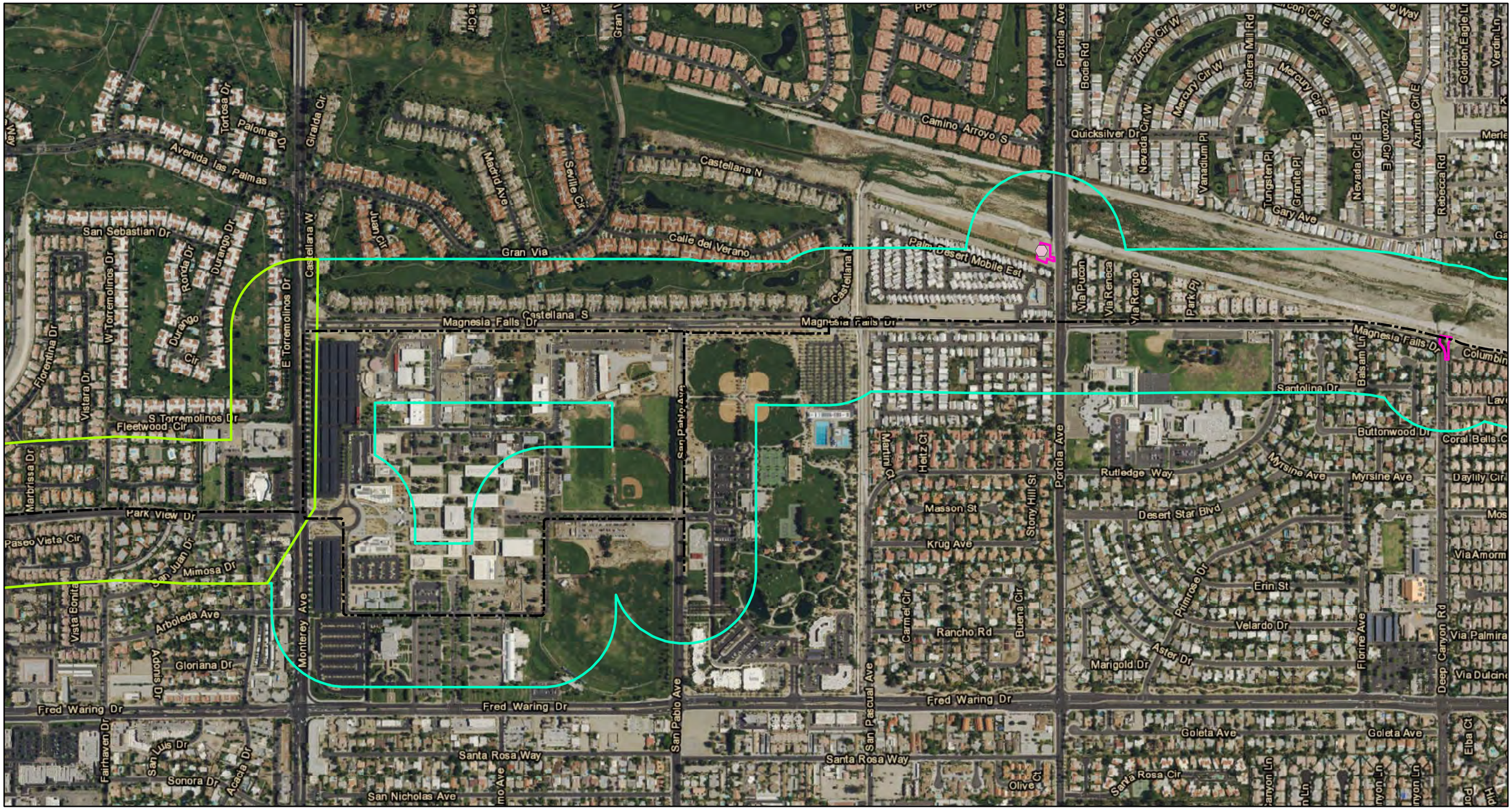
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 4
- Segment 5
- Staging Areas
- Cliff Swallow nests (active)

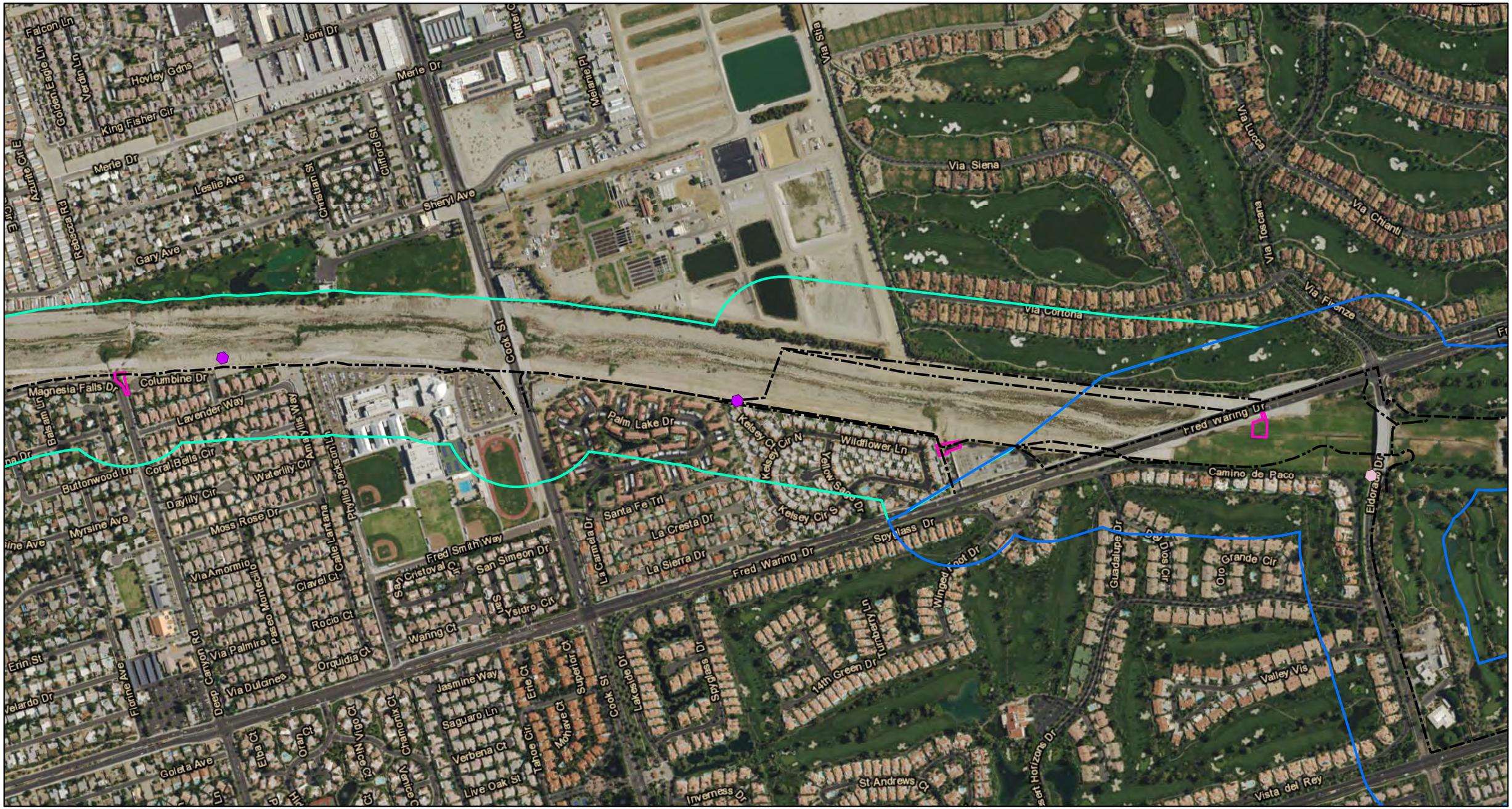
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)



CVAG

0 650

Feet

LEGEND

- Current Alignment 2016
- Segment 5
- Segment 6
- Staging Areas
- Cliff Swallow nests (active)
- California Ground Squirrel Burrows

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

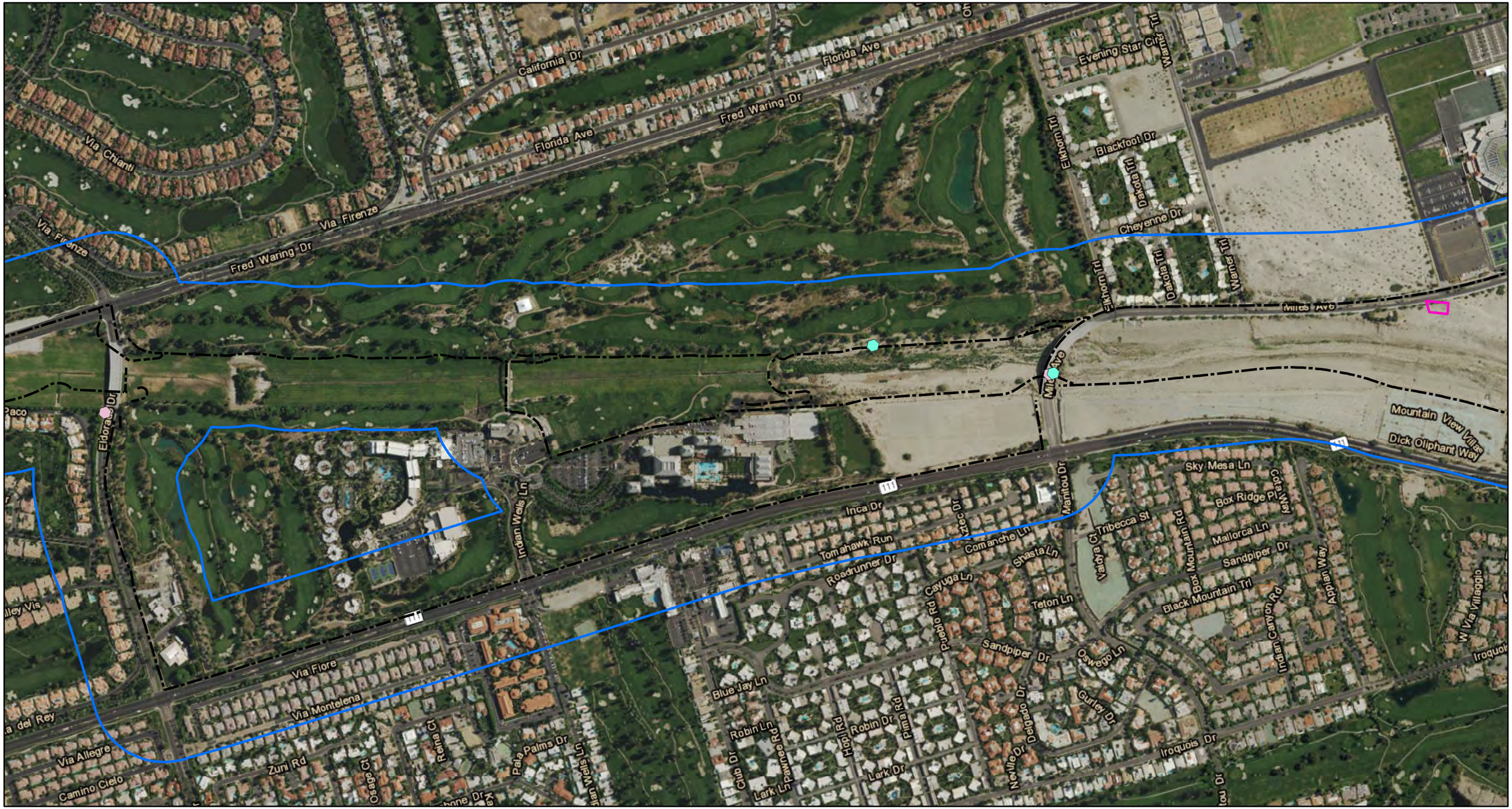
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 6
- Staging Areas
- Cliff Swallow nests (active)
- Verdin nest

0 650
Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

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LEGEND

- Current Alignment 2016
- Segment 6
- Segment 7
- Staging Areas
- Cliff Swallow nests (active)
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows
- Common Raven nest

CVAG

0 650

Feet

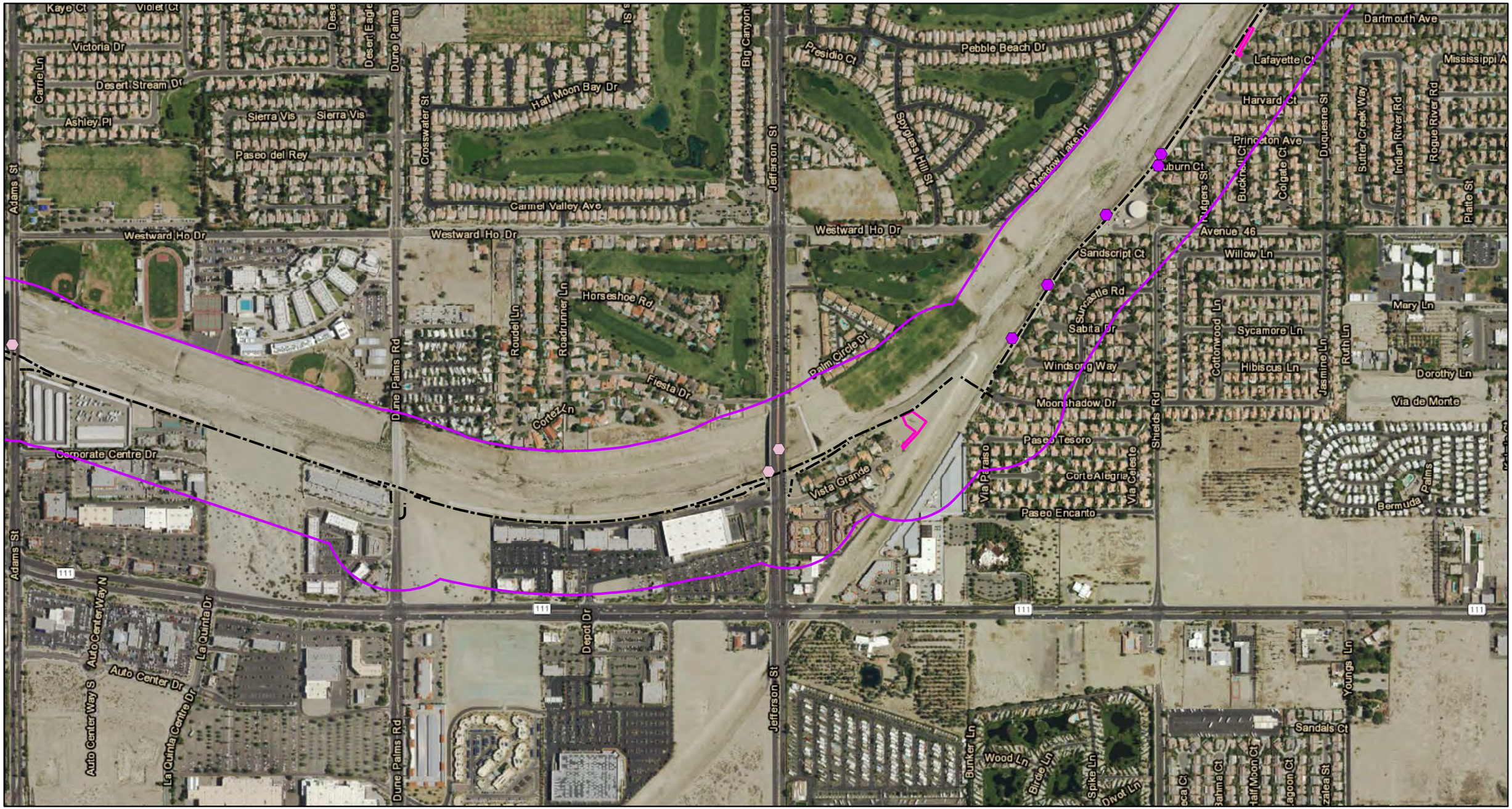
FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)



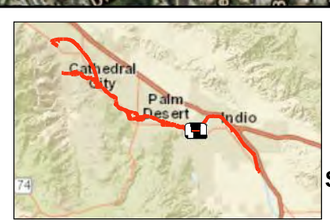
LEGEND

- Current Alignment 2016
- Segment 7
- Staging Areas
- Cliff Swallow nests (active)
- California Ground Squirrel Burrows

CVAG

0 650

Feet



Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

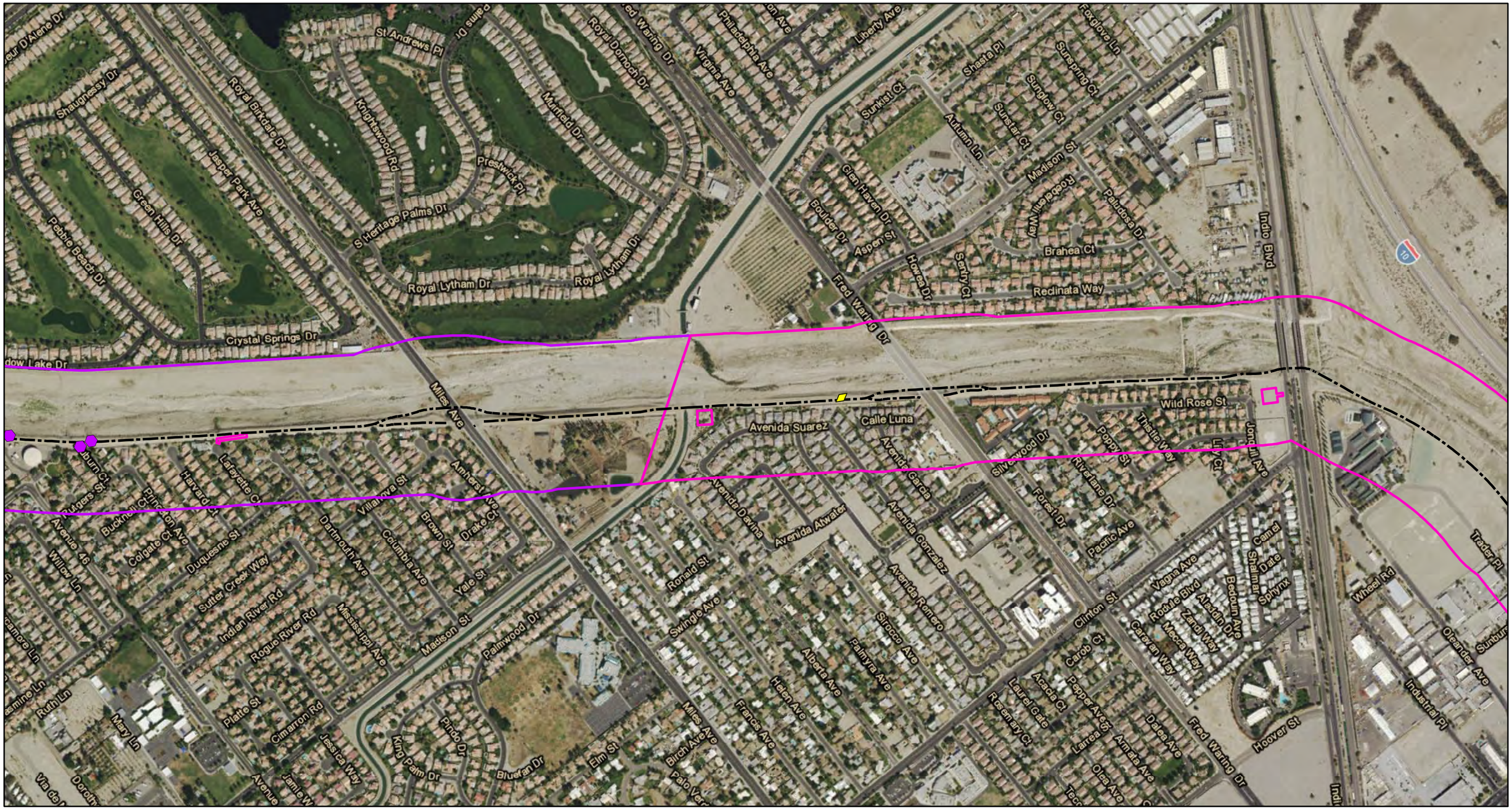
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 7
- Segment 8
- Staging Areas
- Potiential Burrowing Owl Burrows
- California Ground Squirrel Burrows

CVAG

0 650

Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

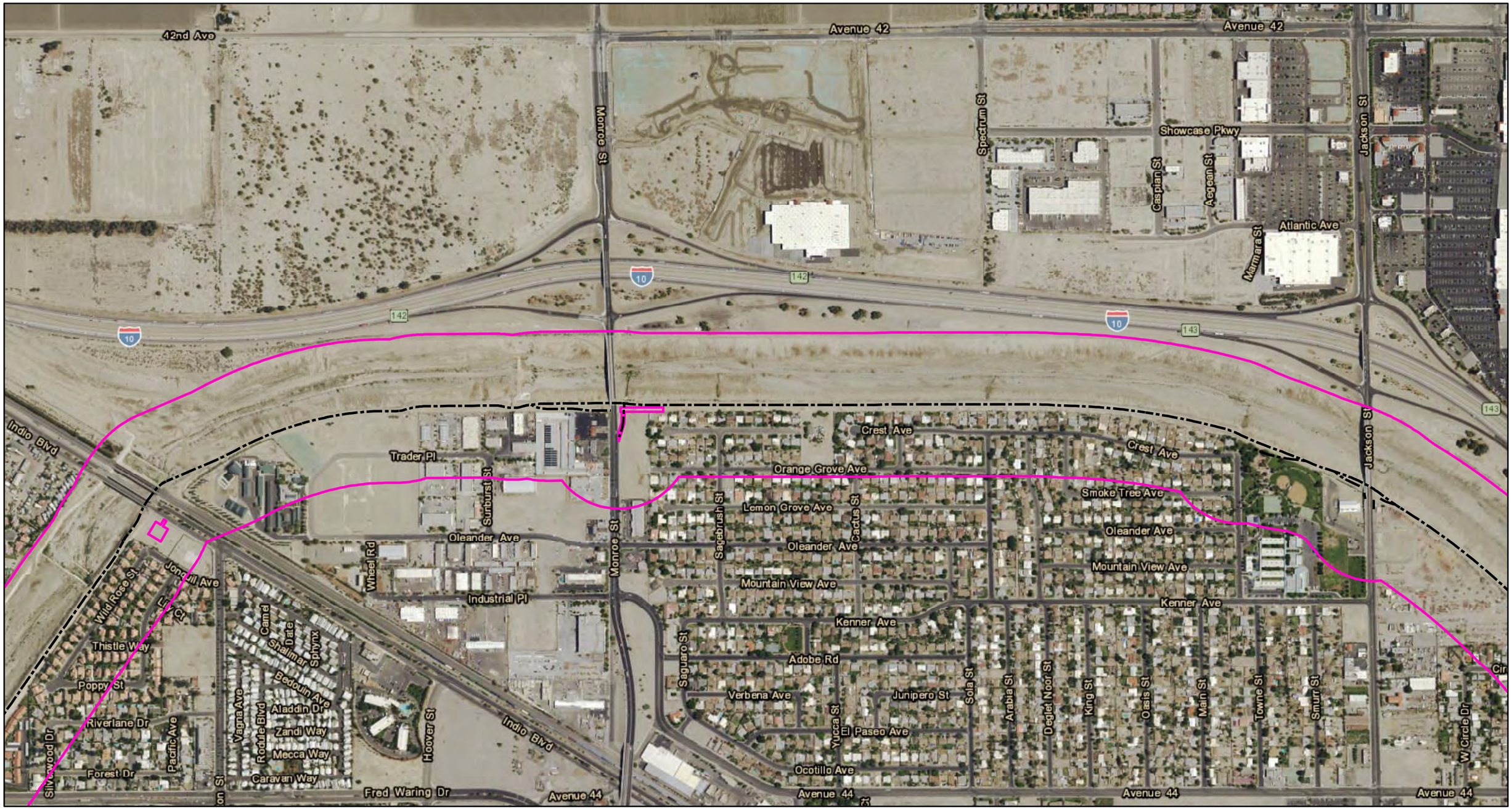
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 8
- Staging Areas

CVAG

0 650

Feet

FIGURE 4

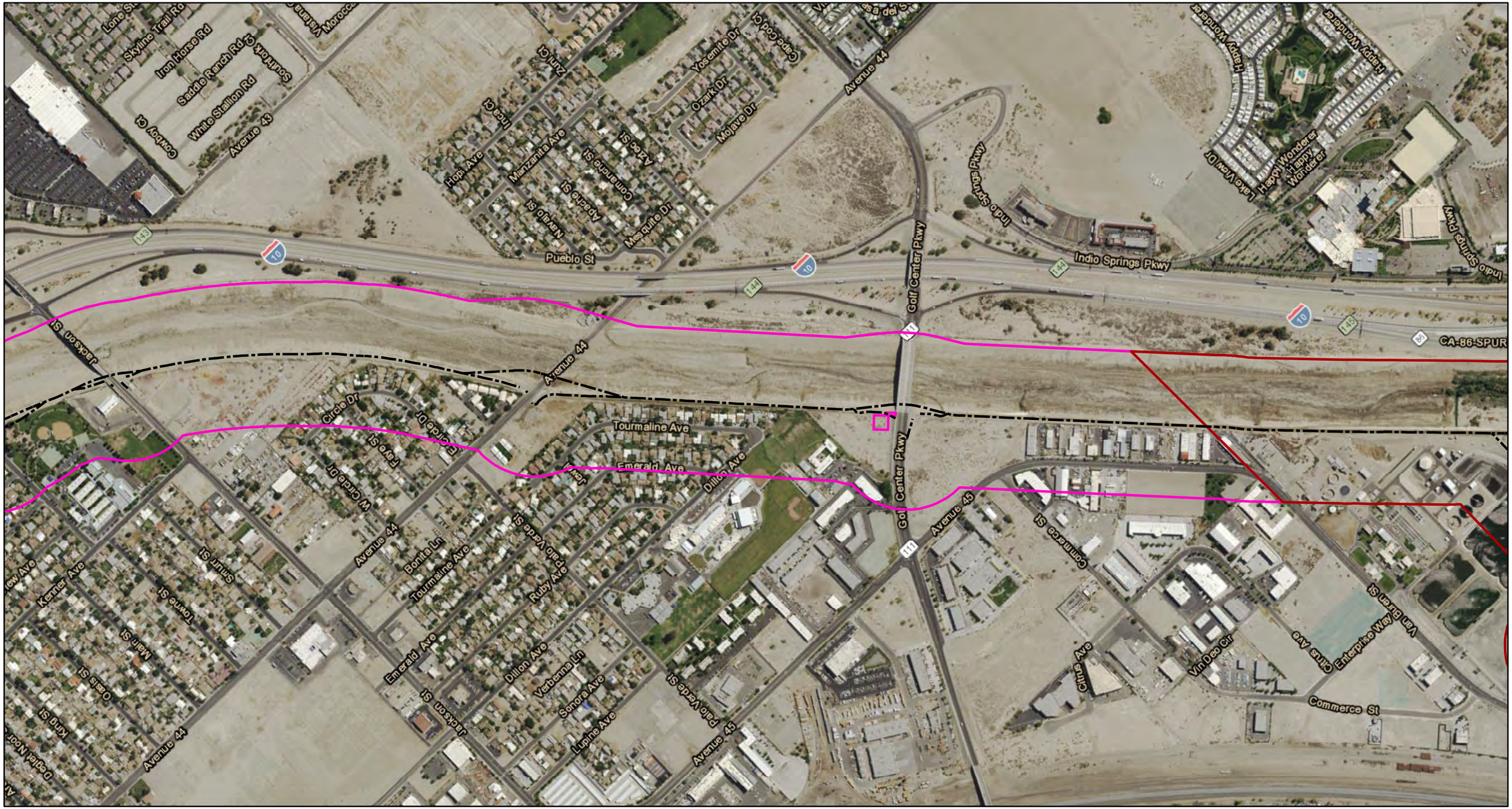
CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 8
- Segment 9
- Staging Areas

0 650
Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

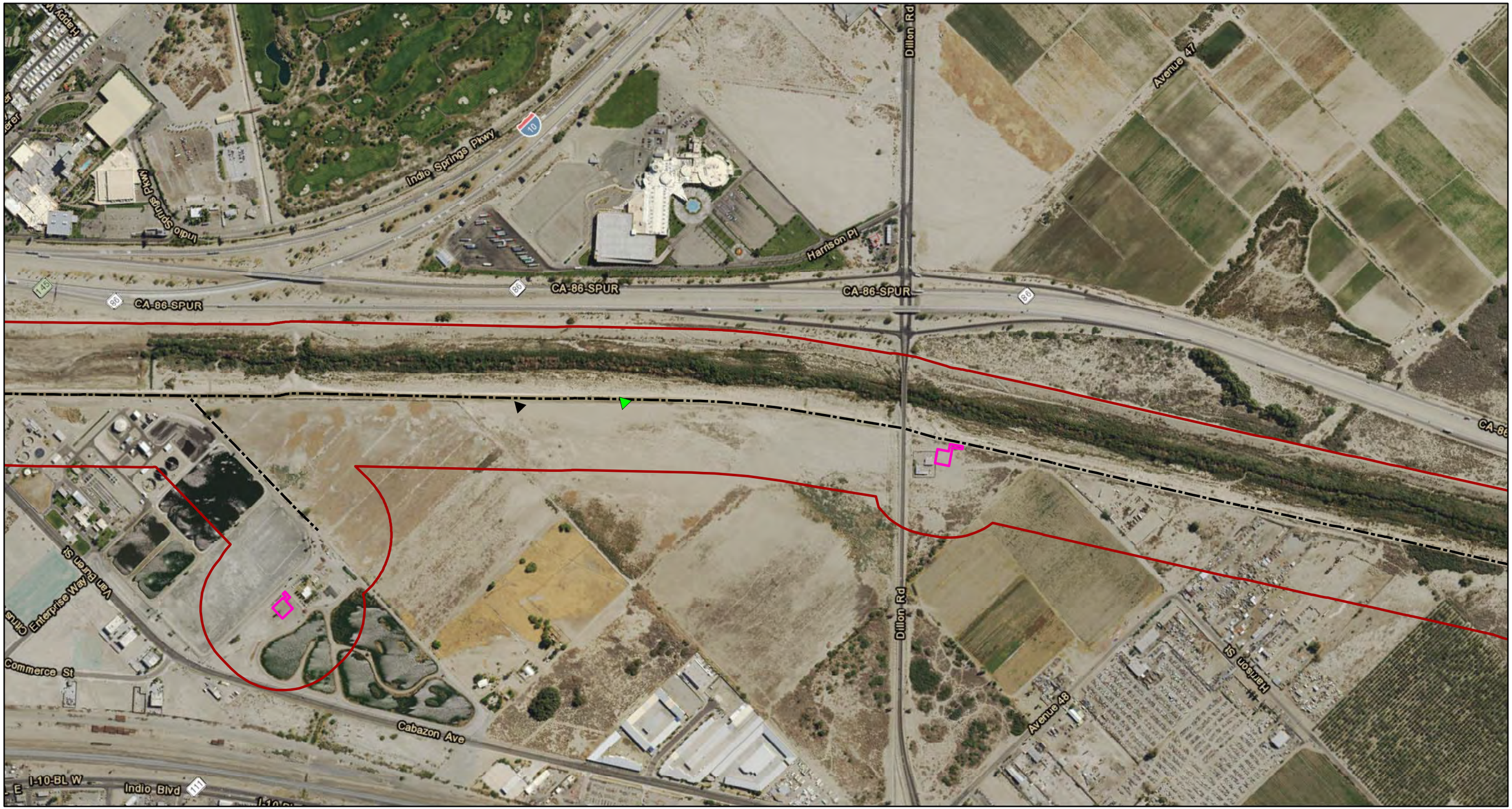
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 9
- Staging Areas
- Old Burrow
- Burrowing owl @ Burrow

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources
Wildlife Survey Results

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

CVAG

0 650
Feet

LEGEND

- Current Alignment 2016
- Segment 9
- Segment 10
- Staging Areas

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler

LEGEND

- Current Alignment 2016
- Segment 10
- Staging Areas

0 650

Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

LEGEND

- Current Alignment 2016
- Segment 10
- Staging Areas

0 650

Feet

Source: CV Link_Construction Documents_ 30% Plan Set,alignment _update_july, ESRI imagery

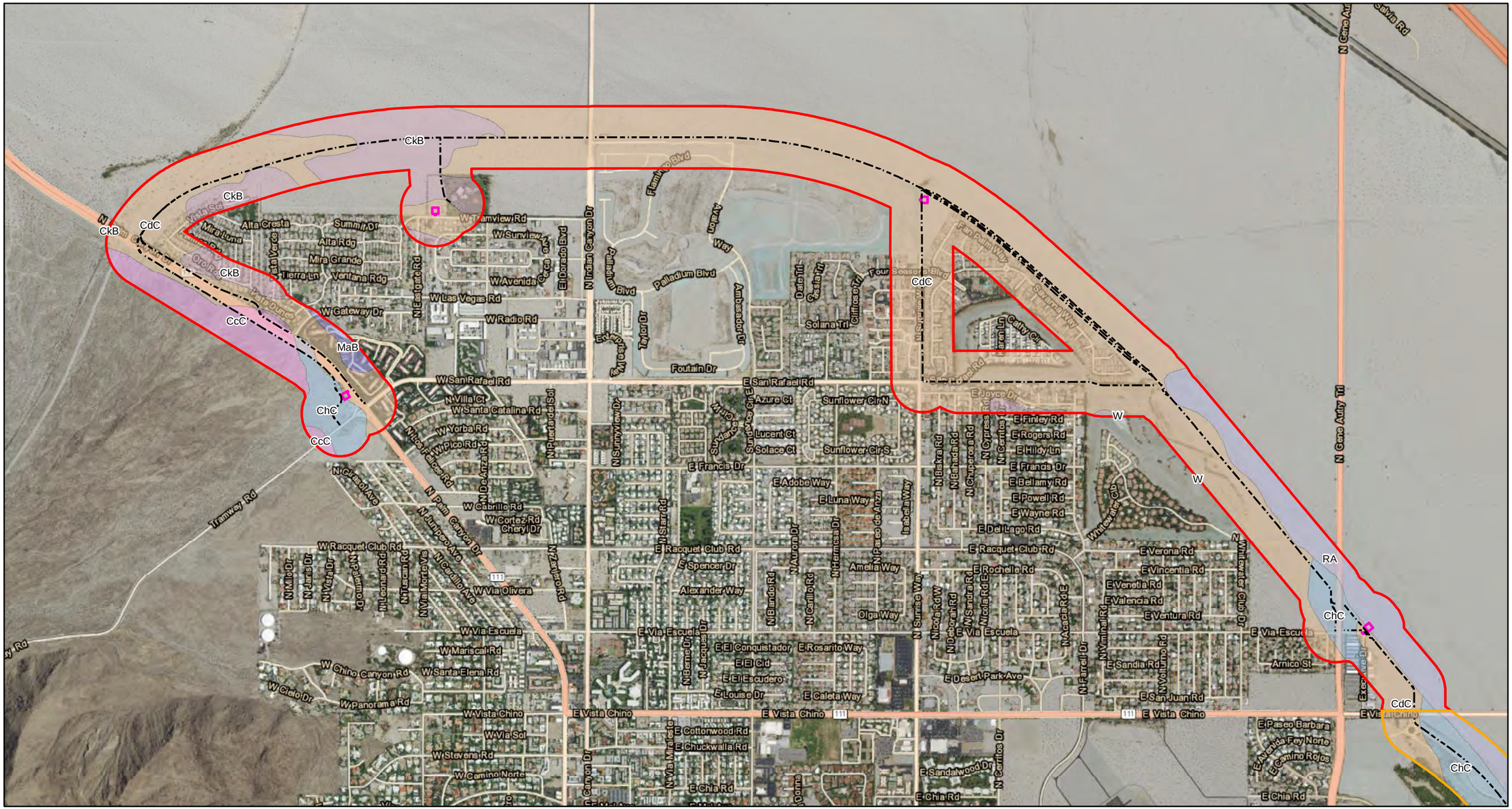
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\results.mxd (8/16/2016)

FIGURE 4

CV/LINK
MSHCP Compliance Report

Special Status Biological Resources Wildlife Survey Results

amec foster wheeler



LEGEND

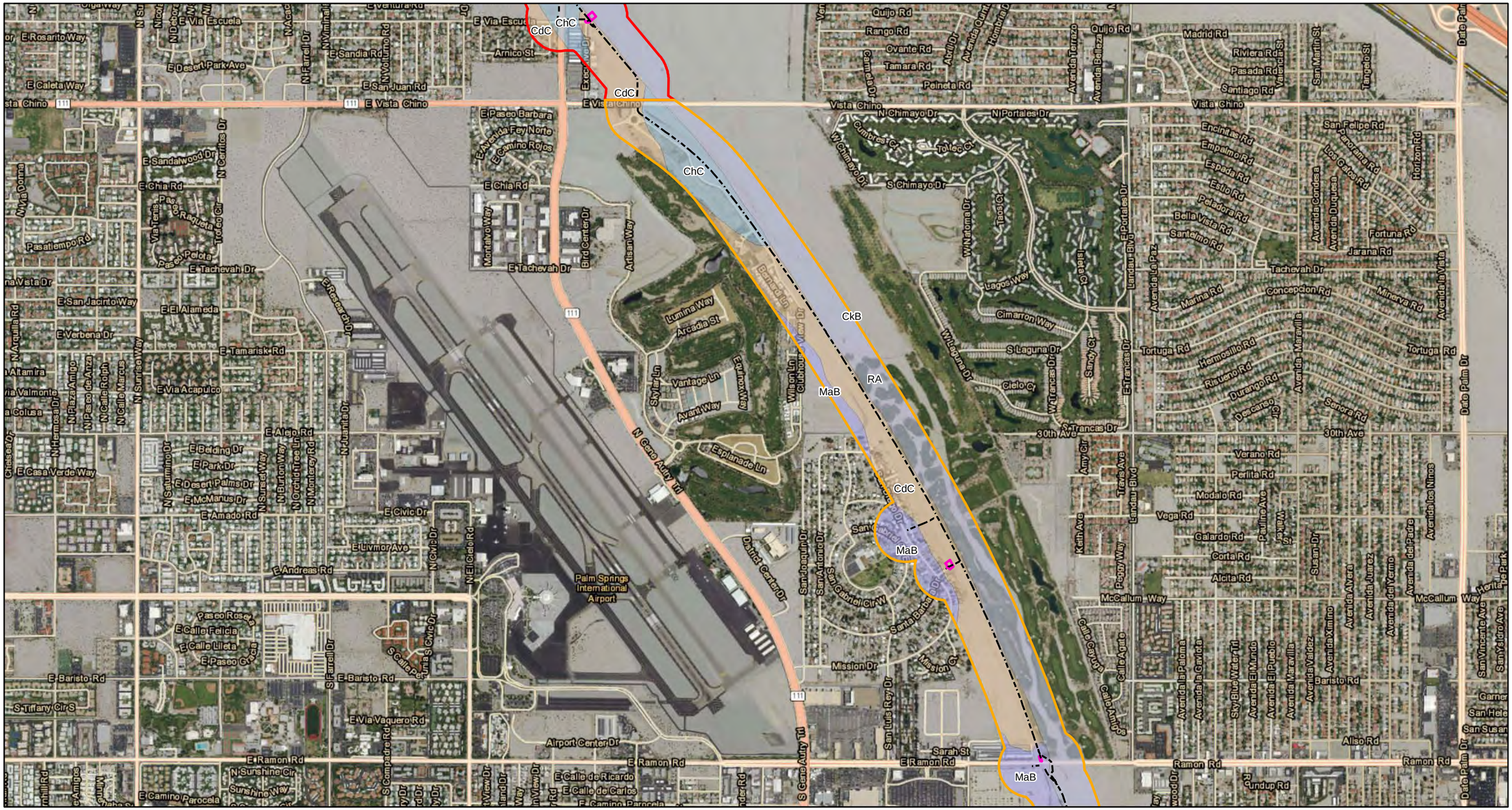
Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/19/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils



CVAG

0 1500
Feet

LEGEND

- Current Alignment 2016
- Staging Areas
- CdC: CARSITAS GRAVELLY SAND, 0-9% SLOPES
- ChC: CARSITAS COBBLY SAND, 2-9% SLOPES
- CkB: CARSITAS FINE SAND, 0-5% SLOPES
- MaB: MYOMA FINE SAND, 0-5% SLOPES
- RA: RIVERWASH

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

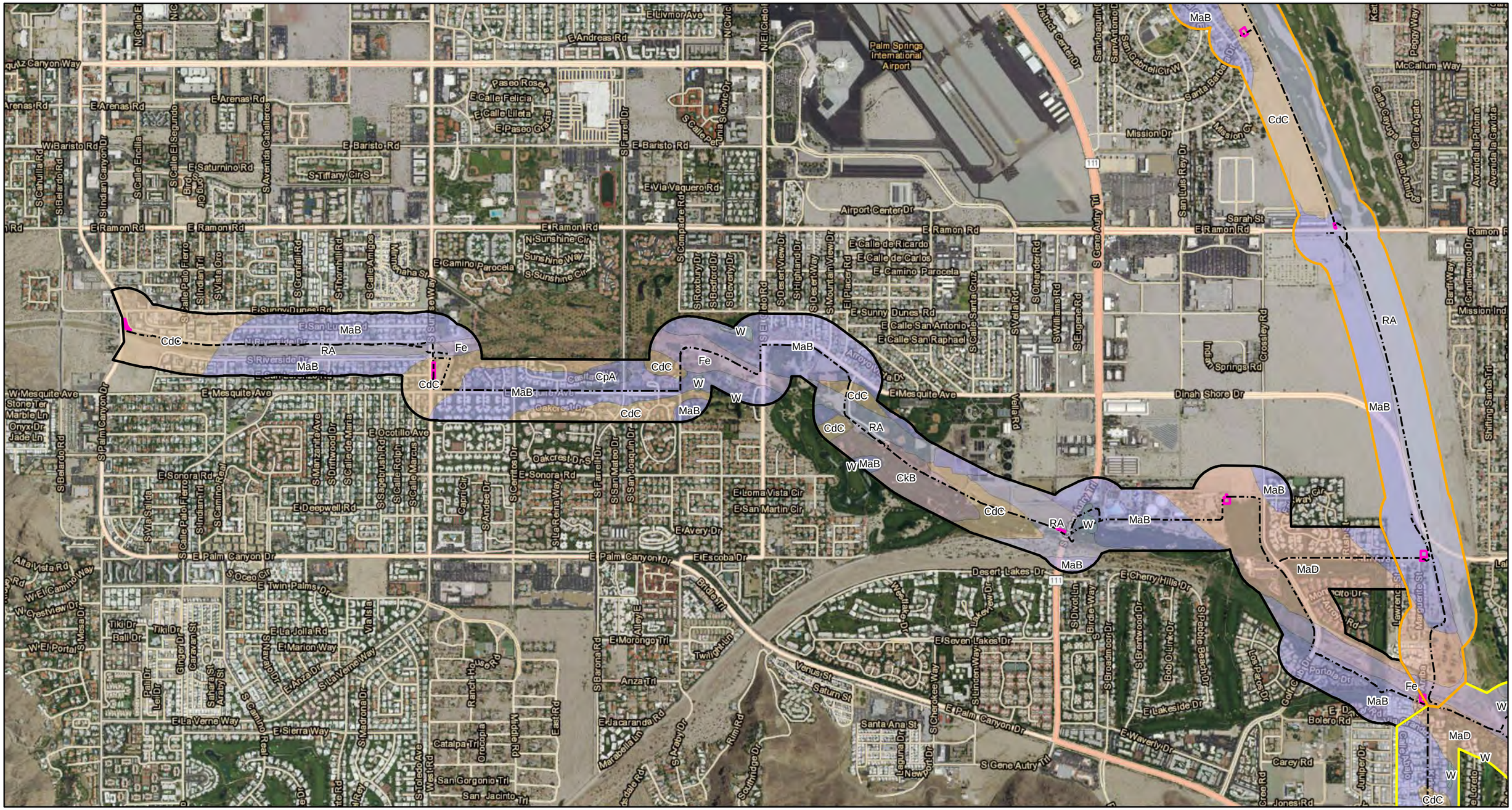
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

amec foster wheeler



CVAG

0 1500 Feet

N

LEGEND

- Current Alignment 2016
- Staging Areas
- CdC: CARSITAS GRAVELLY SAND, 0-9% SLOPES
- CkB: CARSITAS FINE SAND, 0-5% SLOPES
- CpA: COACHELLA FINE SAND, 0-2% SLOPES
- Fe: FLUVENTS
- MaB: MYOMA FINE SAND, 0-5% SLOPES
- MaD: MYOMA FINE SAND, 5-15% SLOPES
- RA: RIVERWASH
- W: Water

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

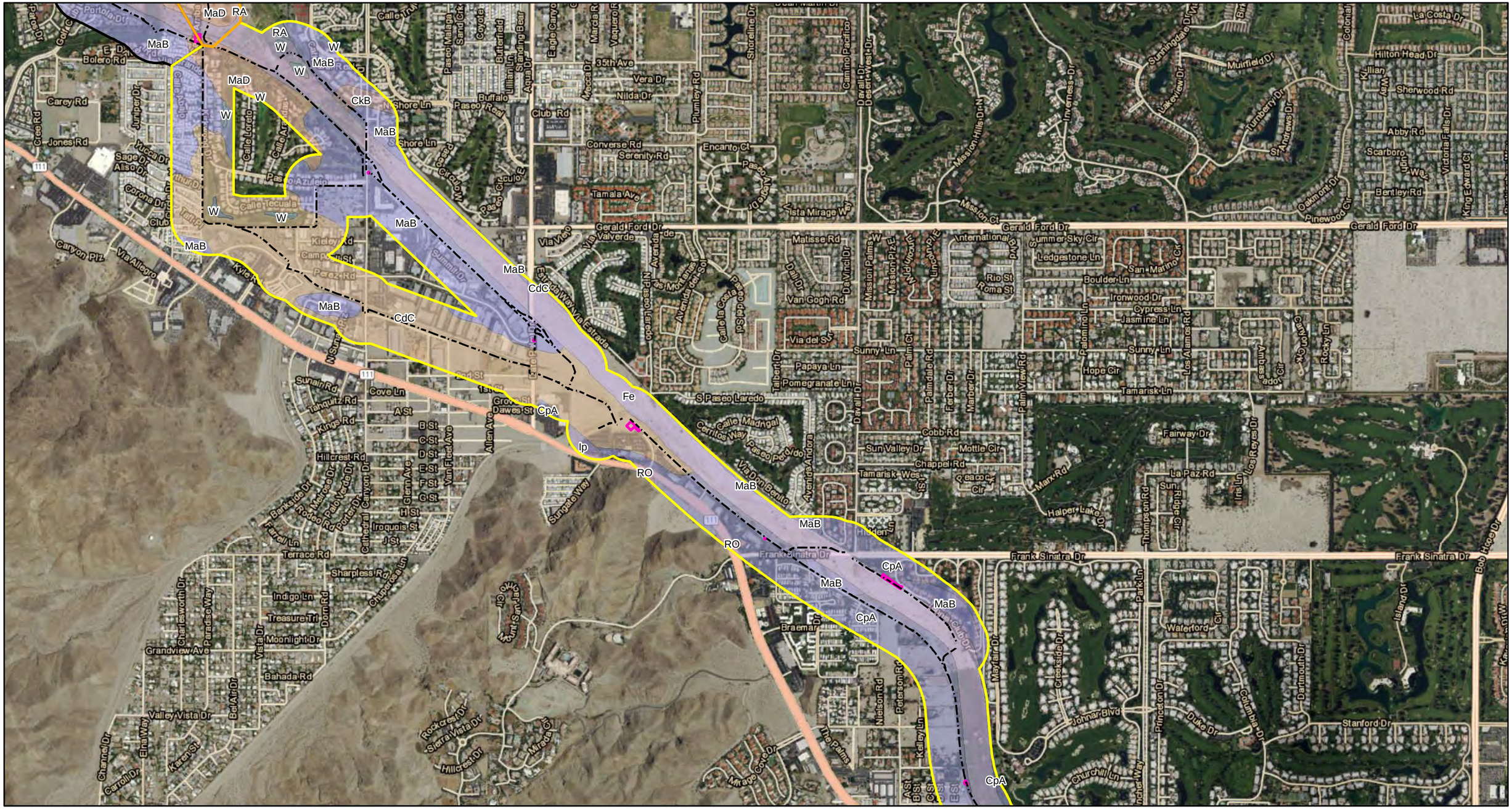
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/19/2016)

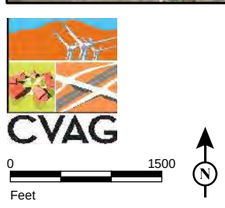
FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

amec foster wheeler





LEGEND

- Current Alignment 2016
- Staging Areas
- CdC: CARSITAS GRAVELLY SAND, 0-9% SLOPES
- CkB: CARSITAS FINE SAND, 0-5% SLOPES
- CpA: COACHELLA FINE SAND, 0-2% SLOPES
- Fe: FLUVENTS
- Ip: : INDIO FINE SANDY LOAM
- MaB: MYOMA FINE SAND, 0-5% SLOPES
- MaD: MYOMA FINE SAND, 5-15% SLOPES
- RA: RIVERWASH
- RO: ROCK OUTCROP
- W: Water

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

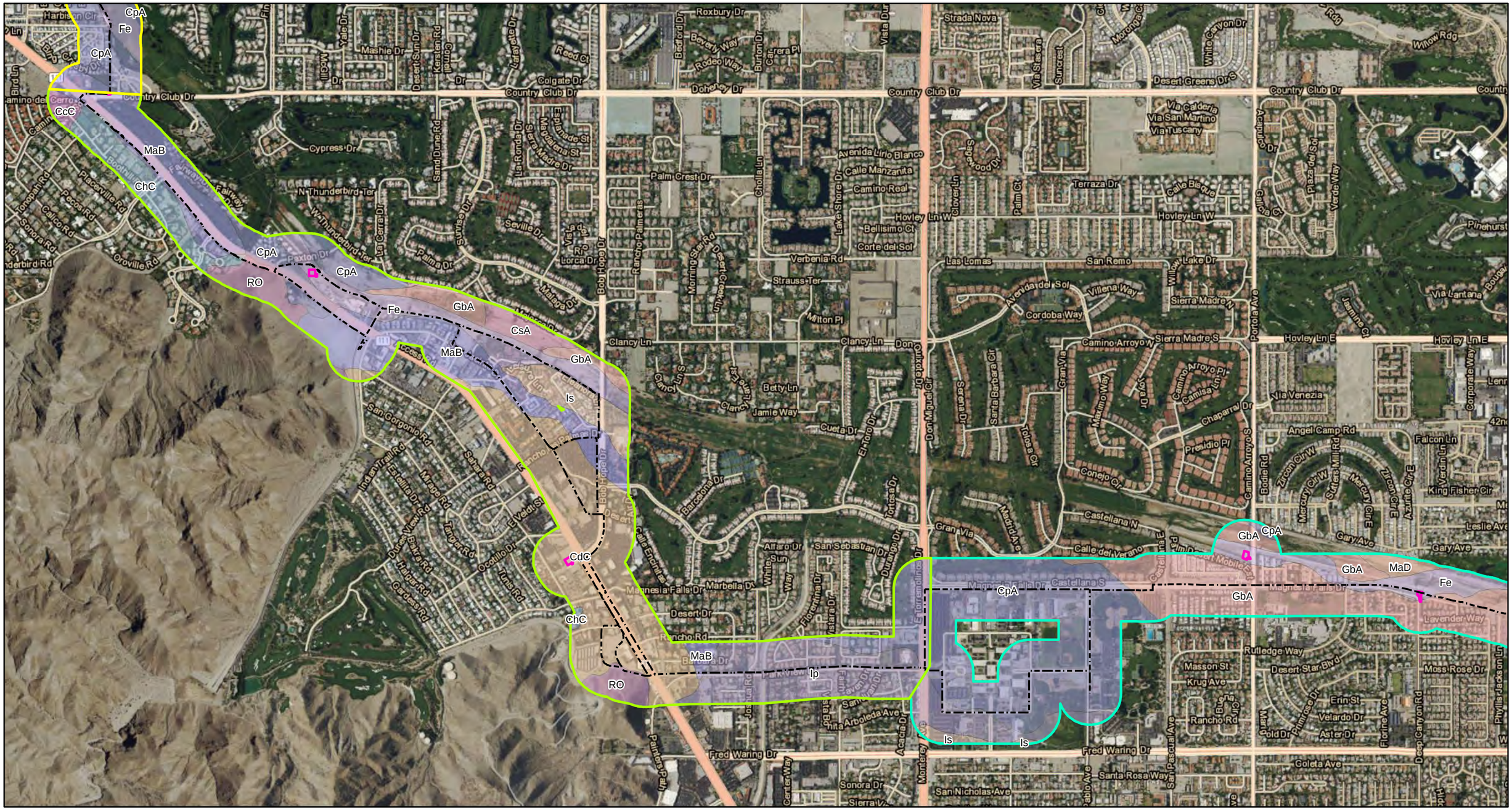
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

amec foster wheeler



LEGEND

- Current Alignment 2016
- Staging Areas
- CcC:CARRIZO STONY SAND, 2-9% SLOPES
- CdC: CARSITAS GRAVELLY SAND, 0-9% SLOPES
- ChC: CARSITAS COBBLY SAND, 2-9% SLOPES
- CpA: COACHELLA FINE SAND, 0-2% SLOPES
- CsA: COACHELLA FINE SANDY LOAM, 0-2% SLOPES
- Fe: FLUVENTS
- GbA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- Ip: : INDIO FINE SANDY LOAM
- Is: INDIO VERY FINE SANDY LOAM
- MaB: MYOMA FINE SAND, 0-5% SLOPES
- MaD: MYOMA FINE SAND, 5-15% SLOPES
- RO: ROCK OUTCROP

CVAG

0 1500

Feet

N

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

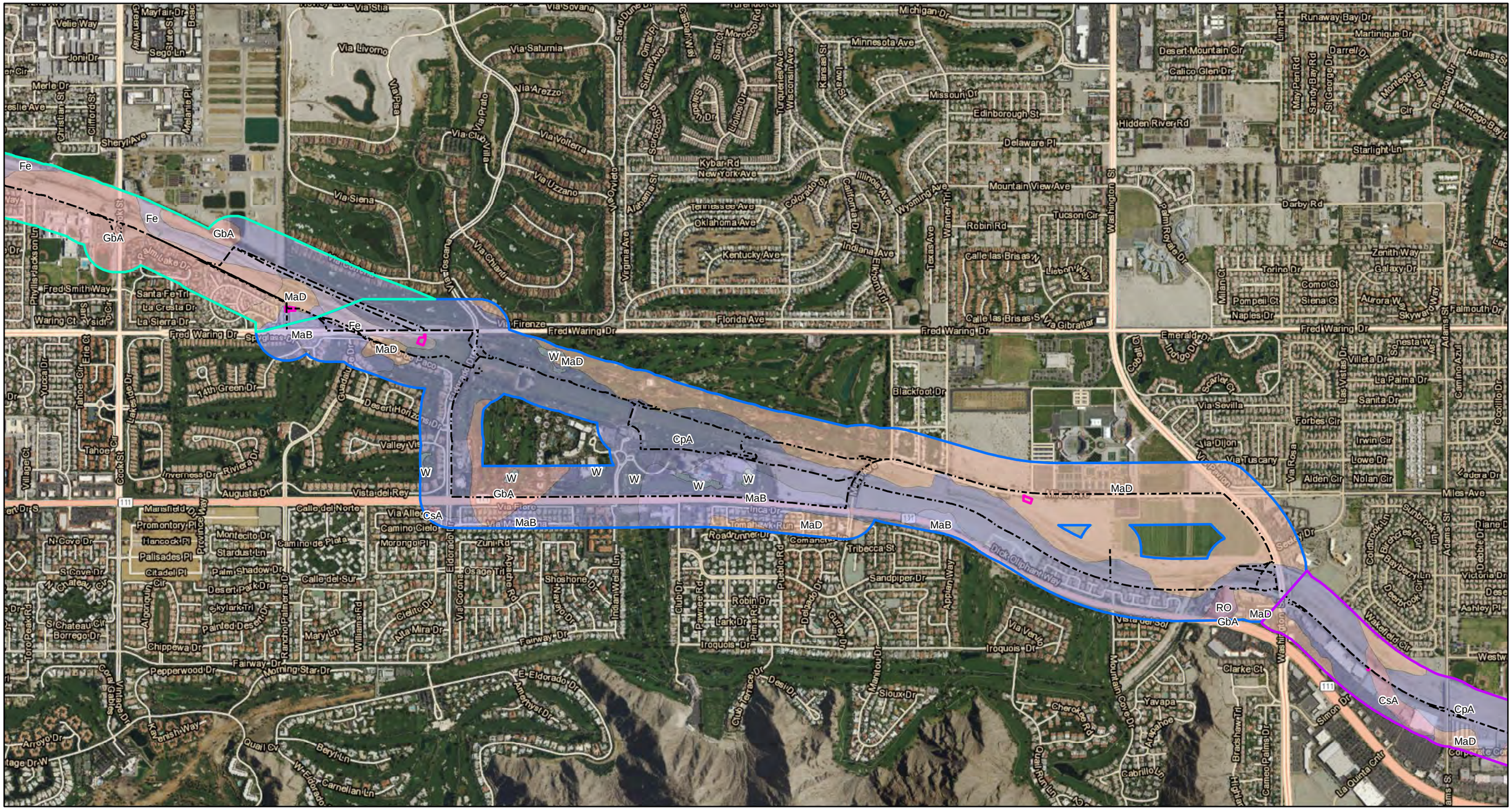
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

amec foster wheeler



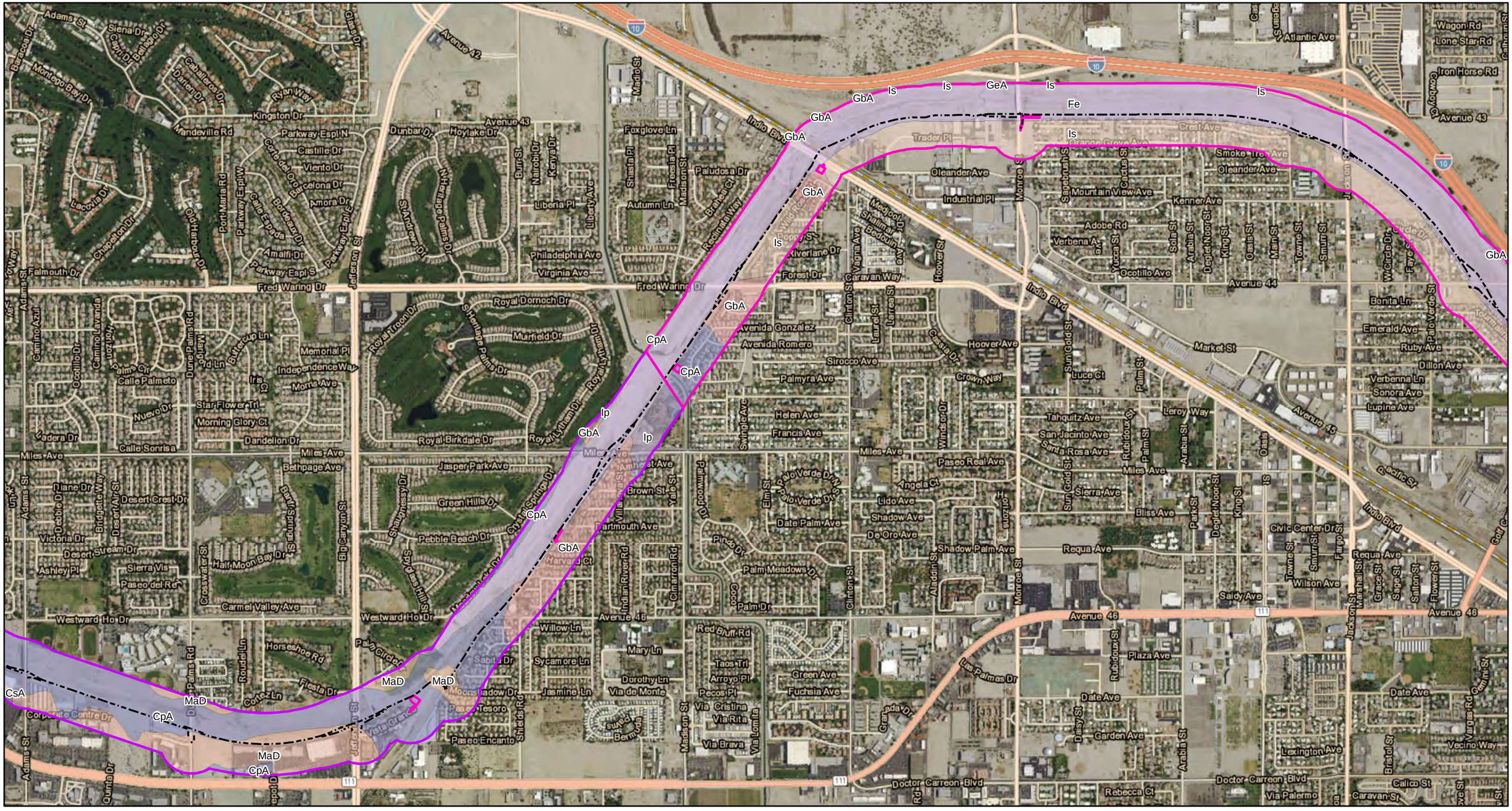
Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (8/5/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils



CVAG

0 1500
Feet

LEGEND

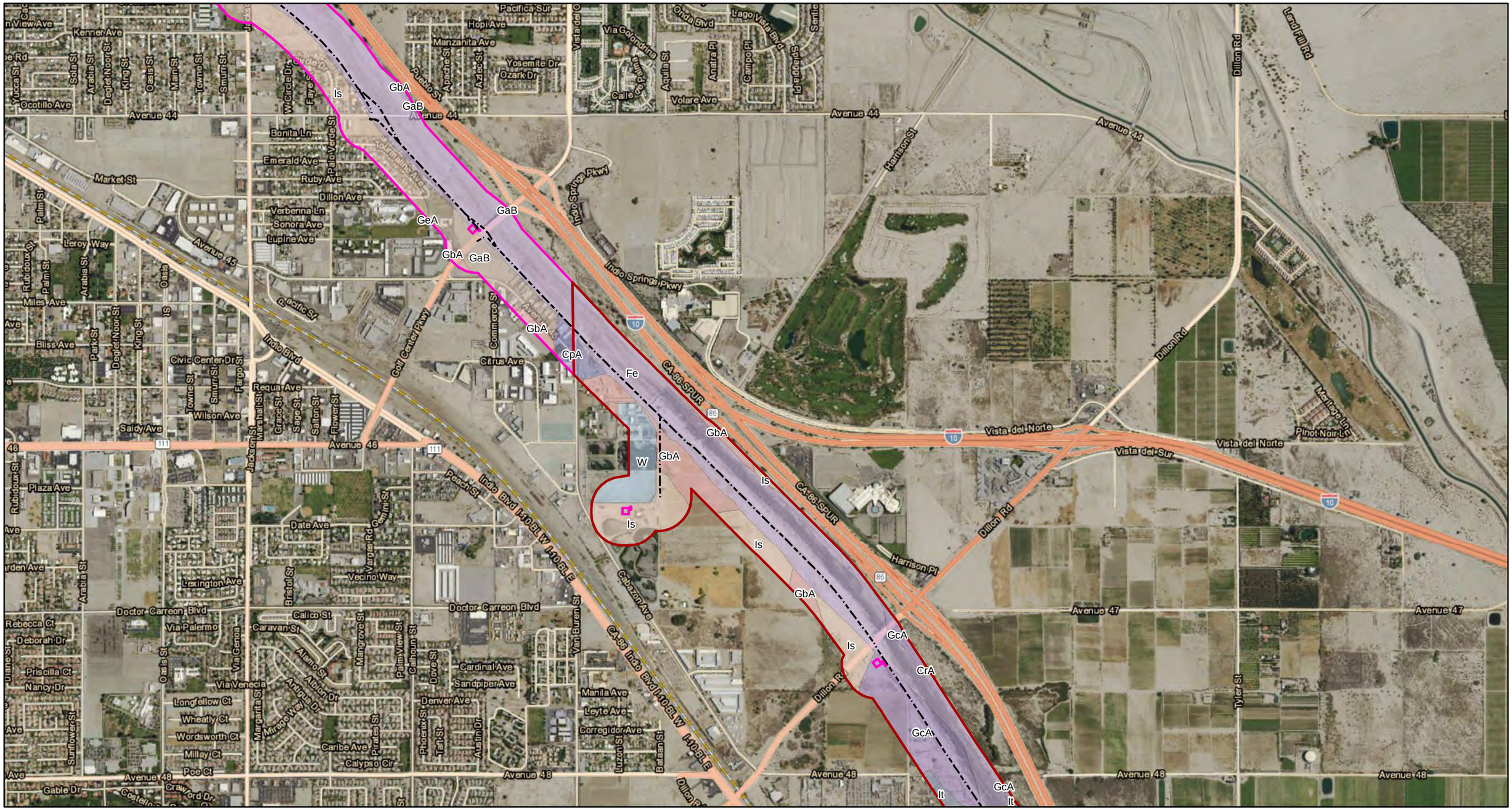
- Current Alignment 2016
- Staging Areas
- CpA: COACHELLA FINE SAND, 0-2% SLOPES
- CsA: COACHELLA FINE SANDY LOAM, 0-2% SLOPES
- Fe: FLUVENTS
- GaB: GILMAN LOAMY FINE SAND, 0-5% SLOPES
- GbA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- GeA: GILMAN SILT LOAM, 0-2% SLOPES
- Ip: : INDIO FINE SANDY LOAM
- Is: INDIO VERY FINE SANDY LOAM
- MaD: MYOMA FINE SAND, 5-15% SLOPES

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

Soils

amec foster wheeler



CVAG

0 1500
Feet

LEGEND

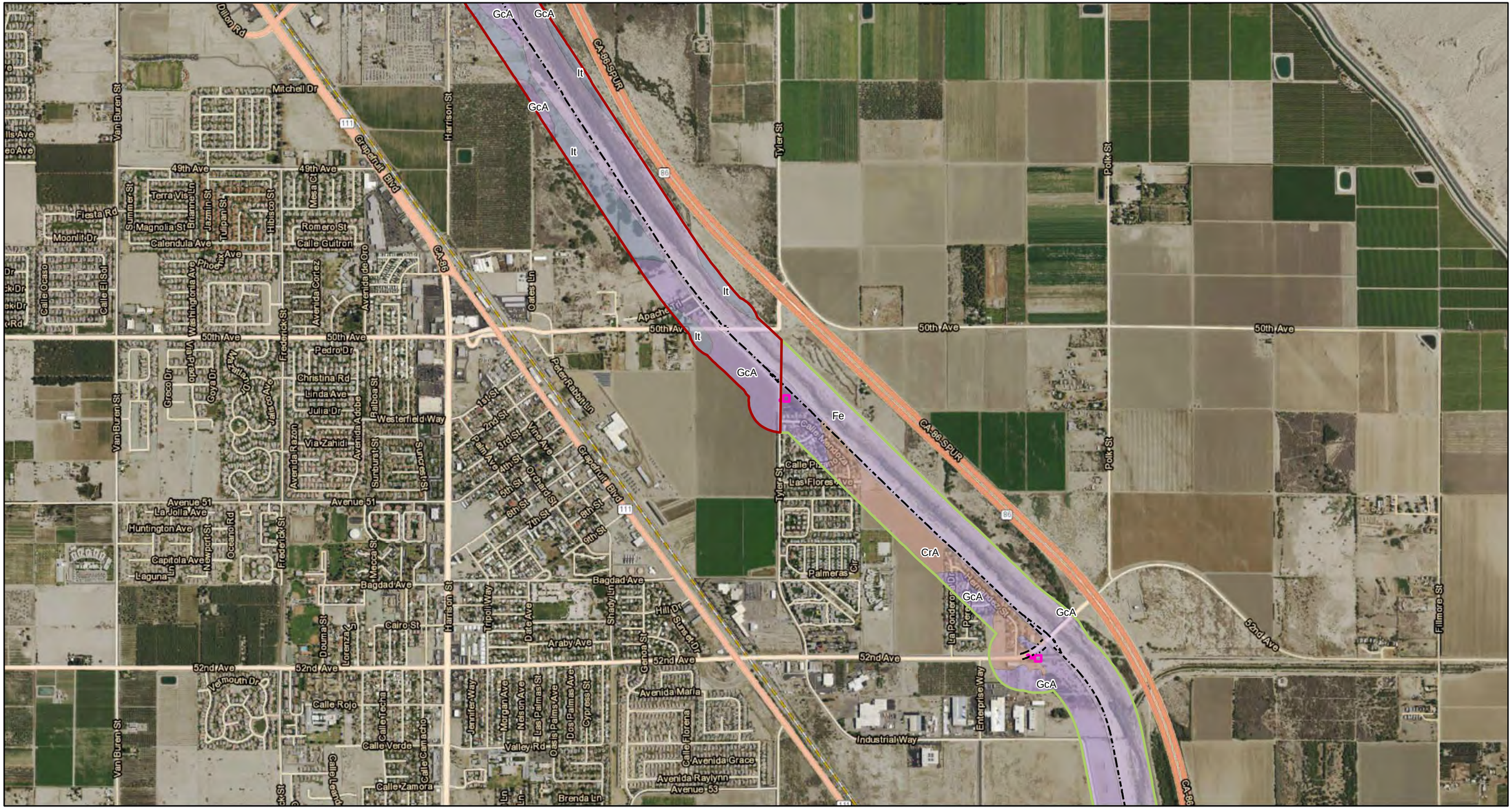
- Current Alignment 2016
- Staging Areas
- CpA: COACHELLA FINE SAND, 0-2% SLOPES
- CrA: COACHELLA FINE SAND, WET, 0-2% SLOPES
- Fe: FLUVENTS
- GaB: GILMAN LOAMY FINE SAND, 0-5% SLOPES
- GbA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- GcA: GcA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- GeA: GILMAN SILT LOAM, 0-2% SLOPES
- Is: INDIO VERY FINE SANDY LOAM
- It: INDIO VERY FINE SANDY LOAM, WET
- W: Water

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

Soils

amec foster wheeler



CVAG

0 1500
Feet

LEGEND

- Current Alignment 2016
- Staging Areas
- CrA: COACHELLA FINE SAND, WET, 0-2% SLOPES
- Fe: FLUVENTS
- GcA: GcA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- It: INDIO VERY FINE SANDY LOAM, WET

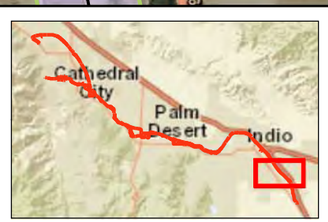


FIGURE 5

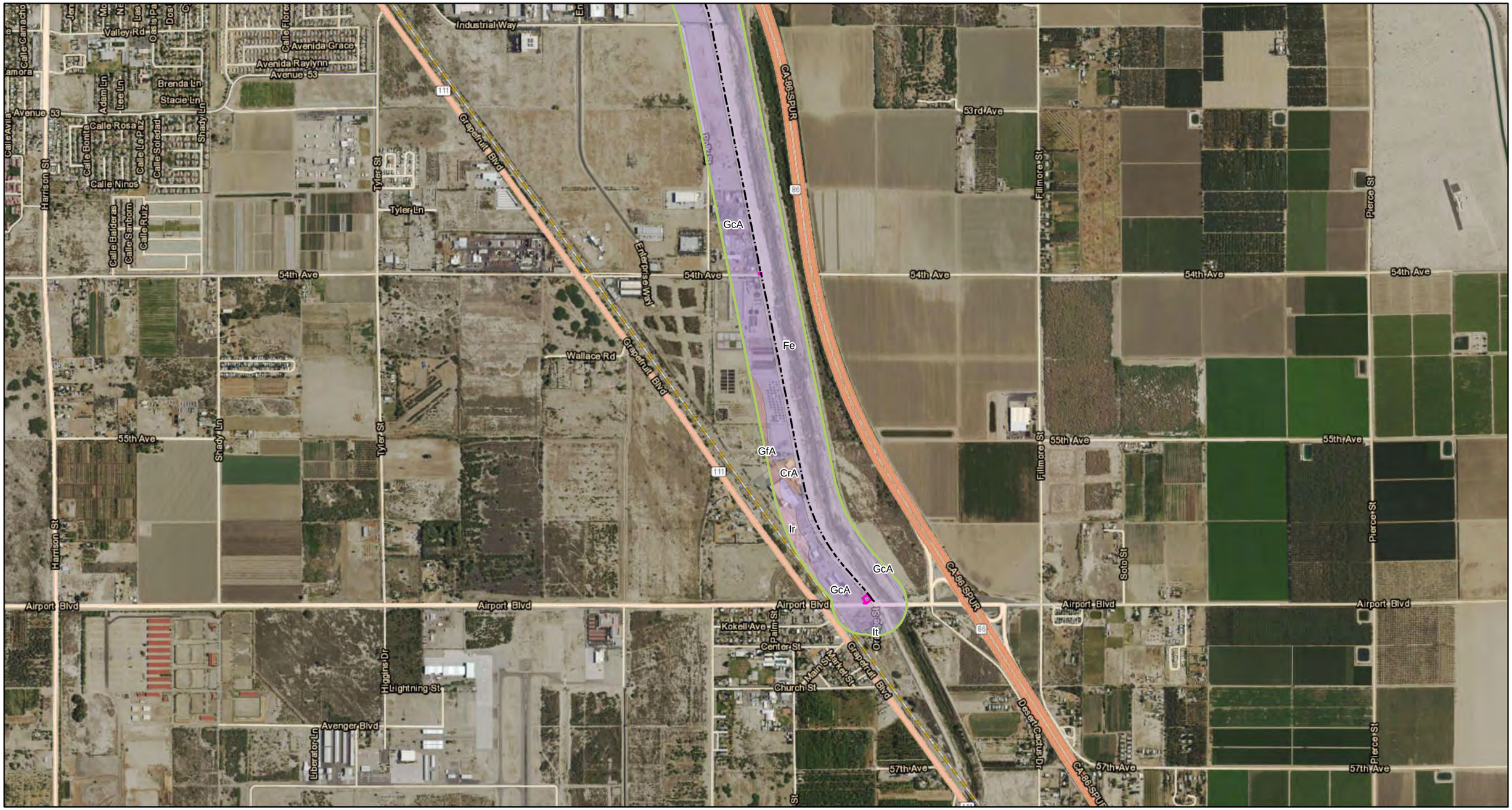
CV/LINK
MSHCP Compliance Report

Soils

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

amec foster wheeler



LEGEND

- Current Alignment 2016
- Staging Areas
- CrA: COACHELLA FINE SAND, WET, 0-2% SLOPES
- Fe: FLUVENTS
- GcA: GcA: GILMAN FINE SANDY LOAM, 0-2% SLOPES
- GfA: GILMAN SILT LOAM, WET, 0-2% SLOPES
- Ir: INDIO FINE SANDY LOAM, WET
- It: INDIO VERY FINE SANDY LOAM, WET

CVAG

0 1500
Feet

Source: CV Link_Construction Documents_ 30% Plan Set, soilmart ca_680, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\soils.mxd (7/14/2016)

FIGURE 5

CV/LINK
MSHCP Compliance Report

Soils

amec foster wheeler

Stabilized shielded sand fields

Stabilized shielded sand fields

Stabilized desert sand fields

Urban

Ephemeral sand fields

Urban

Sonoran mixed woody & succulent scrub

Urban

Urban

Urban

Stabilized shielded sand fields

LEGEND

- Current Alignment 2016
- Segment 1
- Segment 2
- Staging Areas
- Ephemeral sand fields
- Sonoran mixed woody & succulent scrub
- Stabilized desert sand fields
- Stabilized shielded sand fields
- Urban

CVAG

0 1500

Feet

N

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/19/2016)

FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler

Urban
Ephemeral sand fields
Stabilized shielded sand fields
Urban
Stabilized shielded sand fields
Urban
Urban
Stabilized shielded sand fields
Urban

LEGEND

- Current Alignment 2016
- Segment 1
- Segment 2
- Staging Areas
- Ephemeral sand fields
- Stabilized shielded sand fields
- Urban

CVAG

0 1500
Feet

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

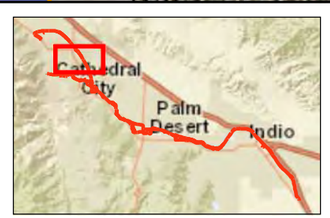
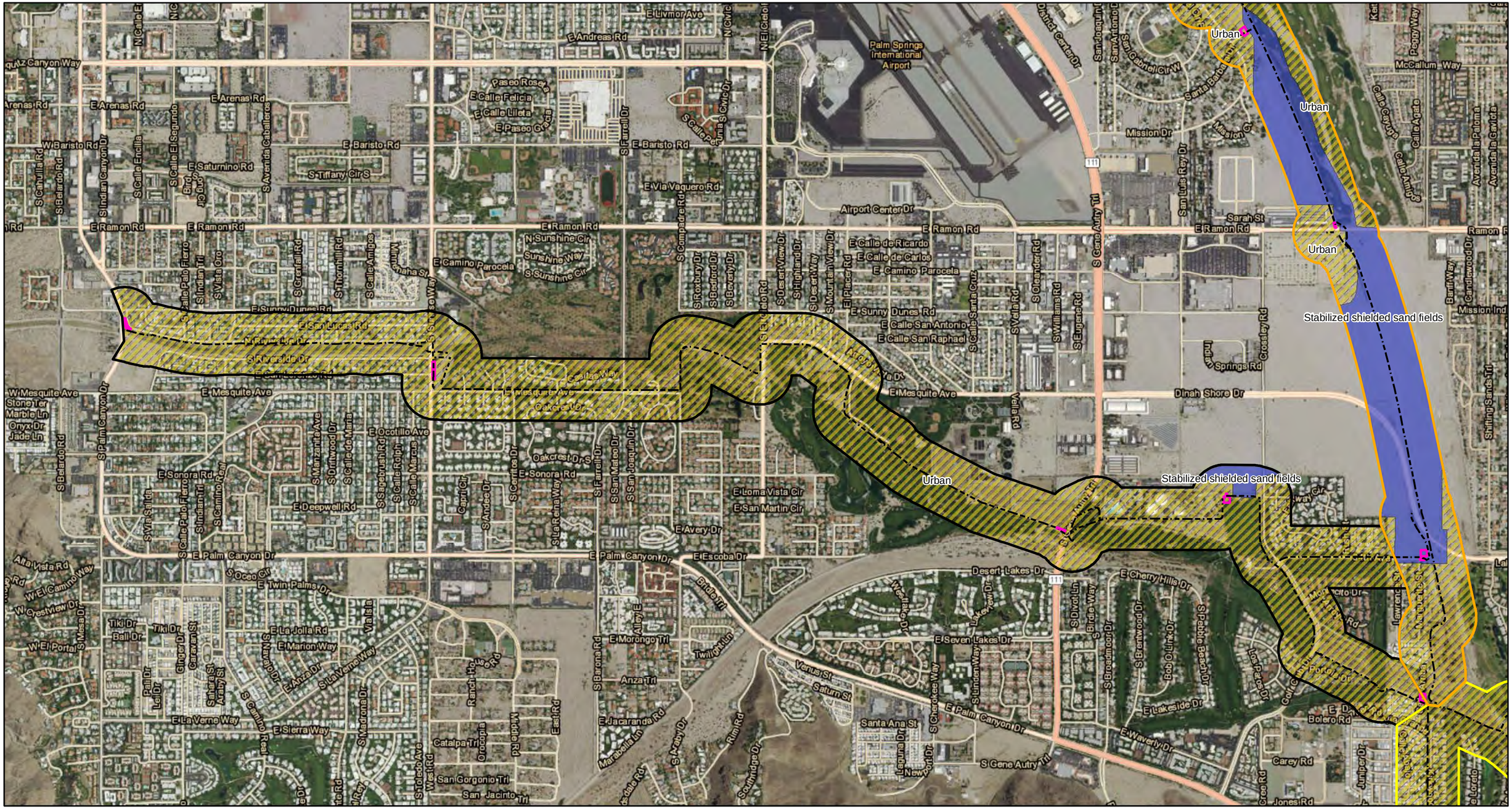


FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler



LEGEND

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/19/2016)

FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

Urban

Sonoran creosote bush scrub

LEGEND

- Current Alignment 2016
- Segment 2A
- Segment 2
- Segment 3
- Staging Areas
- Sonoran creosote bush scrub
- Urban

0 1500
Feet

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler

Sonoran creosote bush scrub

Sonoran creosote bush scrub

Urban

LEGEND

- Current Alignment 2016
- Segment 3
- Segment 4
- Segment 5
- Staging Areas
- Sonoran creosote bush scrub
- Urban

CVAG

0 1500

Feet

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

CV/LINK
MSHCP Compliance Report

Vegetation Communities

Stabilized shielded sand fields

Urban

Stabilized shielded sand fields

Mesquite hummocks

Stabilized shielded sand fields

Stabilized shielded sand fields

Urban

Urban

LEGEND

- Current Alignment 2016
- Segment 5
- Segment 6
- Segment 7
- Staging Areas
- Mesquite hummocks
- Stabilized shielded sand fields
- Urban

CVAG

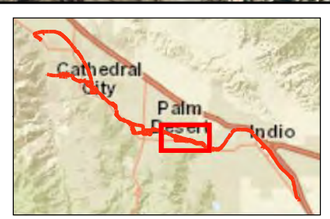
0 1500

Feet

N

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

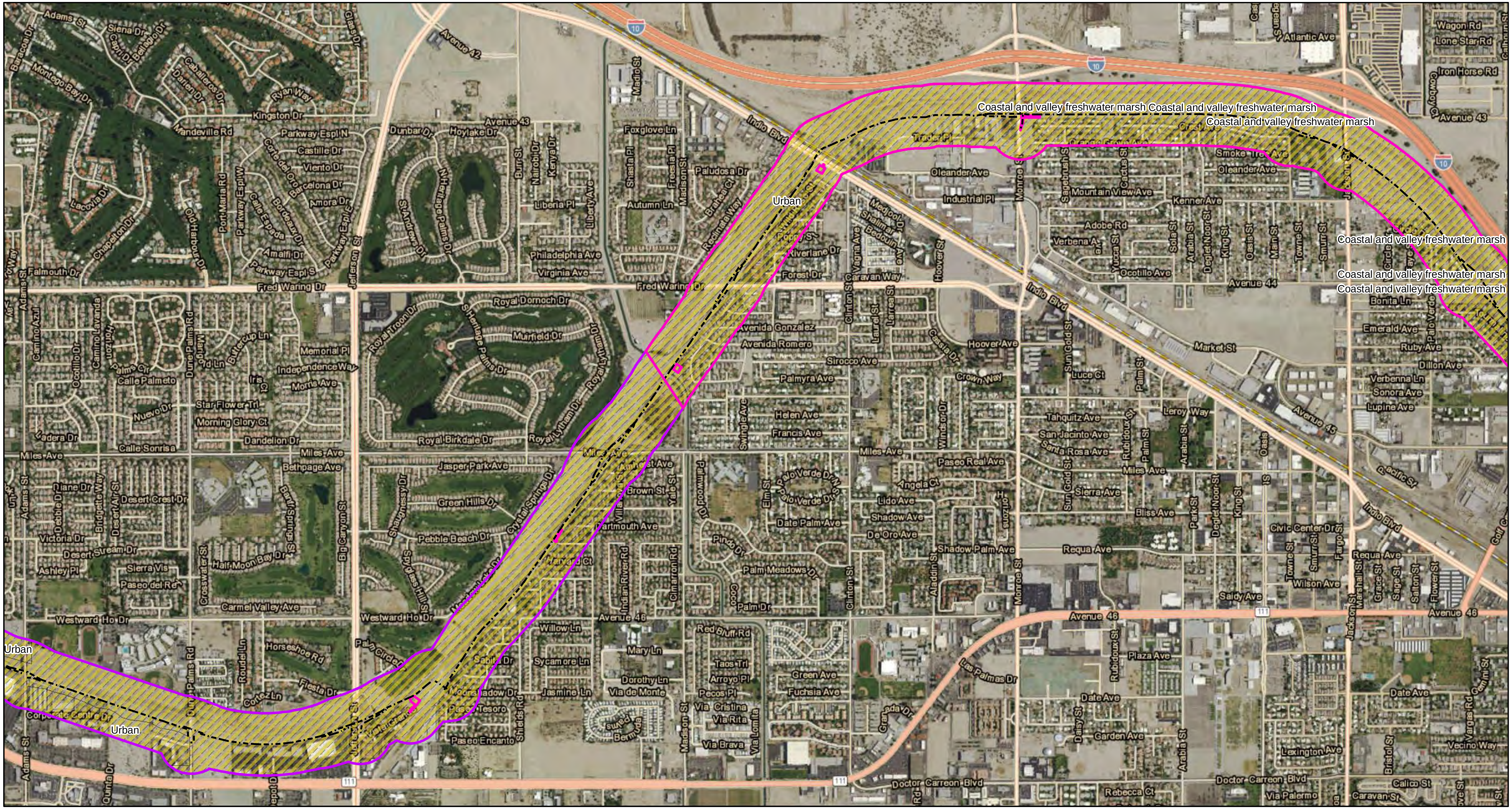
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (8/5/2016)



CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 7
- Segment 8
- Staging Areas
- Coastal and valley freshwater marsh
- Urban

CVAG

0 1500
Feet

N

FIGURE 6

Page 7 of 10

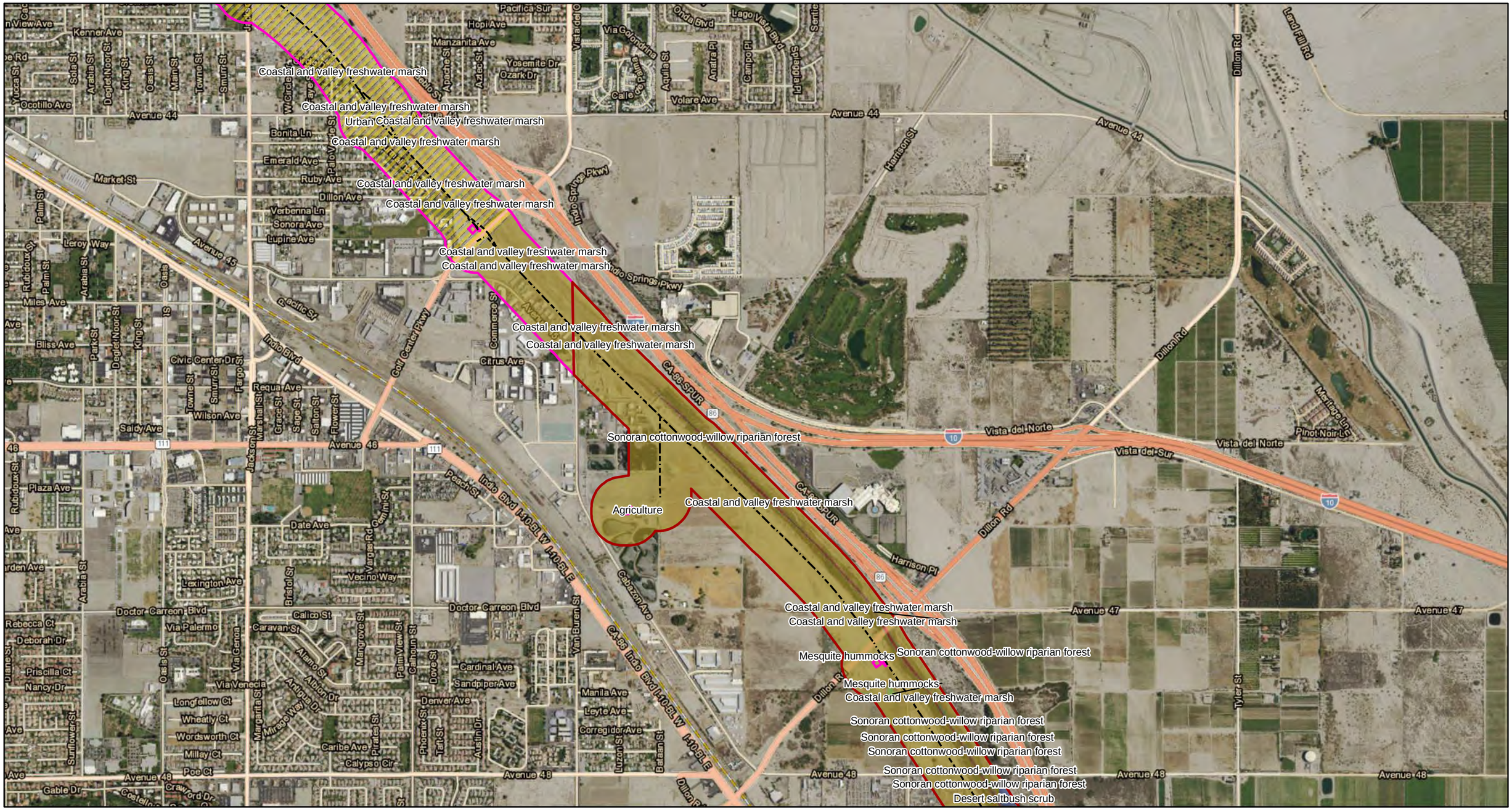
CV/LINK
MSHCP Compliance Report

Vegetation Communities

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

amec foster wheeler



LEGEND

- Current Alignment 2016
- Segment 8
- Segment 9
- Staging Areas
- Agriculture
- Coastal and valley freshwater marsh
- Desert saltbush scrub
- Mesquite hummocks
- Sonoran cottonwood-willow riparian forest
- Urban

0 1500 Feet

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler

Sonoran cottonwood-willow riparian forest
Agriculture
Mesquite hummocks
Mesquite hummocks
Mesquite hummocks
Desert saltbush scrub
Desert saltbush scrub
Mesquite hummocks
Mesquite hummocks
Mesquite hummocks
Mesquite hummocks
Mesquite hummocks
Coastal and valley freshwater marsh
Urban
Agriculture
Urban
Desert saltbush scrub
Agriculture

LEGEND

- Current Alignment 2016
- Segment 9
- Segment 10
- Staging Areas
- Agriculture
- Coastal and valley freshwater marsh
- Desert saltbush scrub
- Mesquite hummocks
- Sonoran cottonwood-willow riparian forest
- Urban

0 1500 Feet

Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

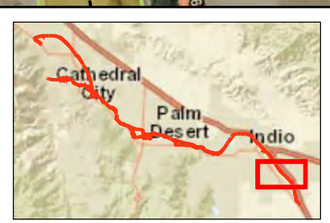


FIGURE 6

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler

Coastal and valley freshwater marsh
Agriculture
Sonoran cottonwood-willow riparian forest
Agriculture

LEGEND

- Current Alignment 2016
- Segment 10
- Staging Areas
- Agriculture
- Coastal and valley freshwater marsh
- Sonoran cottonwood-willow riparian forest

0 1500
Feet

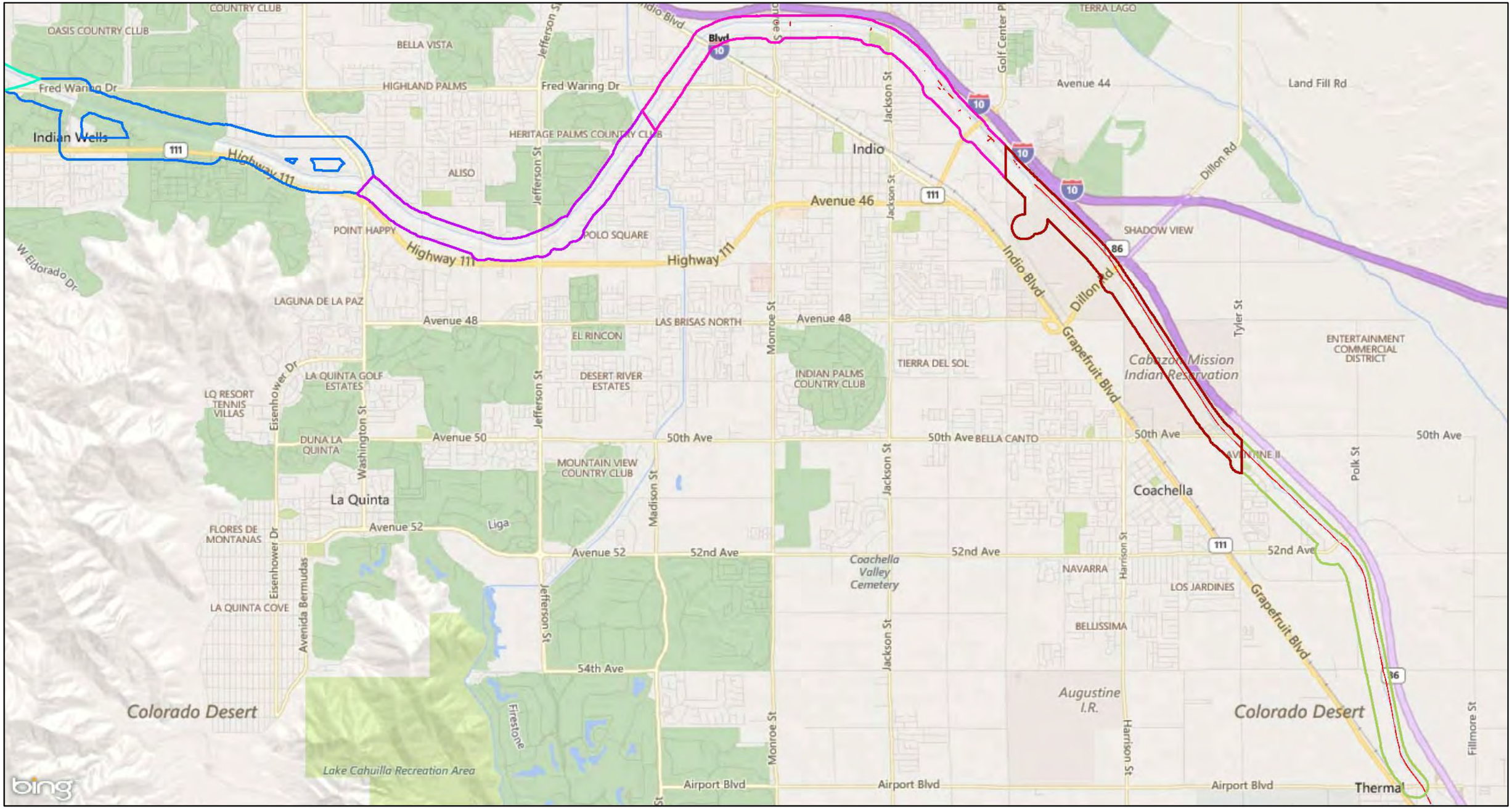
Source: CV Link_Construction Documents_ 30% Plan Set, CVMSHCP_Vegetation, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\veg.mxd (7/14/2016)

CV/LINK
MSHCP Compliance Report

Vegetation Communities

amec foster wheeler



LEGEND

- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- California Black Rail

CVAG

0 1

Miles

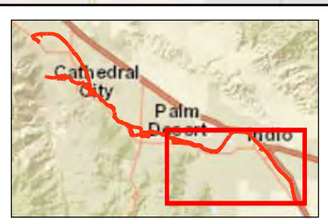


FIGURE 7-A

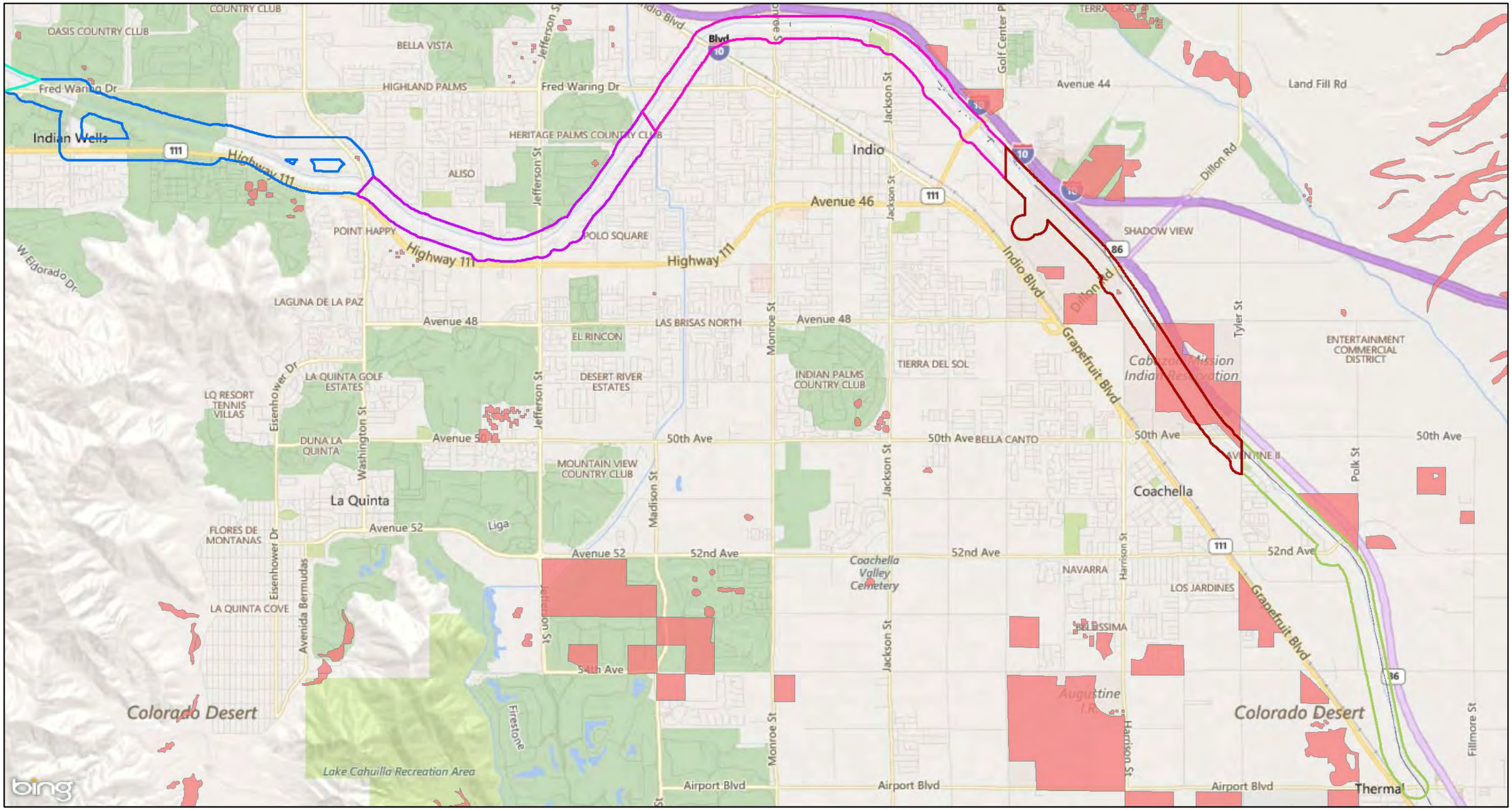
CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/8/2016)

amec foster wheeler

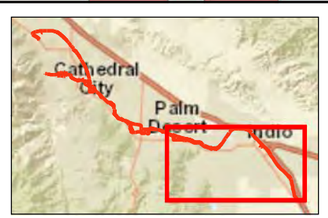


LEGEND

- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- Summer Tanger

CVAG

0 1 Miles



Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

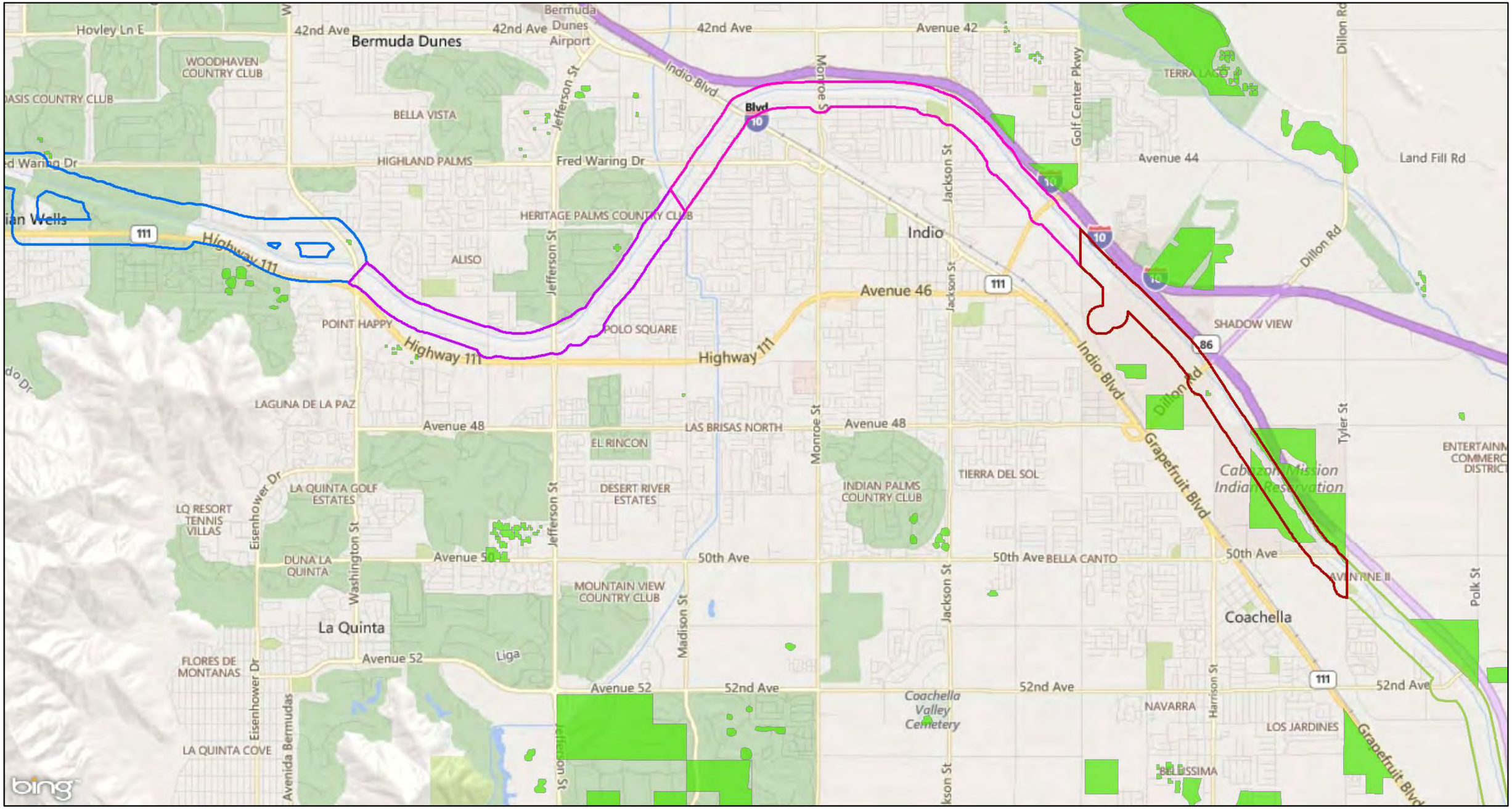
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/8/2016)

FIGURE 7-B

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler



LEGEND

- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- Crissal Thrasher

CVAG

0 0.75
Miles

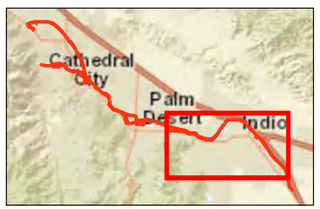


FIGURE 7-C

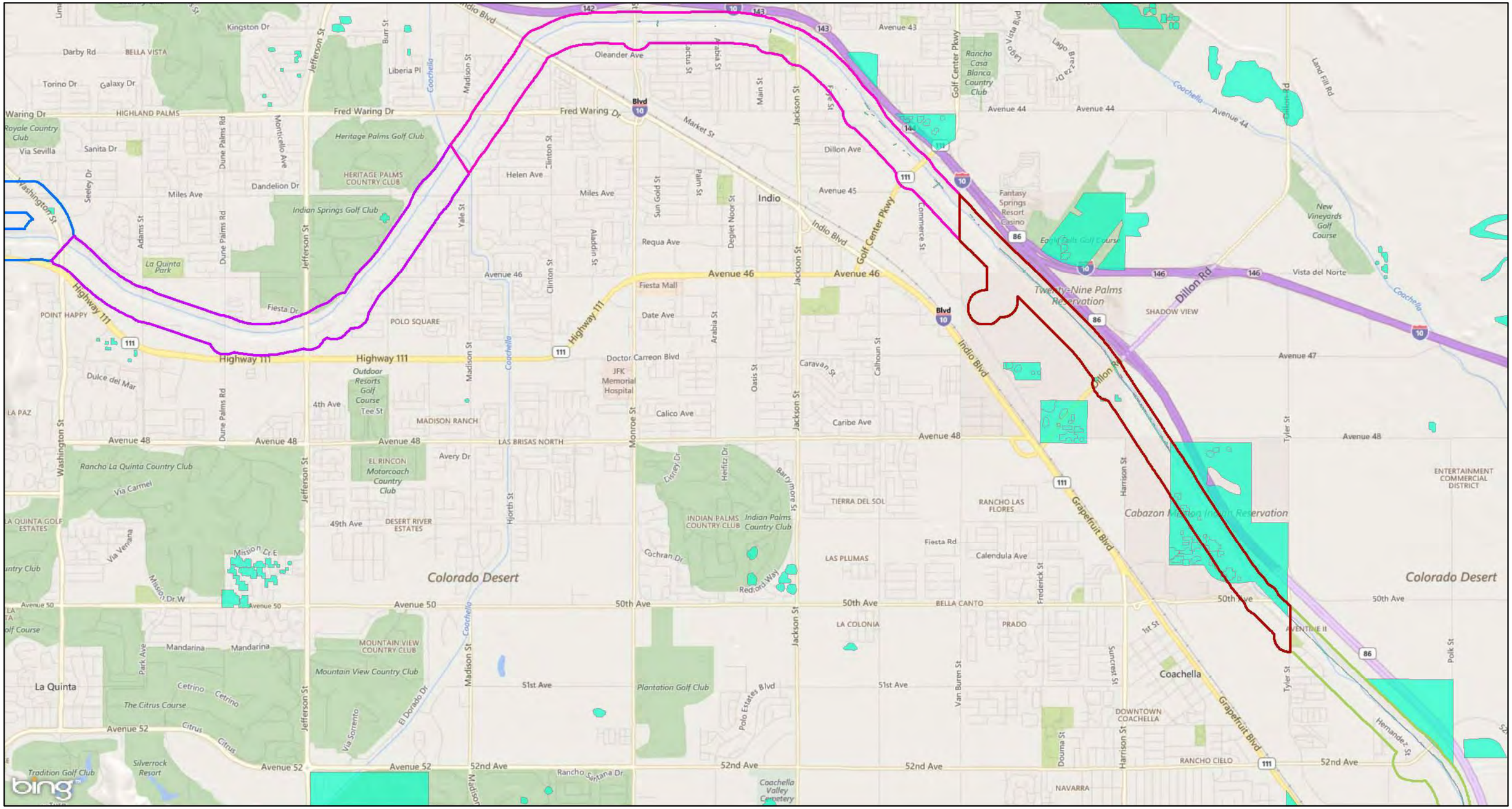
CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/8/2016)

amec foster wheeler



LEGEND

- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- Least Bell's Vireo

CVAG

0 0.6
Miles

FIGURE 7-D

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/8/2016)

amec foster wheeler

LEGEND

- Segment 2A
- Segment 1
- Segment 2
- Segment 3
- Segment 4
- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- Le Conte's Thrasher

0 2
Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

FIGURE 7-E

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

LEGEND

- Segment 2A
- Segment 1
- Segment 2
- Segment 3
- Segment 4
- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- Palm Springs Pocket Mouse

0 2
Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

FIGURE 7-F

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

LEGEND

- Segment 2A
- Segment 1
- Segment 2
- Segment 3
- Segment 4
- Segment 5
- Segment 6
- Segment 7
- Segment 8
- Segment 9
- Segment 10
- Palm Springs Ground Squirrel

0 2
Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

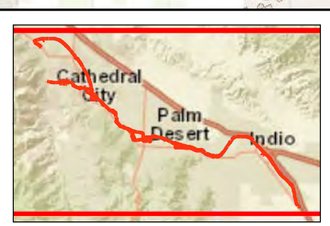
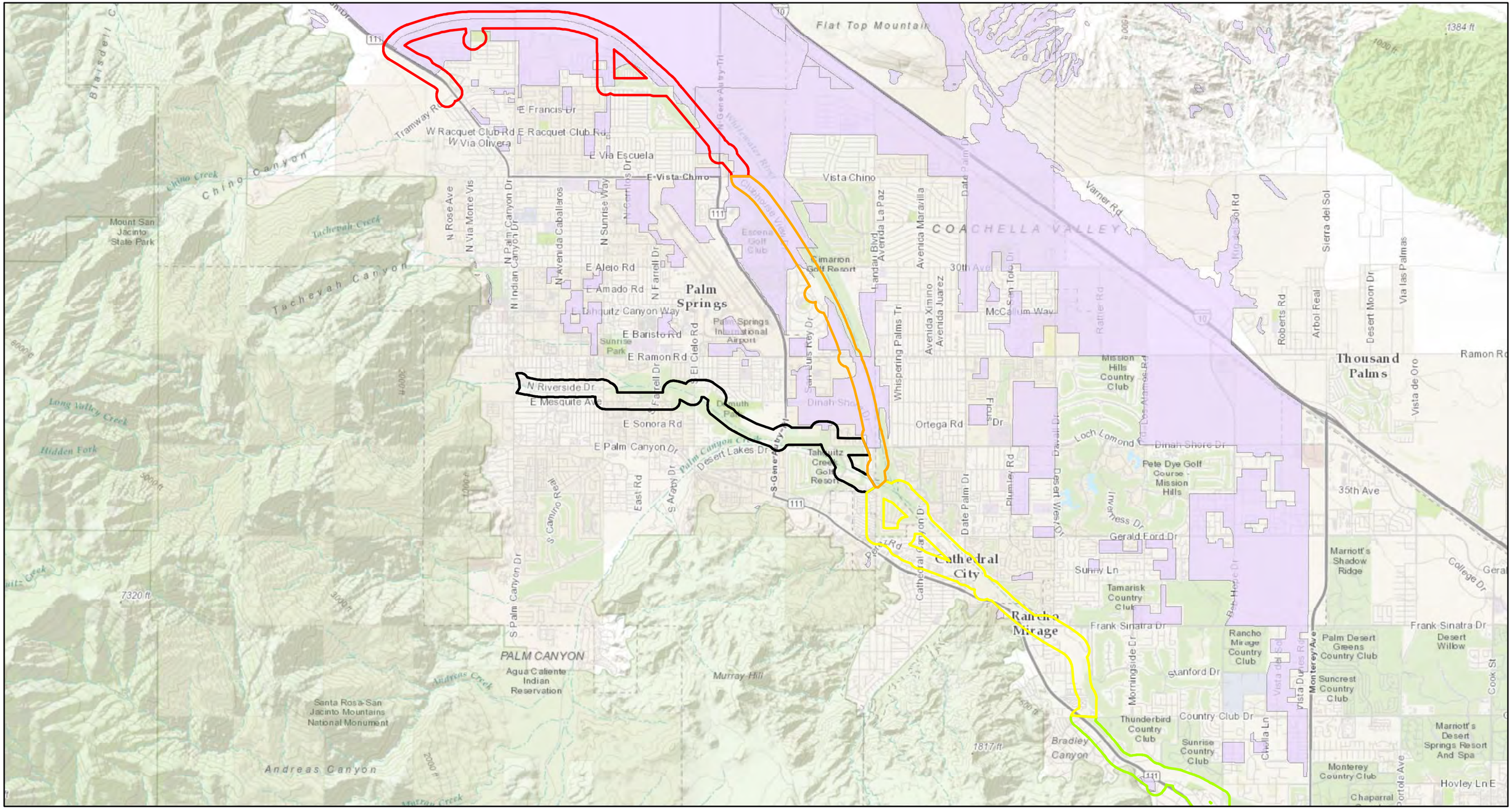


FIGURE 7-G

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat



LEGEND

Segment 2A | Segment 2 | Segment 4
Segment 1 | Segment 3 | Coachella Valley Jerusalem Cricket

CVAG

0 1
Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/19/2016)

FIGURE 7-H

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler

LEGEND

Segment 2A | Segment 3 | Segment 6 | Flat-tailed Horned Lizard
Segment 1 | Segment 4 | Segment 7
Segment 2 | Segment 5 | Segment 8

CVAG

0 1.5
Miles

FIGURE 7-I

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

amec foster wheeler

LEGEND

Segment 2A
Segment 1
Segment 2
Segment 3
Segment 4
Segment 5
Segment 6
Segment 7
Segment 8
Fringe-toed Lizard

CVAG

0 1.5
Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/19/2016)

FIGURE 7-J

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler

LEGEND

Segment 2A
Segment 1
Segment 2
Segment 3
Segment 4
Segment 5
Segment 6
Segment 7
Segment 8
Coachella Giant Sand Treader Cricket

CVAG

0 1.5
Miles

N

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

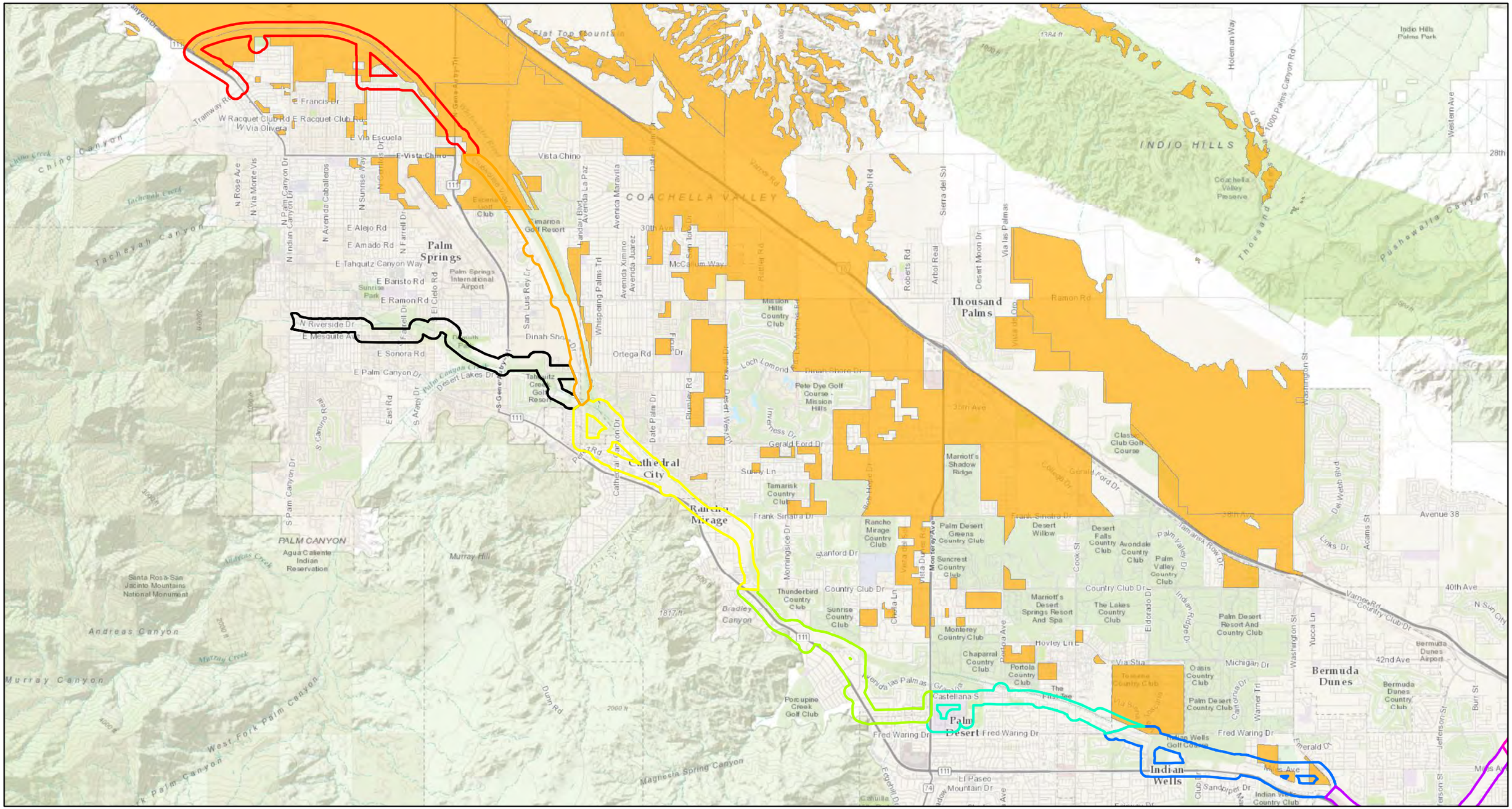
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

FIGURE 7-K

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler



LEGEND

Segment 2A
Segment 1
Segment 2
Segment 3
Segment 4
Segment 5
Segment 6
Segment 7
Segment 8
Coachella Valley Milkvetch

0 1
Miles

FIGURE 7-L

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/27/2016)

amec foster wheeler

LEGEND

Segment 2A
Segment 1
Segment 2
Segment 3
Segment 4
Segment 5
Segment 6
Segment 7
Desert Tortoise

CVAG

0 1
Miles

Source: CV Link_Construction Documents_ 30% Plan Set, CVAG dataset, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\model.mxd (7/19/2016)

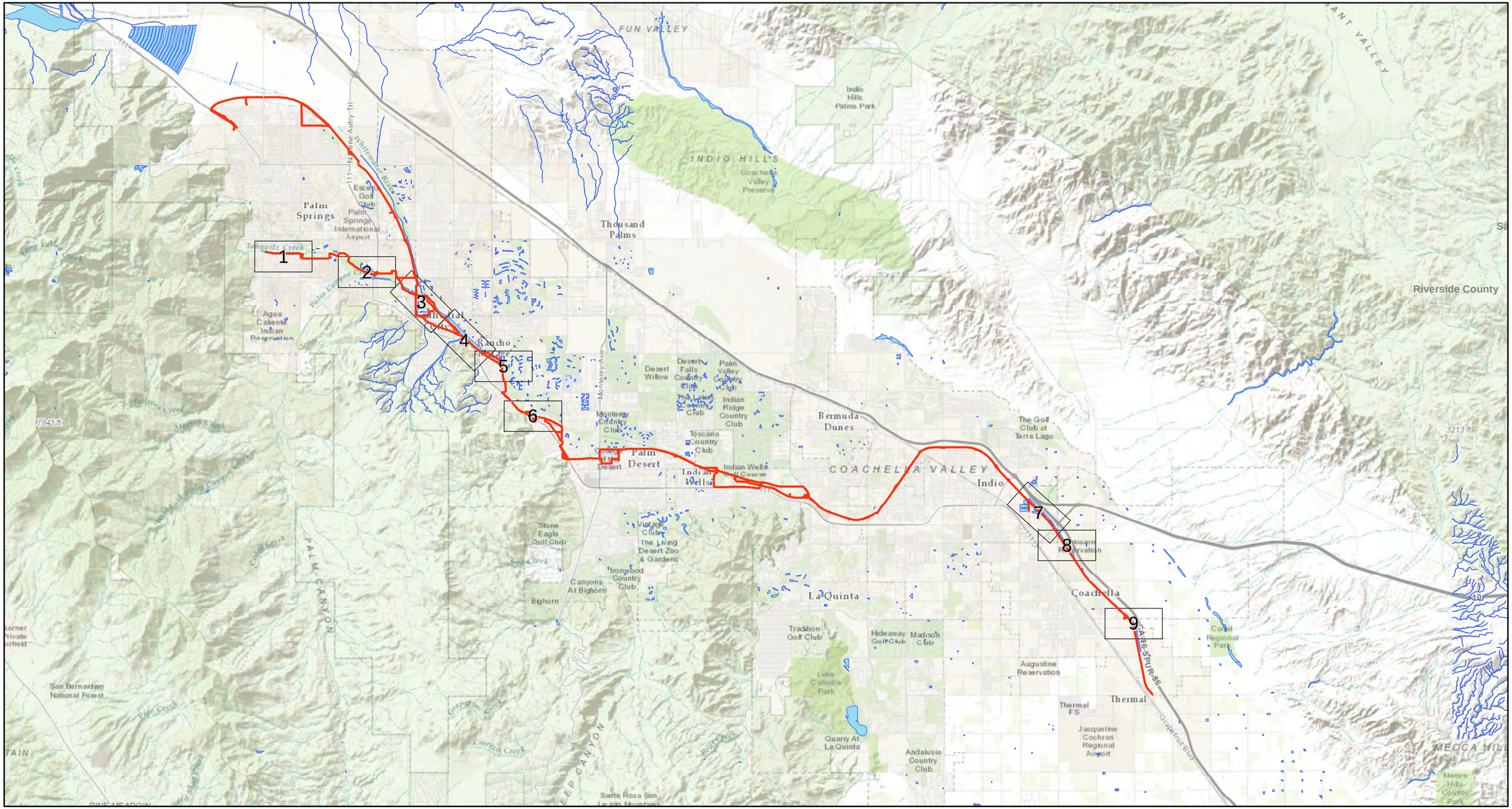
FIGURE 7-M

CV/LINK
MSHCP Compliance Report

CVAG Model Habitat

amec foster wheeler

Jurisdictional Delineation Report Maps



CVAG

LEGEND

- Current Alignment 2016
- NWI Wetland Areas

0 1 2 3

Miles

N

FIGURE 3A

DRAFT

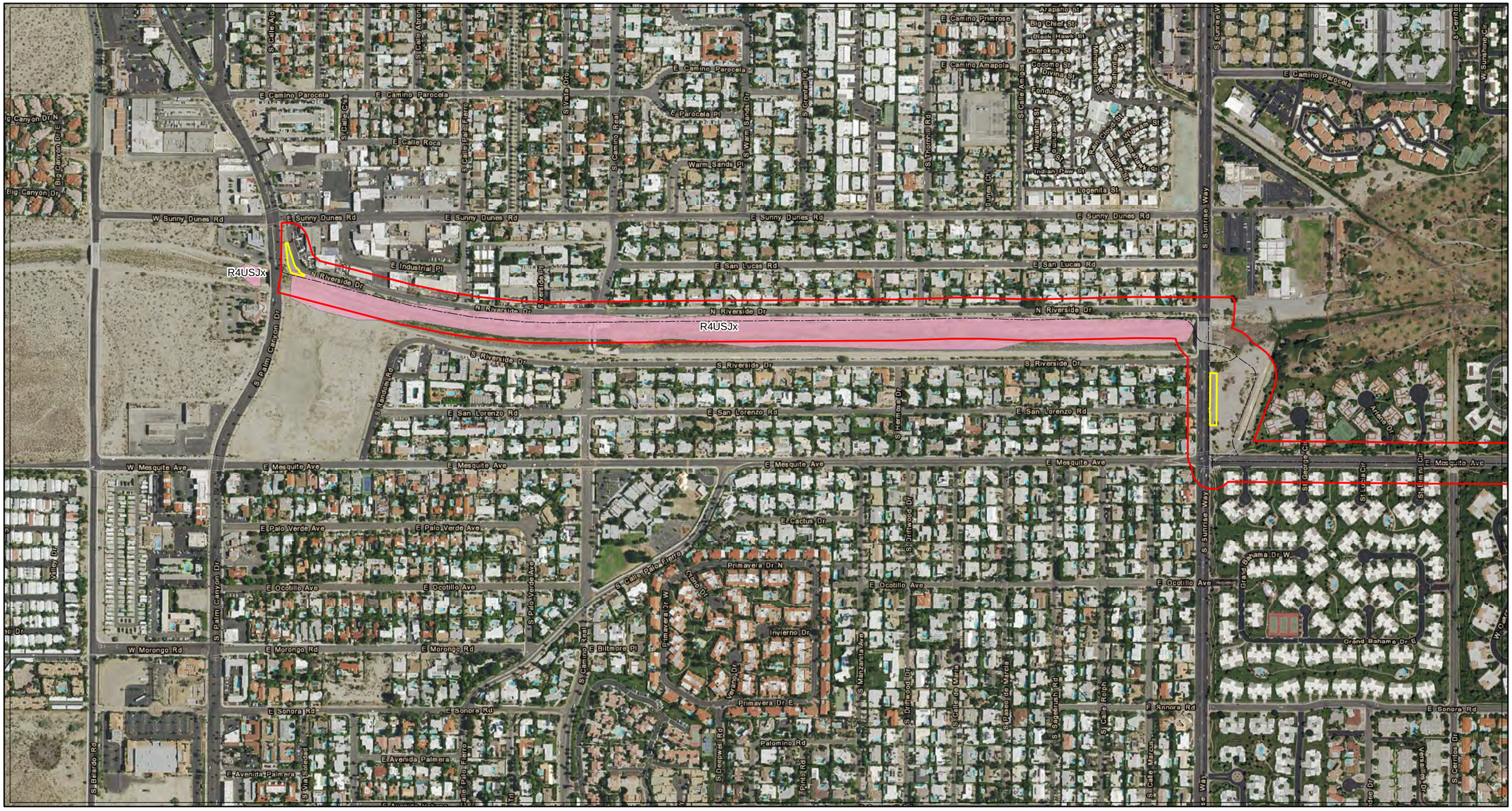
CV Link
Jurisdictional Delineation Report

NWI Overview

Source: CV Link_Construction Documents_ 30% Plan Set, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\NWI-index.mxd (7/27/2016)

amec foster wheeler



CVAG

0 500
Feet

LEGEND

- Survey Area
- Updated Alignment 7.25.16
- Staging Area
- R4USJx: Riverine, intermittent, Unconsolidated shore, intermittently flooded, excavated

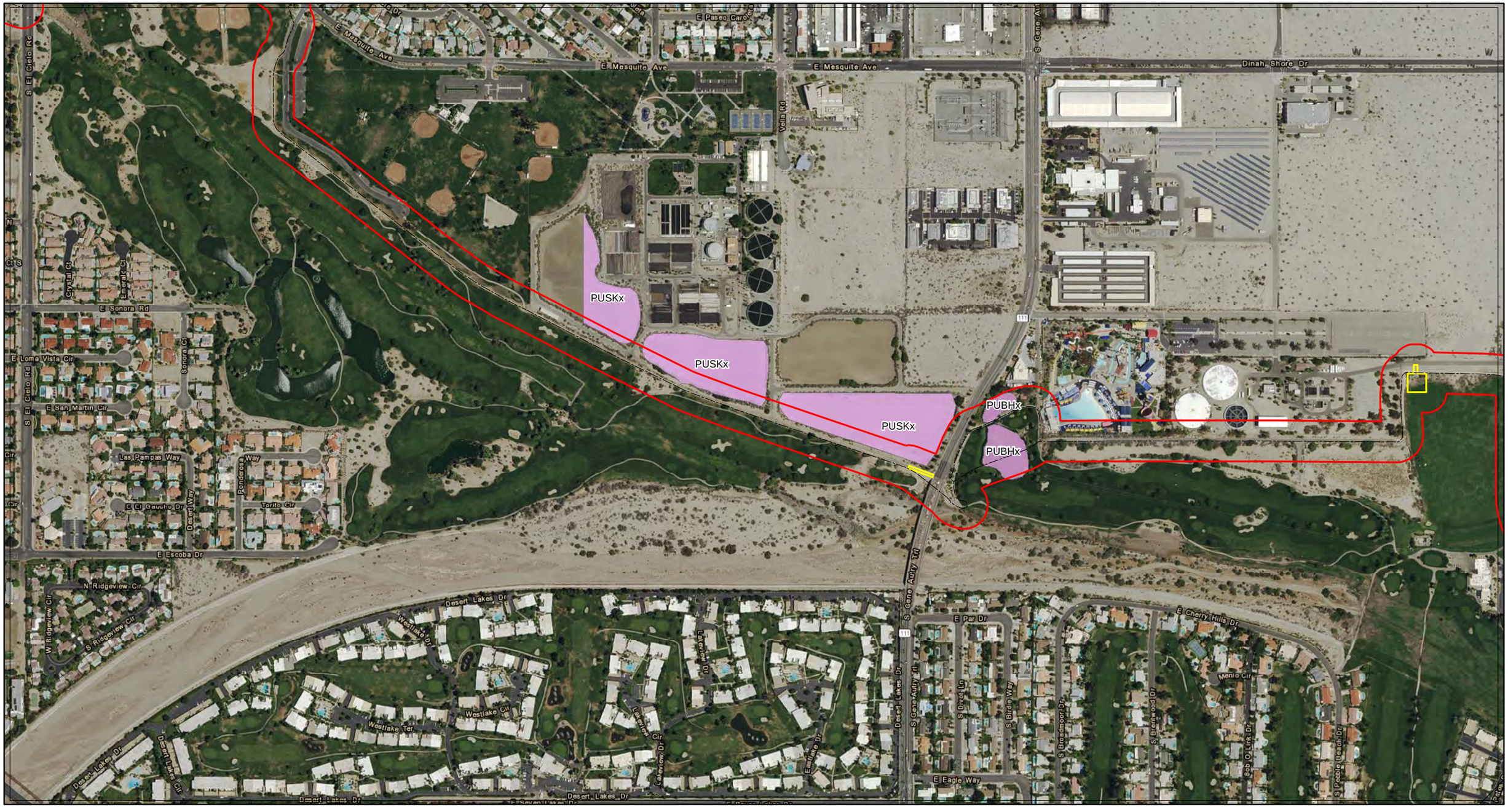
FIGURE 3B

CV Link
Jurisdictional Delineation Report

NWI Map

Source: CV LINK KMZ UPDATE 7.25.16 PL 2, CONUS_wet_poly.shp,world imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\NWI.mxd (7/27/2016)



CVAG

0 500
Feet

LEGEND

- Survey Area
- Updated Alignment 7.25.16
- Staging Area
- PUBHx: Palustrrine, Unconsolidated Bottom, Permanently Flooded
- PUSKx: Palustrine, Unconsolidated shore, Artificially Flooded, Excavated

Source: CV LINK KMZ UPDATE 7.25.16 PL 2, CONUS_wet_poly.shp,world imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\NWI.mxd (7/27/2016)

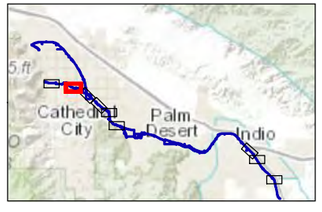
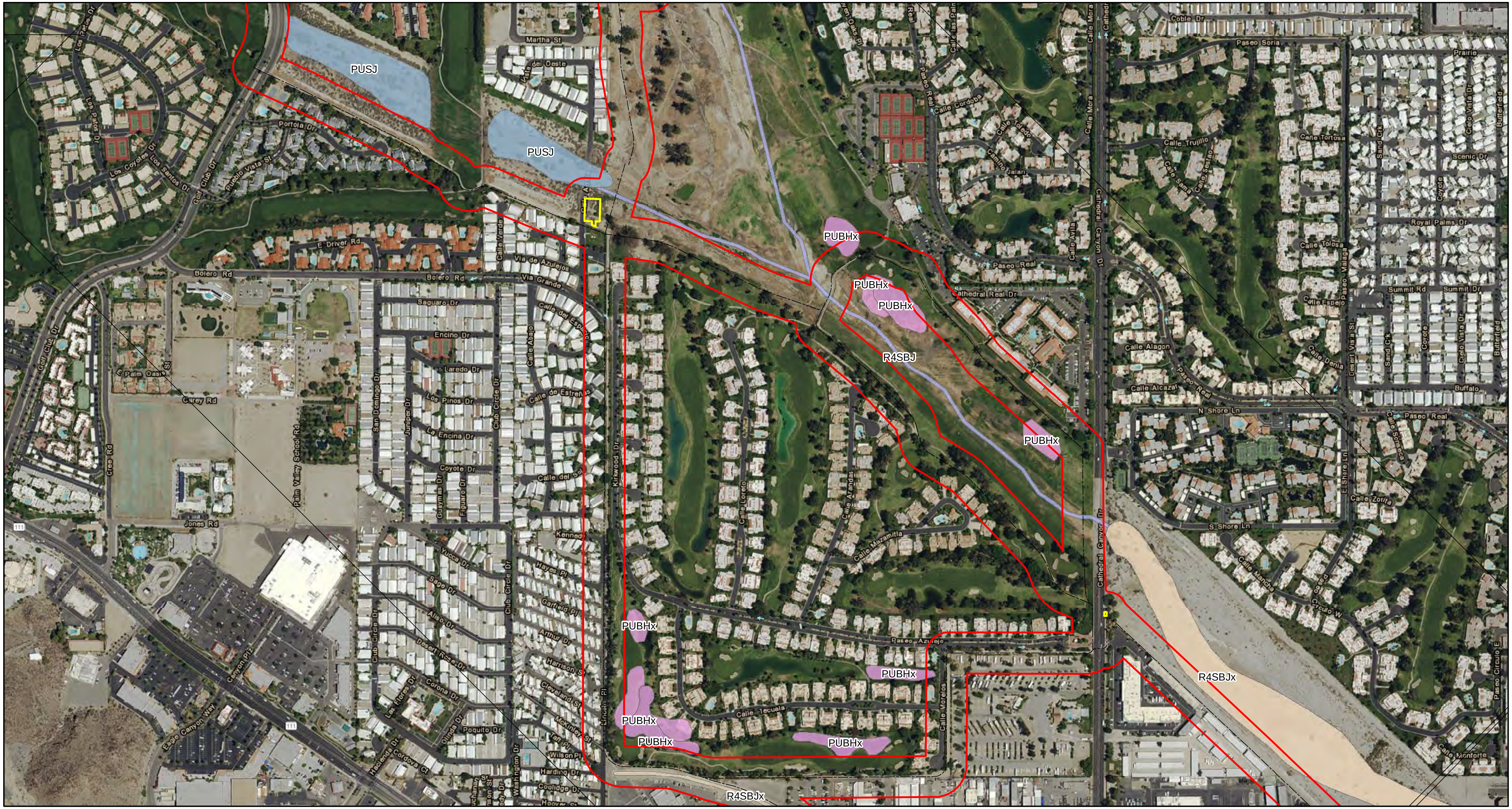


FIGURE 3B

CV Link
Jurisdictional Delineation Report

NWI Map

amec foster wheeler



CVAG

0 500
Feet

LEGEND

- Survey Area
- Updated Alignment 7.25.16
- Staging Area
- PUBHx: Palustrrine, Unconsolidated Bottom, Permanently Flooded
- PUSJ:Palustrine, Unconsolidated shore, intermittent
- R4SBJ: Riverine, intermittent, streambed, intermittently flooded
- R4SBJx: Riverine, intermittent, streambed, intermittently flooded, excavated

Source: CV LINK KMZ UPDATE 7.25.16 PL 2; CONUS_wet_poly.shp;World Imagery
S:\active projects\CV-Link MSHCP Compliance ...

FIGURE 3B

Page 3 of 9

CV Link
Jurisdictional Delineation Report

NWI Map

amec foster wheeler

PEMA

R4SBJx

LEGEND

- Survey Area
- Updated Alignment 7.25.16
- Staging Area
- PEMA: Palustrine, Emergent, Temporarily Flooded
- R4SBJx: Riverine, intermittent, streambed, intermittently flooded, excavated

CVAG

0 500
Feet

Source: CV LINK KMZ UPDATE 7.25.16 PL 2, CONUS_wet_poly.shp,world imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\NWI.mxd (7/27/2016)

FIGURE 3B

CV Link
Jurisdictional Delineation Report

NWI Map

amec foster wheeler

CVAG

0 500
Feet

LEGEND

- Survey Area
- Updated Alignment 7.25.16
- Staging Area
- R4SBJx: Riverine, intermittent, streambed, intermittently flooded, excavated

FIGURE 3B

CV Link
Jurisdictional Delineation Report

NWI Map

Source: CV LINK KMZ UPDATE 7.25.16 PL 2, CONUS_wet_poly.shp,world imagery

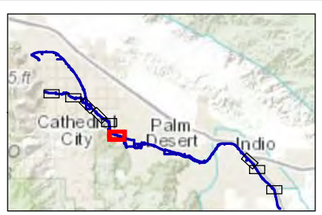
S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\NWI.mxd (7/27/2016)

CVAG

0 500
Feet

LEGEND

- Survey Area
- Updated Alignment 7.25.16
- Staging Area
- PUSCh: Palustrine, Unconsolidated shore, seasonally flooded, diked/impounded



Source: CV LINK KMZ UPDATE 7.25.16 PL 2, CONUS_wet_poly.shp,world imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\NWI.mxd (7/27/2016)

FIGURE 3B

CV Link
Jurisdictional Delineation Report

NWI Map

amec foster wheeler

LEGEND

- Survey Area
- Updated Alignment 7.25.16
- Staging Area
- PEMFx: Palustrine, Emergent, Semiparmently Flooded, Excavated
- PUBHx: Palustrrine, Unconsolidated Bottom, Permanently Flooded
- PUSCx: Palustrine, Unconsolidated shore, Seasonally Flooded, excavated

0 500 Feet

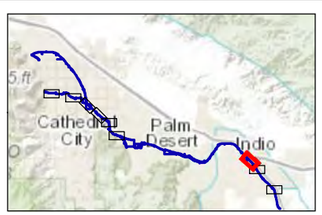


FIGURE 3B

CV Link
Jurisdictional Delineation Report

NWI Map

Source: CV LINK KMZ UPDATE 7.25.16 PL2, CONUS_wet_poly.shp,world imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\NWI.mxd (7/27/2016)

amec foster wheeler

LEGEND

- Survey Area
- Updated Alignment 7.25.16
- Staging Area
- PEMFx: Palustrine, Emergent, Semiparmently Flooded, Excavated

CVAG

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Feet

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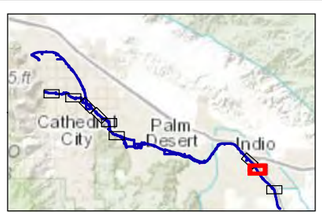

Source: CV LINK KMZ UPDATE 7.25.16 PL 2, CONUS_wet_poly.shp,world imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\NWI.mxd (7/27/2016)

FIGURE 3B

CV Link
Jurisdictional Delineation Report

NWI Map

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LEGEND

- Survey Area
- Updated Alignment 7.25.16
- Staging Area
- PSSC: Palustrine, Scrub-shrub, Seasonally Flooded

CVAG

0 500
Feet

Source: CV LINK KMZ UPDATE 7.25.16 PL 2, CONUS_wet_poly.shp,world imagery

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\NWI.mxd (7/27/2016)

FIGURE 3B

CV Link
Jurisdictional Delineation Report

NWI Map

amec foster wheeler

APPENDIX C

JURISDICTIONAL DELINEATION MAPS

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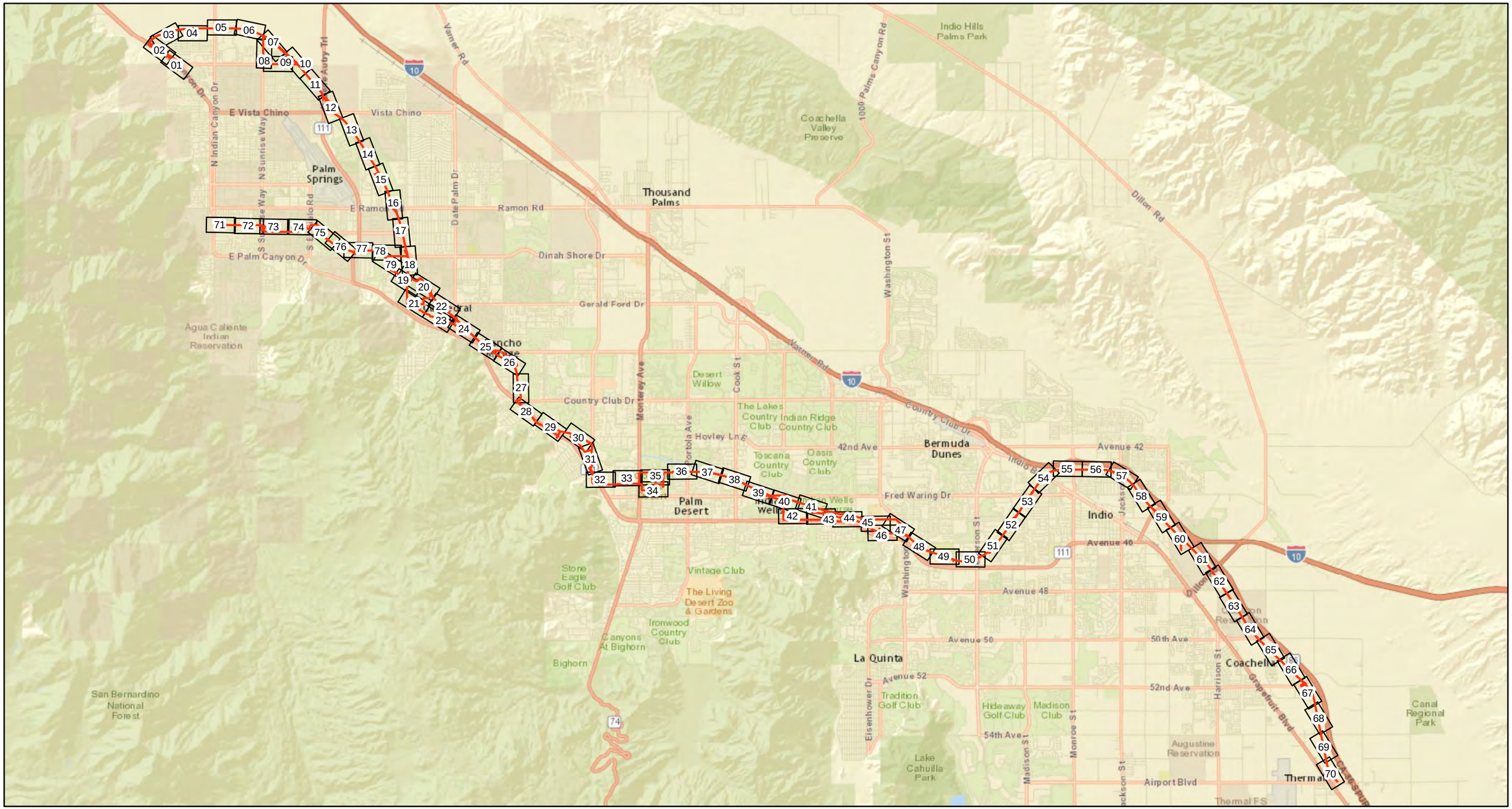

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LEGEND

- Current Alignment 2016
- Index Pages

APPENDIX 3A

DRAFT

CV Link
Jurisdictional Delineation Report

JD Overview

Source: CV Link_Construction Documents_ 30% Plan Set, Bing Maps

S:\active projects\CV-Link MSHCP Compliance 3-2252-0065\graphics\mxd\JD-index.mxd (7/19/2016)

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LEGEND

- Survey Area
- CV Link Path
- Staging Area
- Permanent Impact
- Temporary Impact
- Waters of the US/State
- USACE Wetland
- CDFW Streambed
- Photo Location

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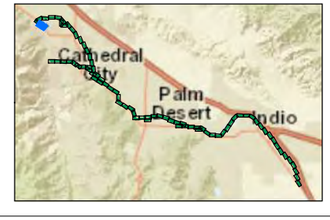

Source: CV Link_Construction Documents_ 30% Plan Set, Bing Maps

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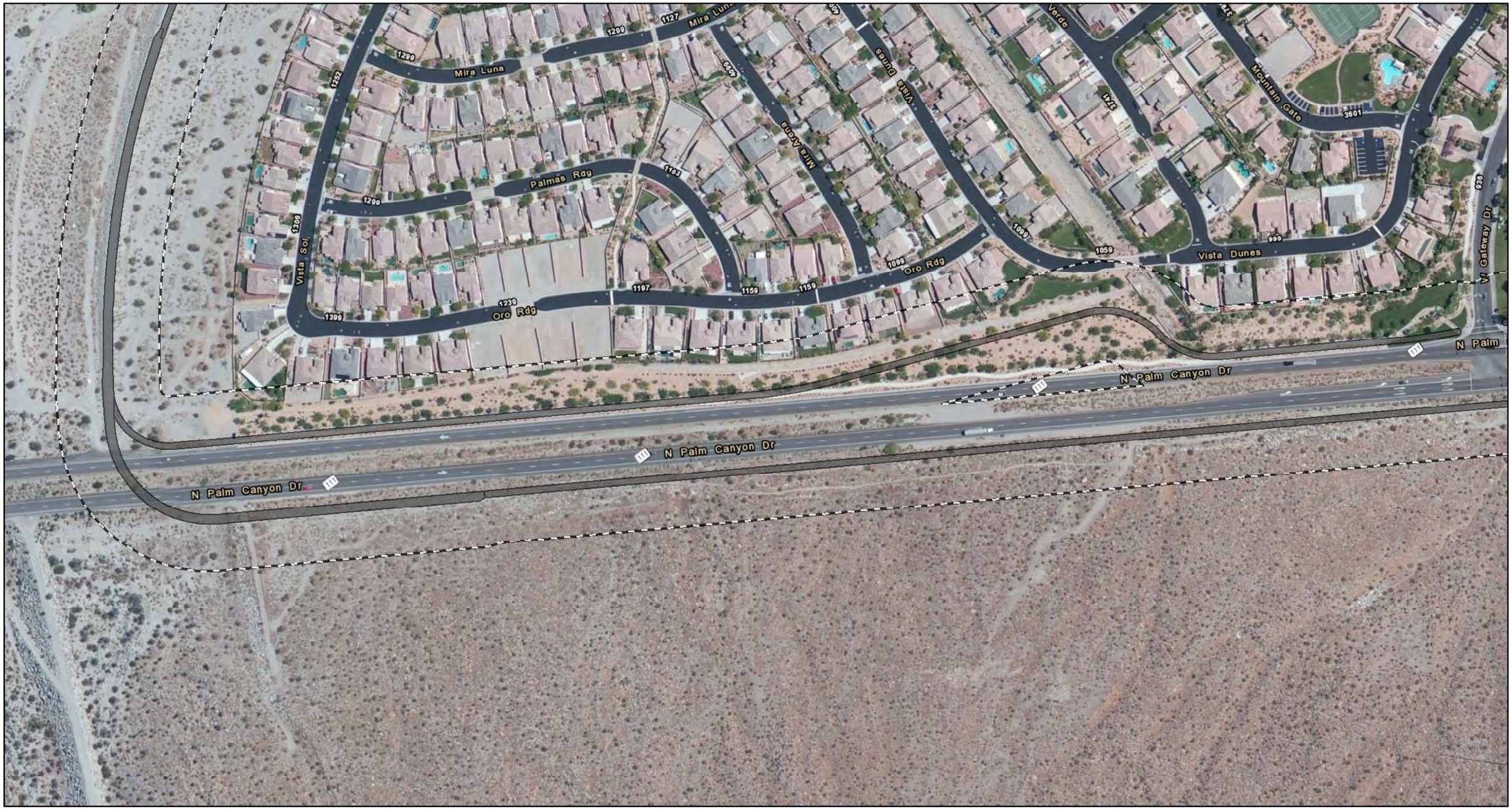
CV LINK
Jurisdictional Delineation Report

Jurisdictional Delineation



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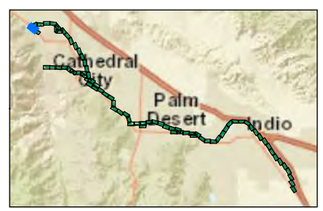
LEGEND

- Survey Area
- CV Link Path
- Staging Area
- Permanent Impact
- Temporary Impact
- Waters of the US/State
- USACE Wetland
- CDFW Streambed
- Photo Location



Source: CV Link_Construction Documents_ 30% Plan Set, Bing Maps

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CV LINK
Jurisdictional Delineation Report

Jurisdictional Delineation

amec foster wheeler

LEGEND

- Survey Area
- CV Link Path
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- Waters of the US/State
- USACE Wetland
- CDFW Streambed
- Photo Location

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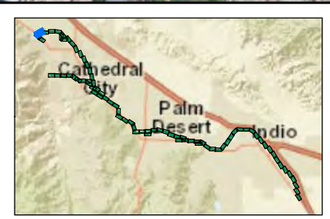

Source: CV Link_Construction Documents_ 30% Plan Set, Bing Maps

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Jurisdictional Delineation Report

Jurisdictional Delineation

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- Temporary Impact
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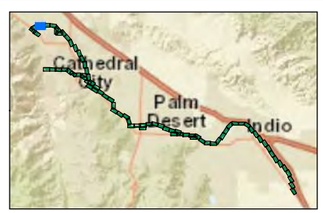
- CDFW Streambed
- Photo Location



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Jurisdictional Delineation Report

Jurisdictional Delineation

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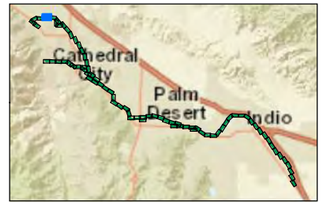

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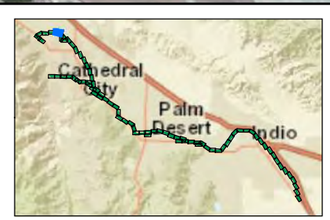

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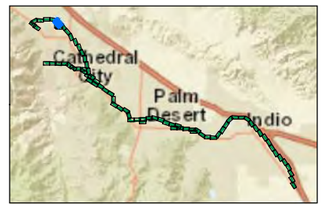

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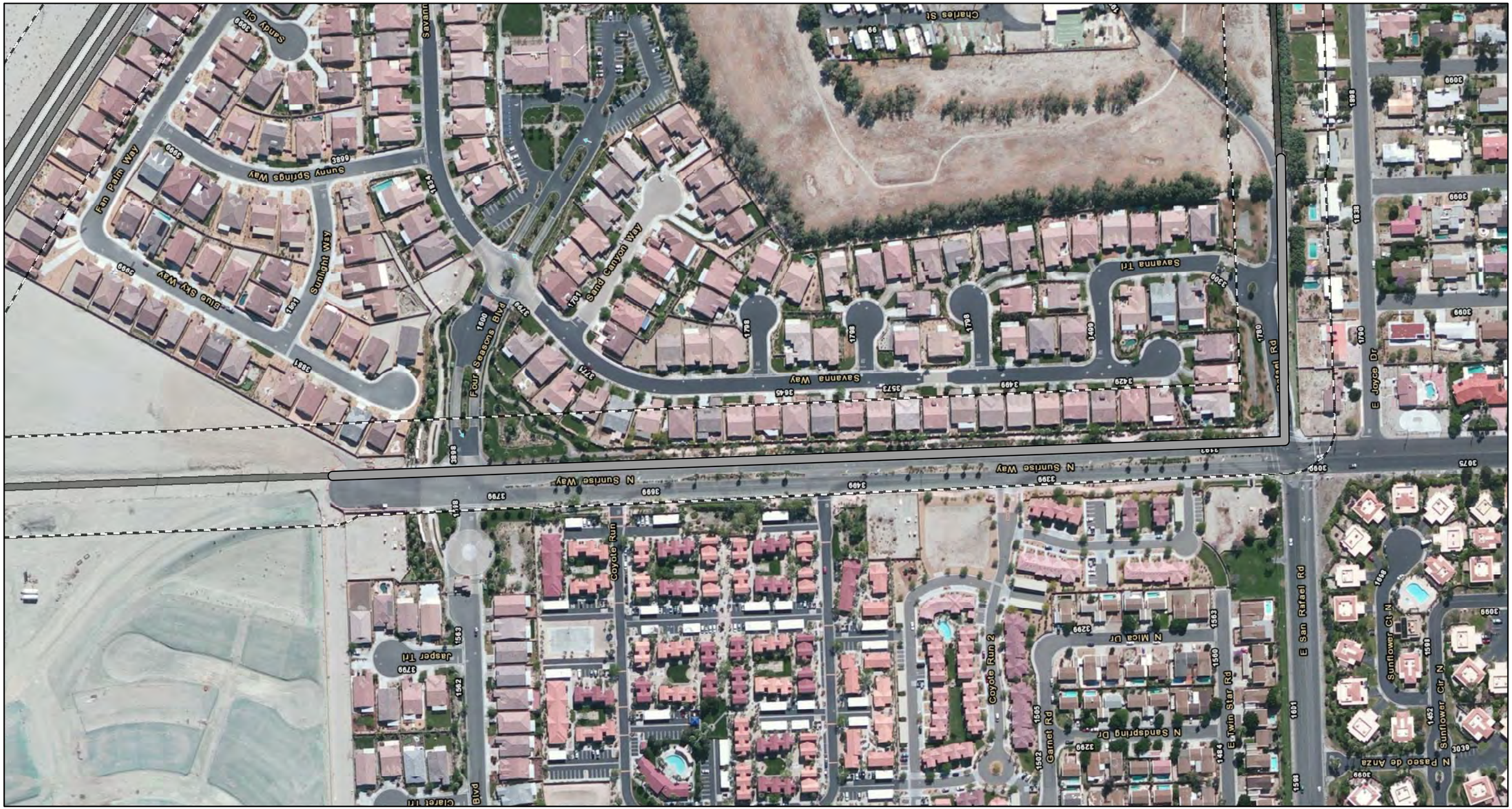

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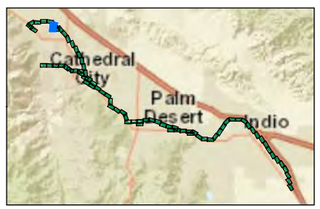

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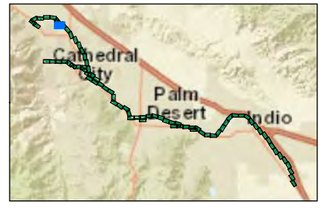

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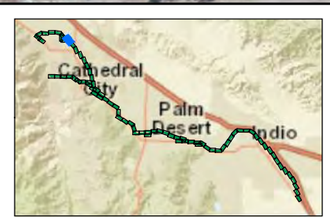

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Jurisdictional Delineation Report

Jurisdictional Delineation

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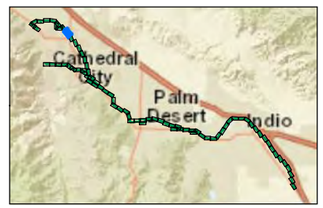

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Jurisdictional Delineation Report

Jurisdictional Delineation

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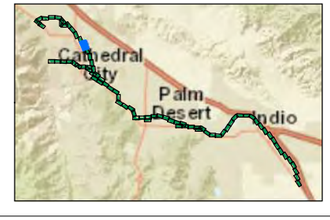

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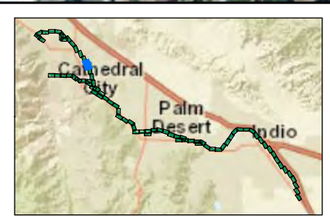

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CV LINK
Jurisdictional Delineation Report

Jurisdictional Delineation

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CVAG

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Source: CV Link_Construction Documents_ 30% Plan Set, Bing Maps

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CV LINK
Jurisdictional Delineation Report

Jurisdictional Delineation

amec foster wheeler

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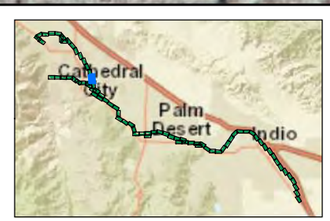

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CV LINK
Jurisdictional Delineation Report

Jurisdictional Delineation

amec foster wheeler

CVAG

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- Photo Location

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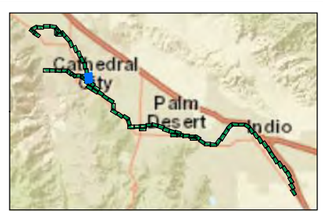

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CVAG

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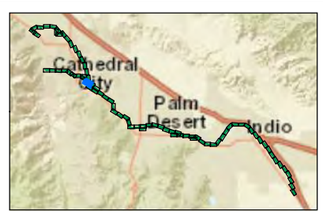

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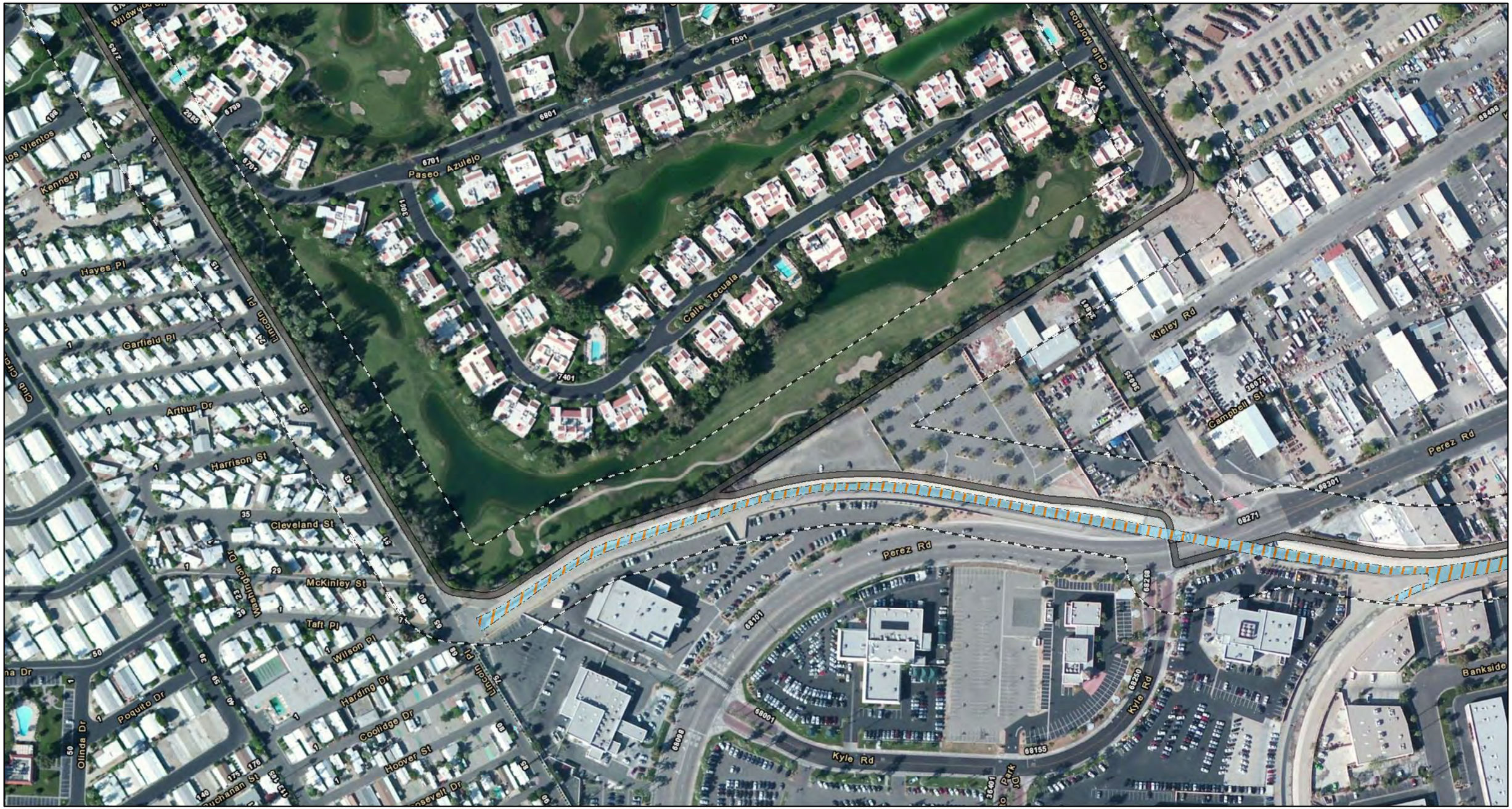

CVAG

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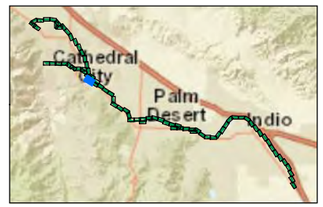

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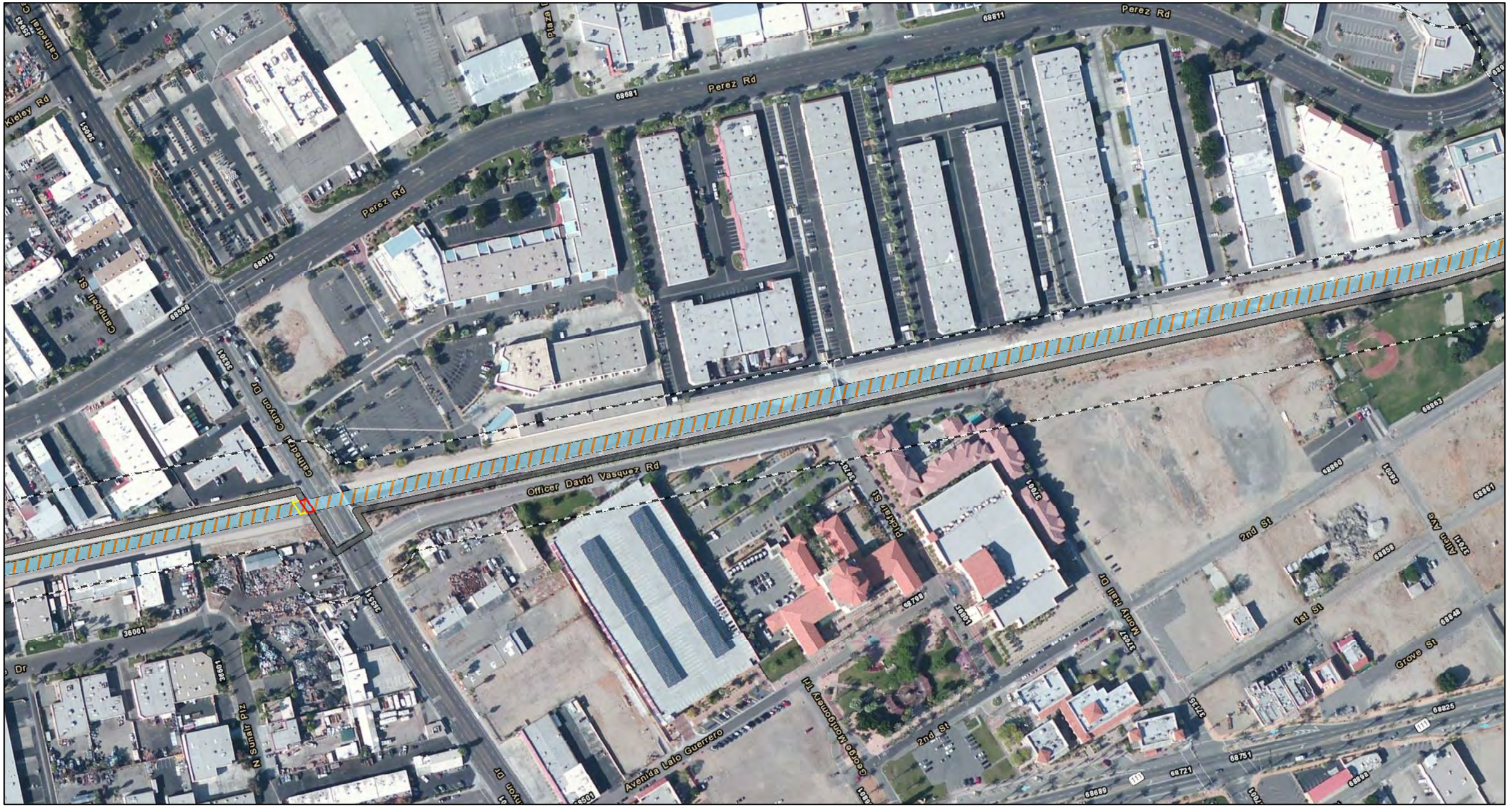
Jurisdictional Delineation



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- USACE Wetland
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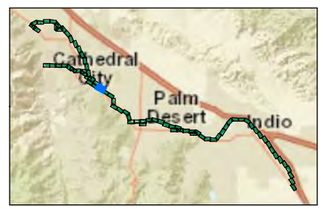

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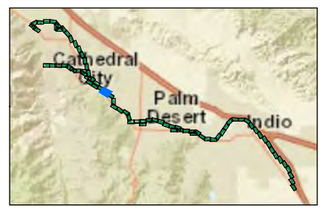

Source: CV Link_Construction Documents_ 30% Plan Set, Bing Maps

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CV LINK
Jurisdictional Delineation Report

Jurisdictional Delineation

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LEGEND

- Survey Area
- CV Link Path
- Staging Area
- Permanent Impact
- Temporary Impact
- Waters of the US/State
- USACE Wetland
- CDFW Streambed
- Photo Location

CVAG

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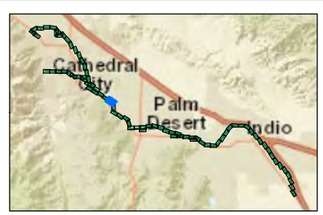
Feet



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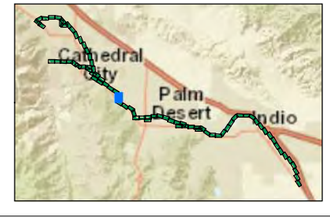
Feet



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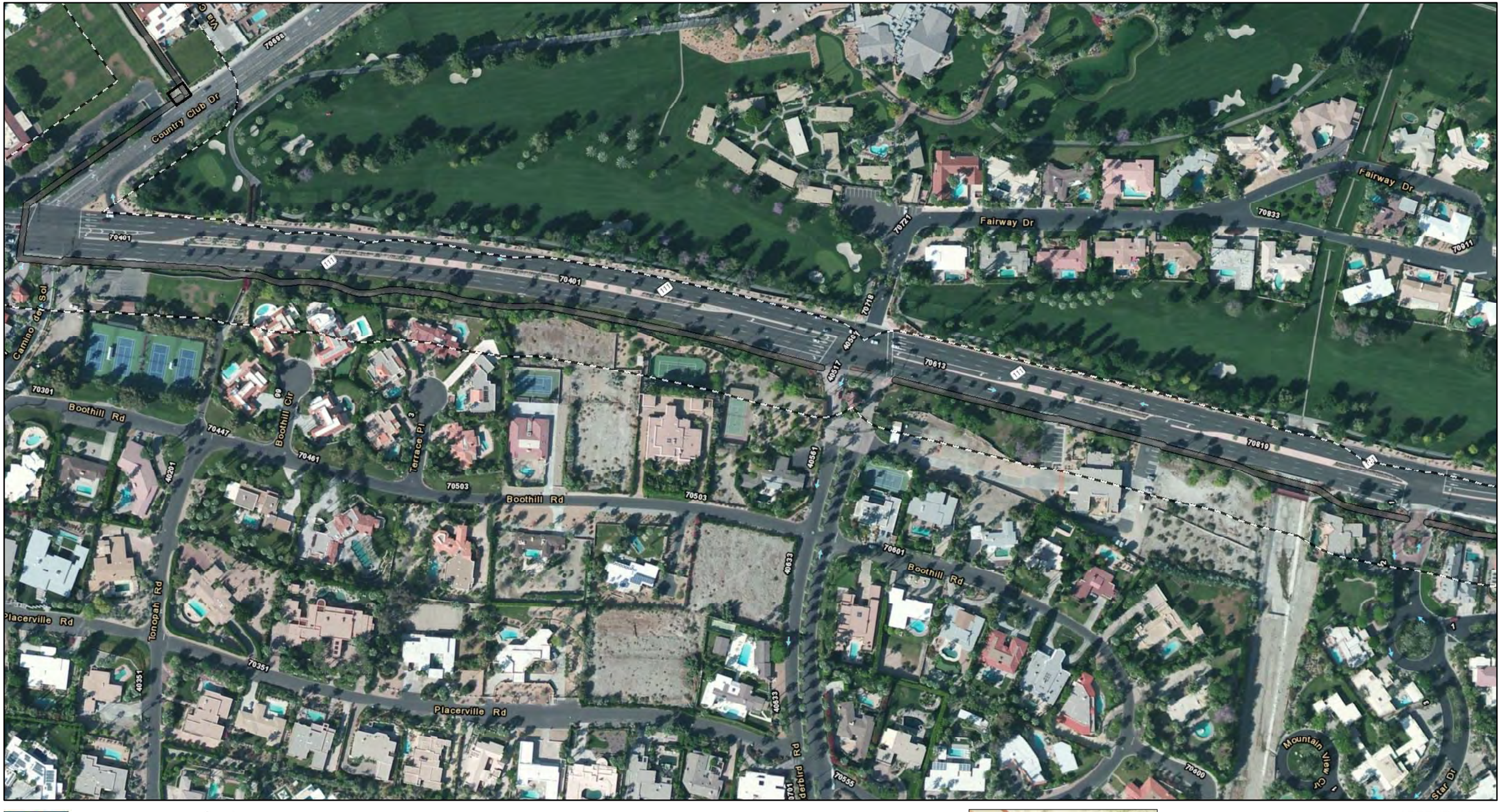

CVAG

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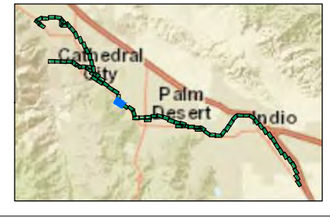

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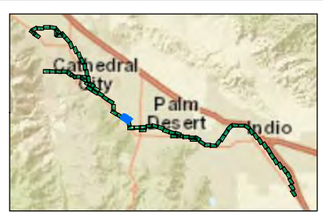

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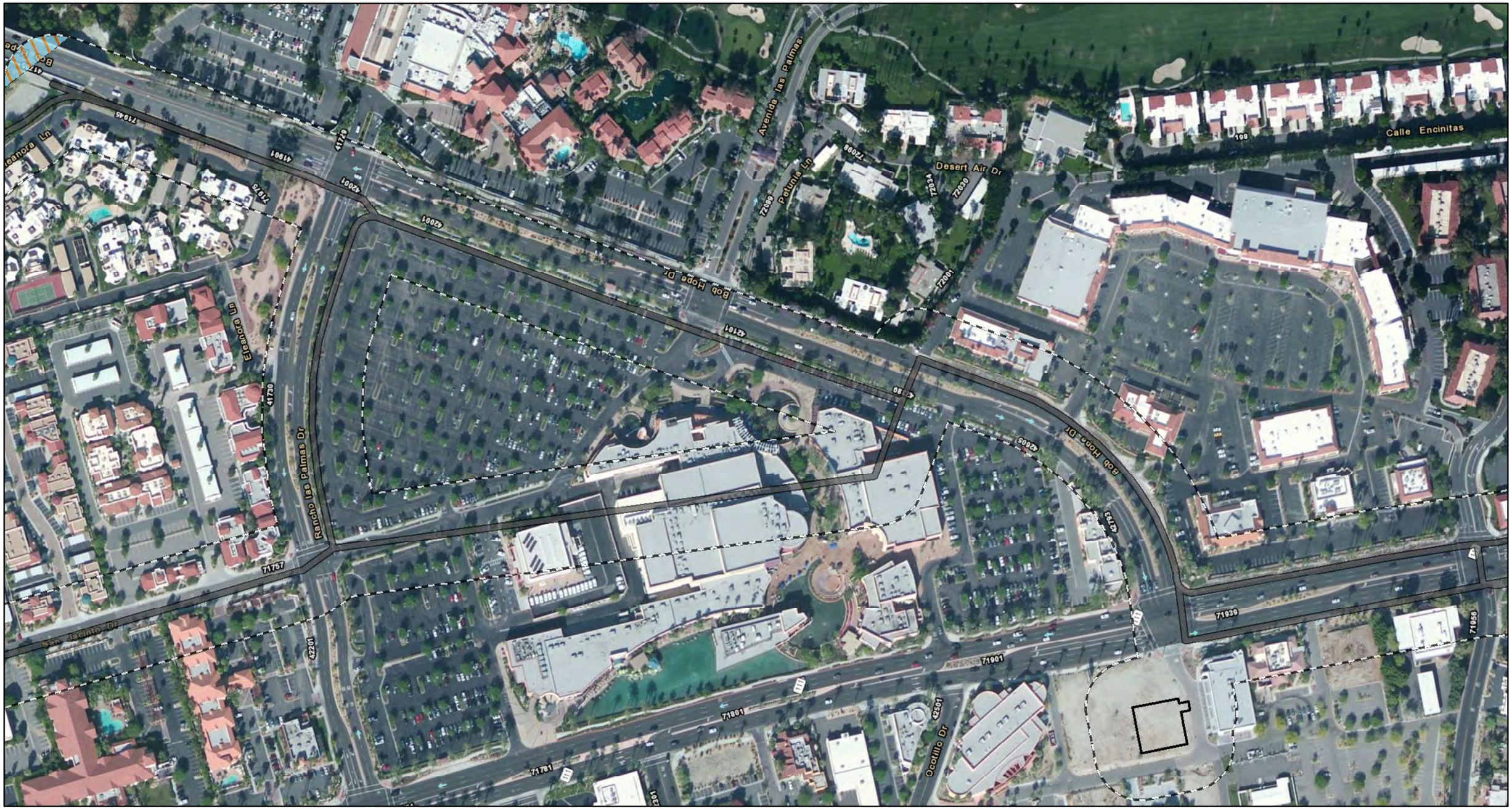

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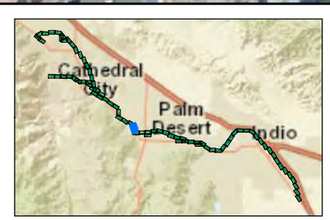

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Jurisdictional Delineation

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CVAG

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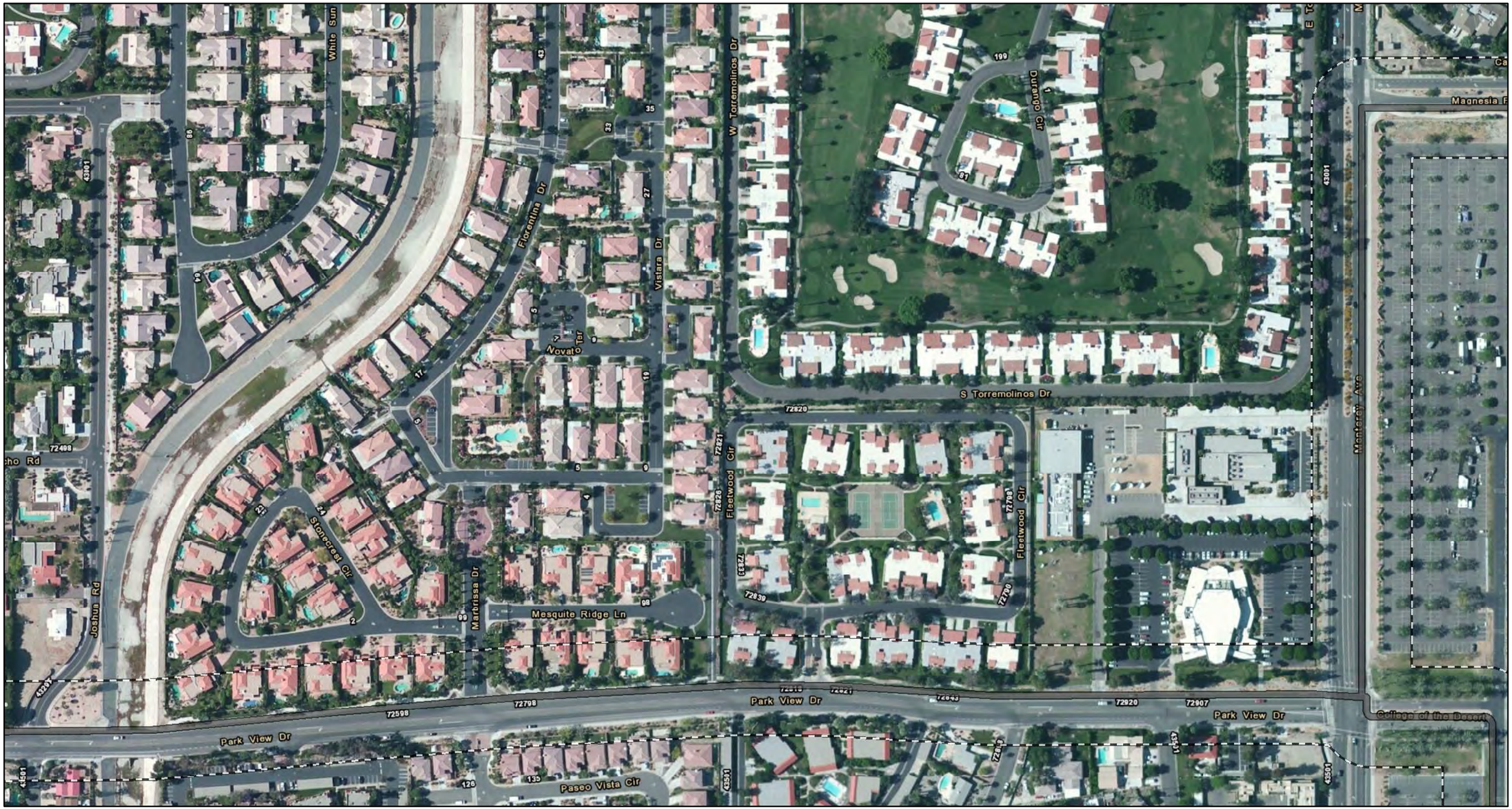

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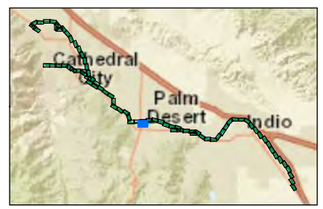

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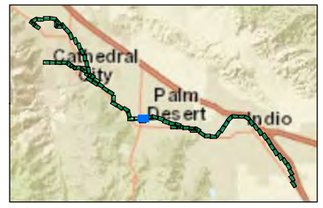

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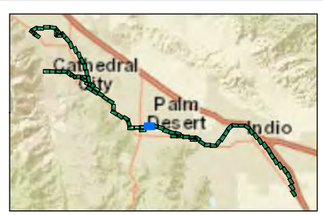

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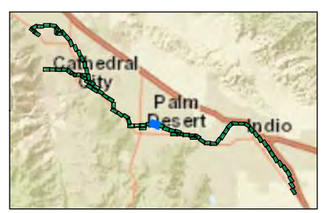

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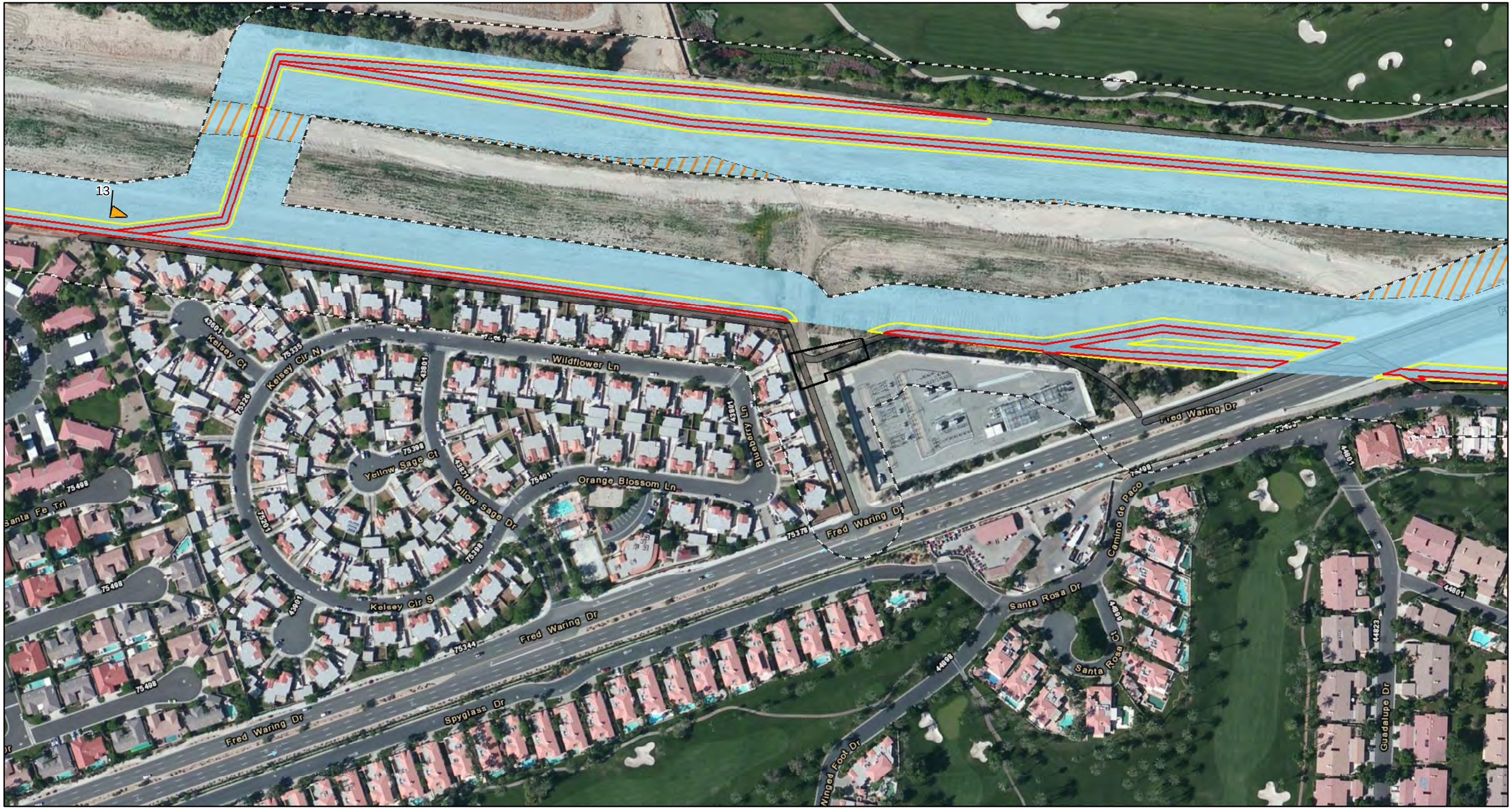

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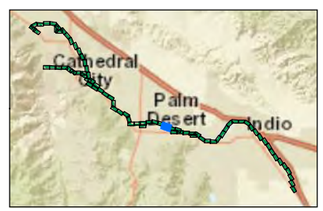

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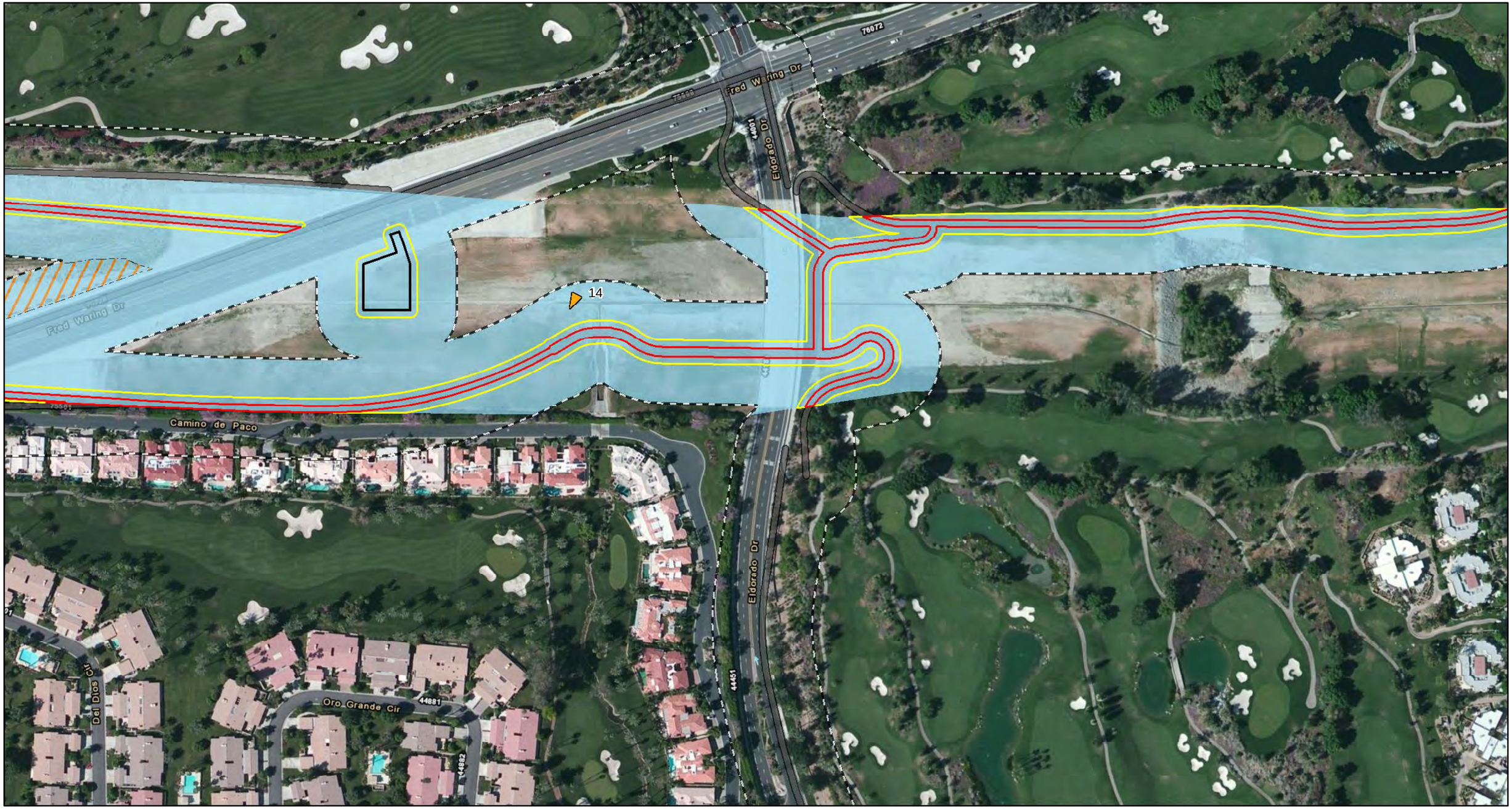

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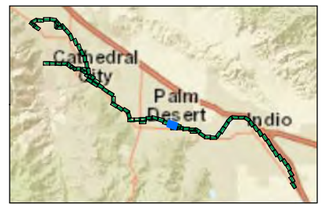

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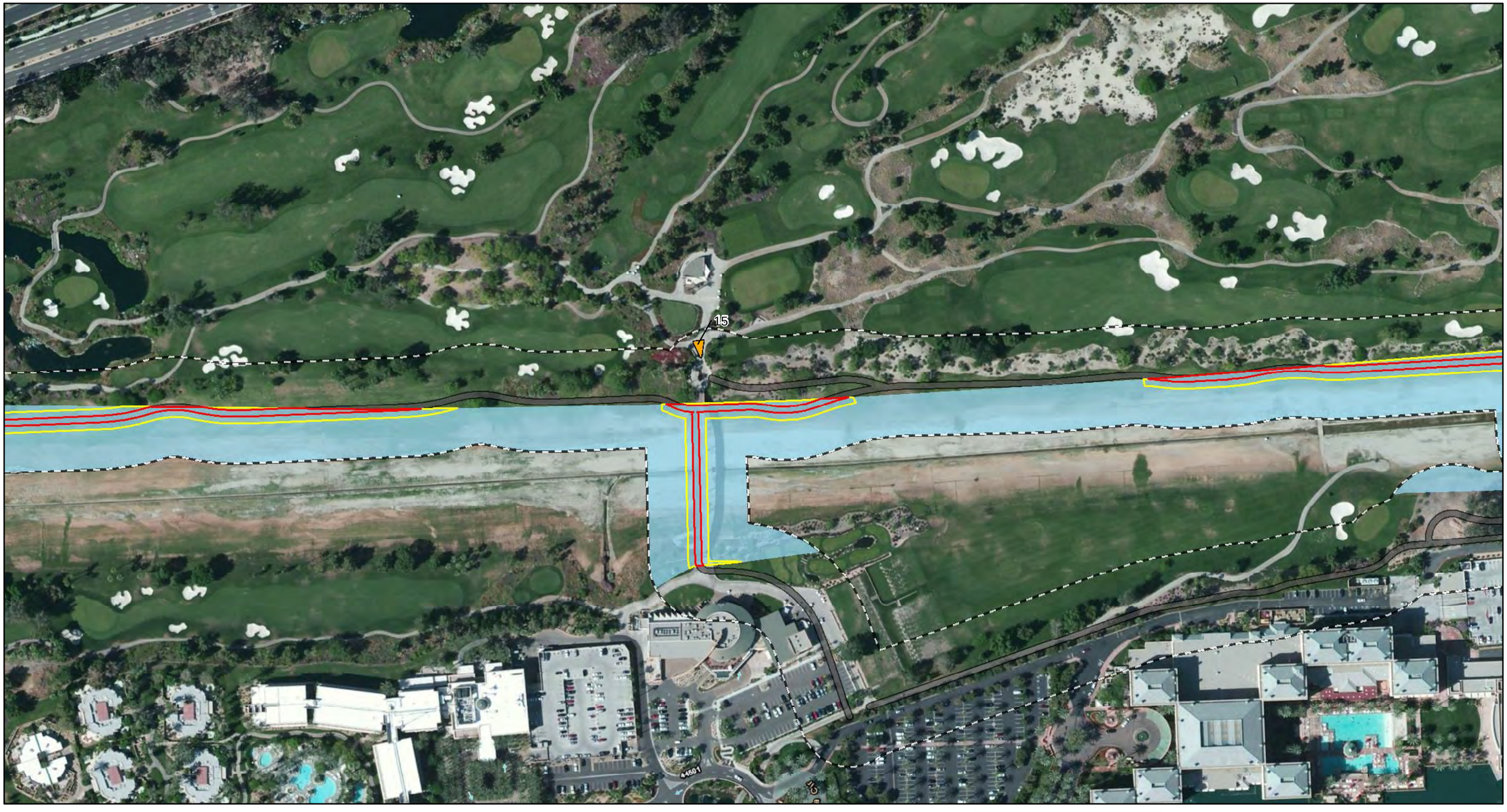

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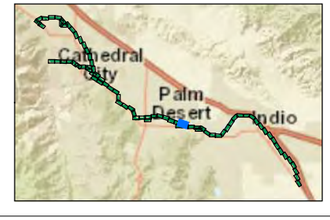

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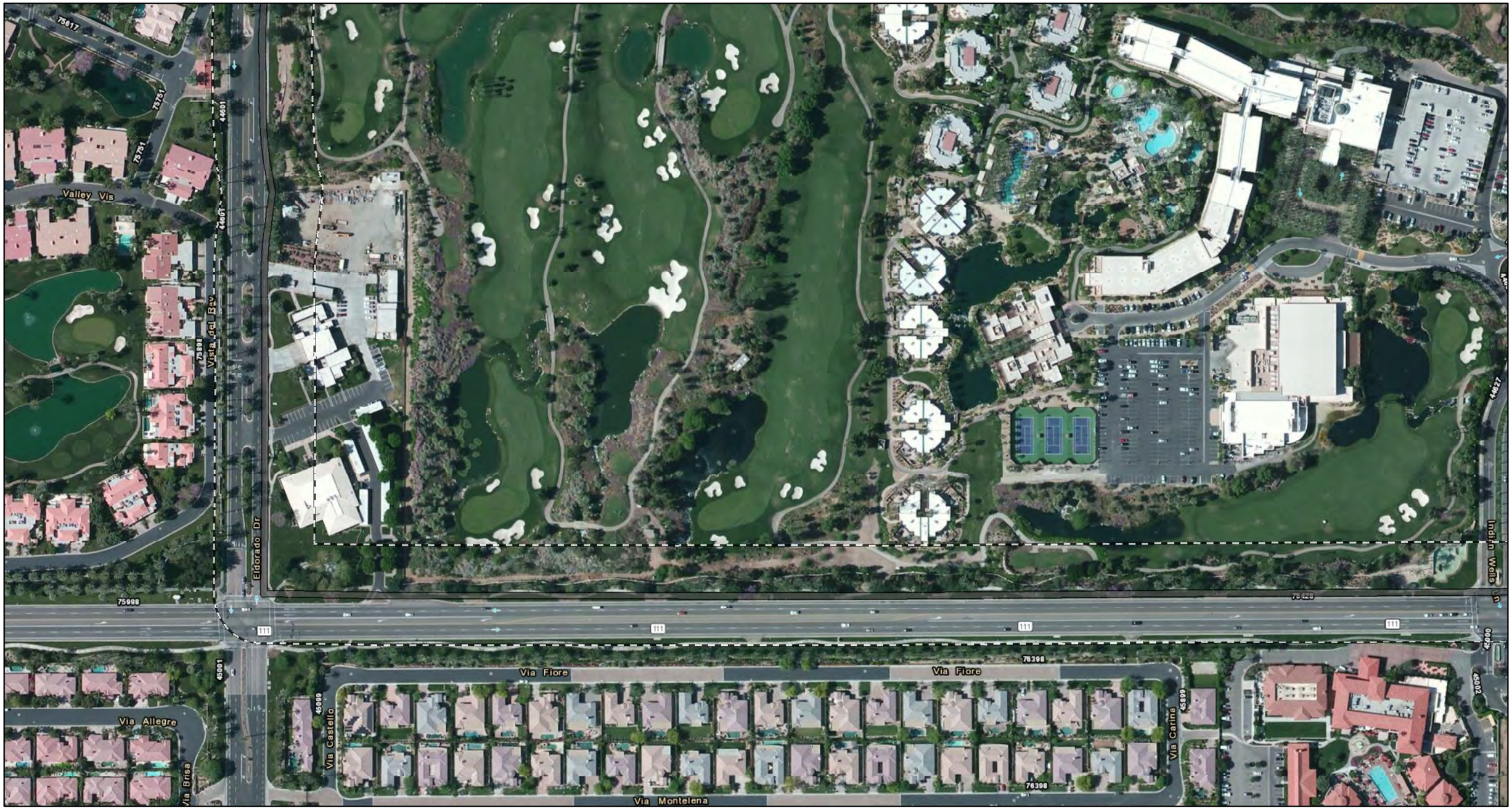

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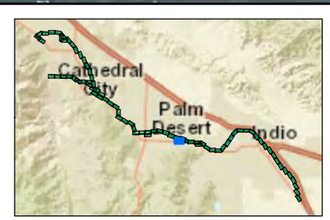

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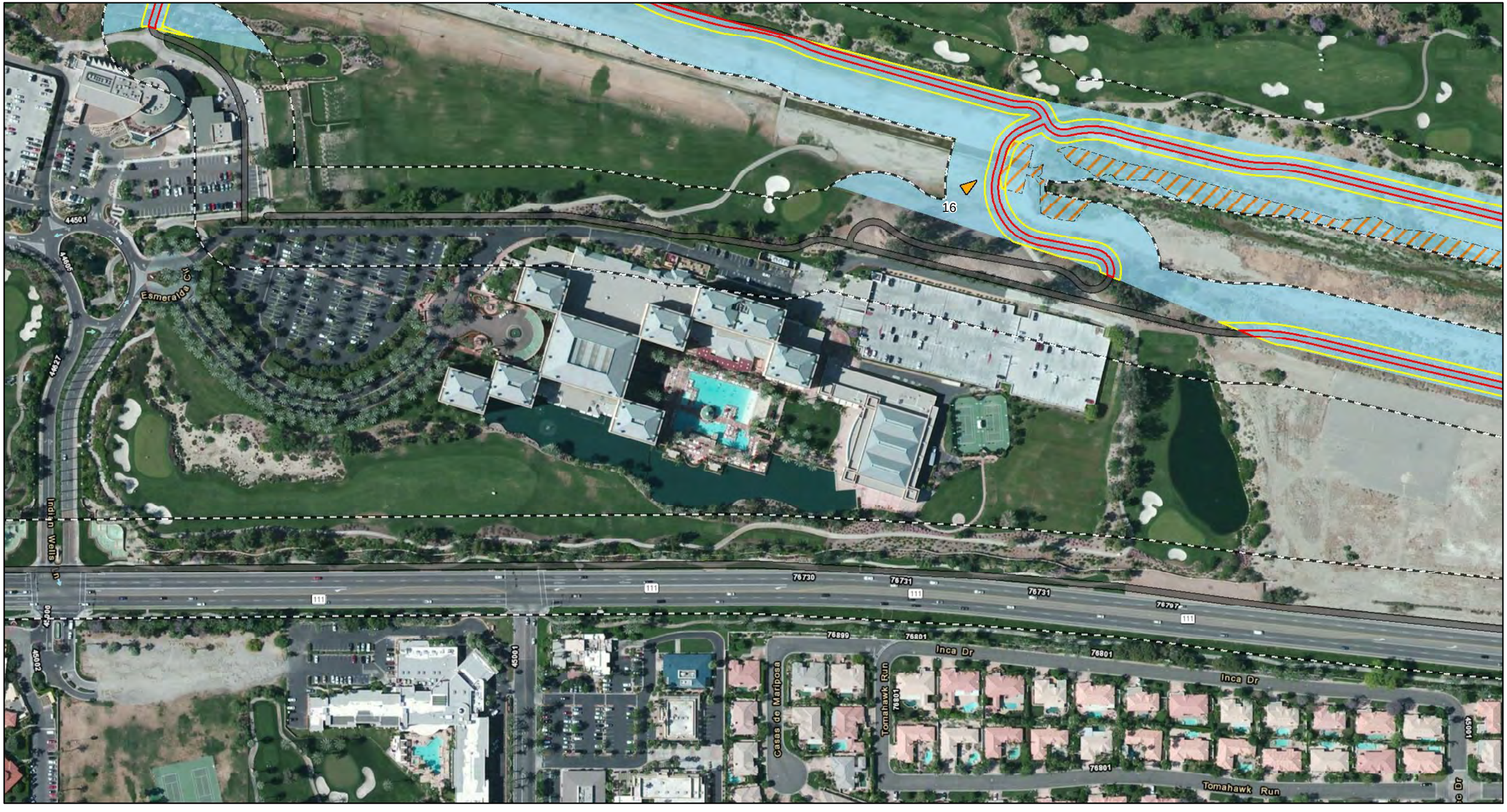

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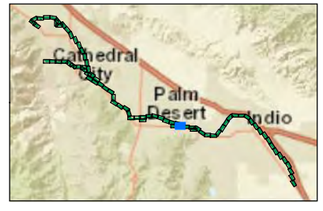

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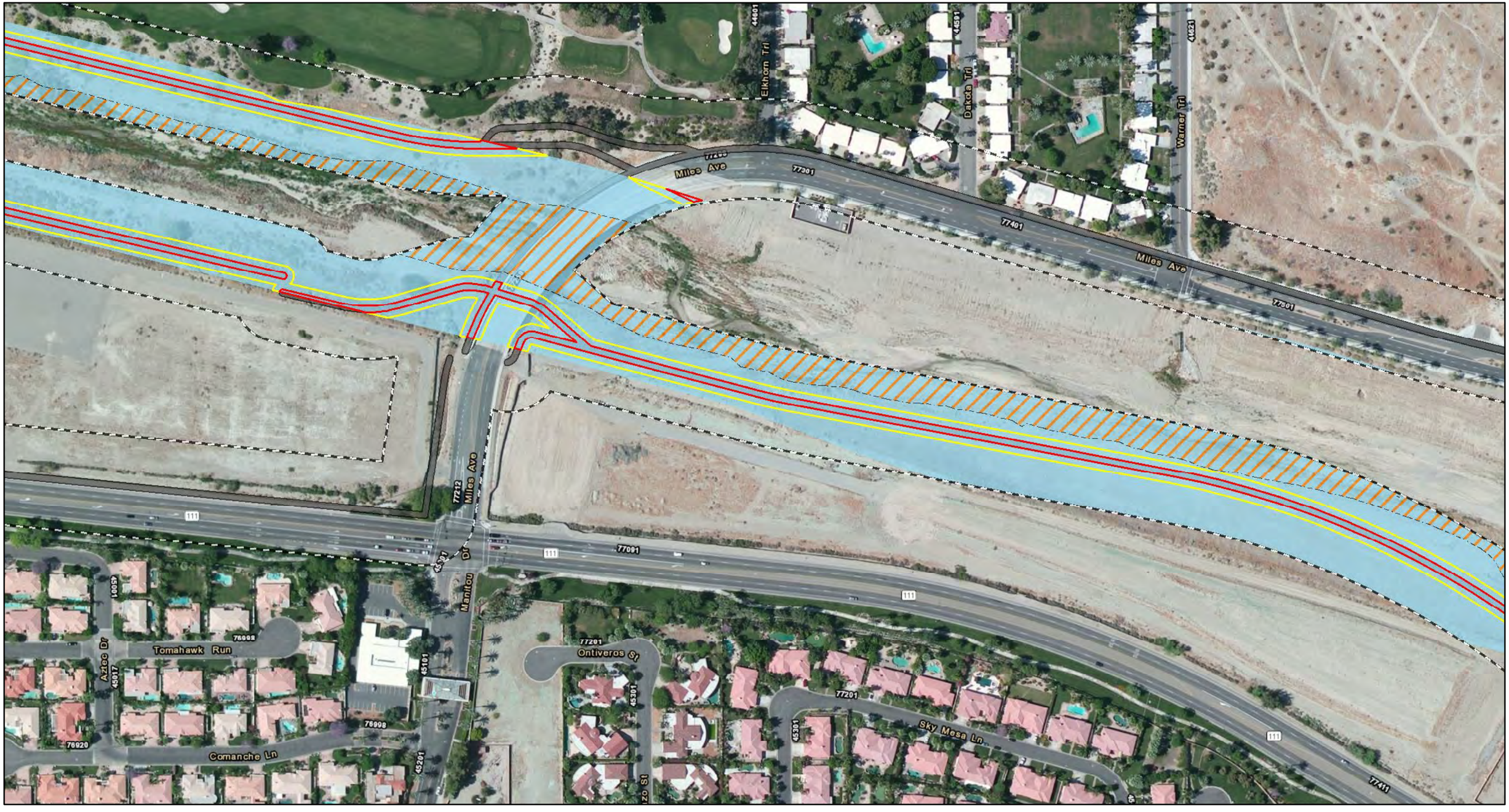

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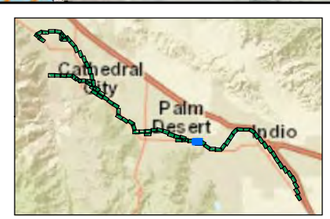

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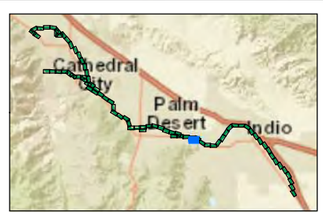

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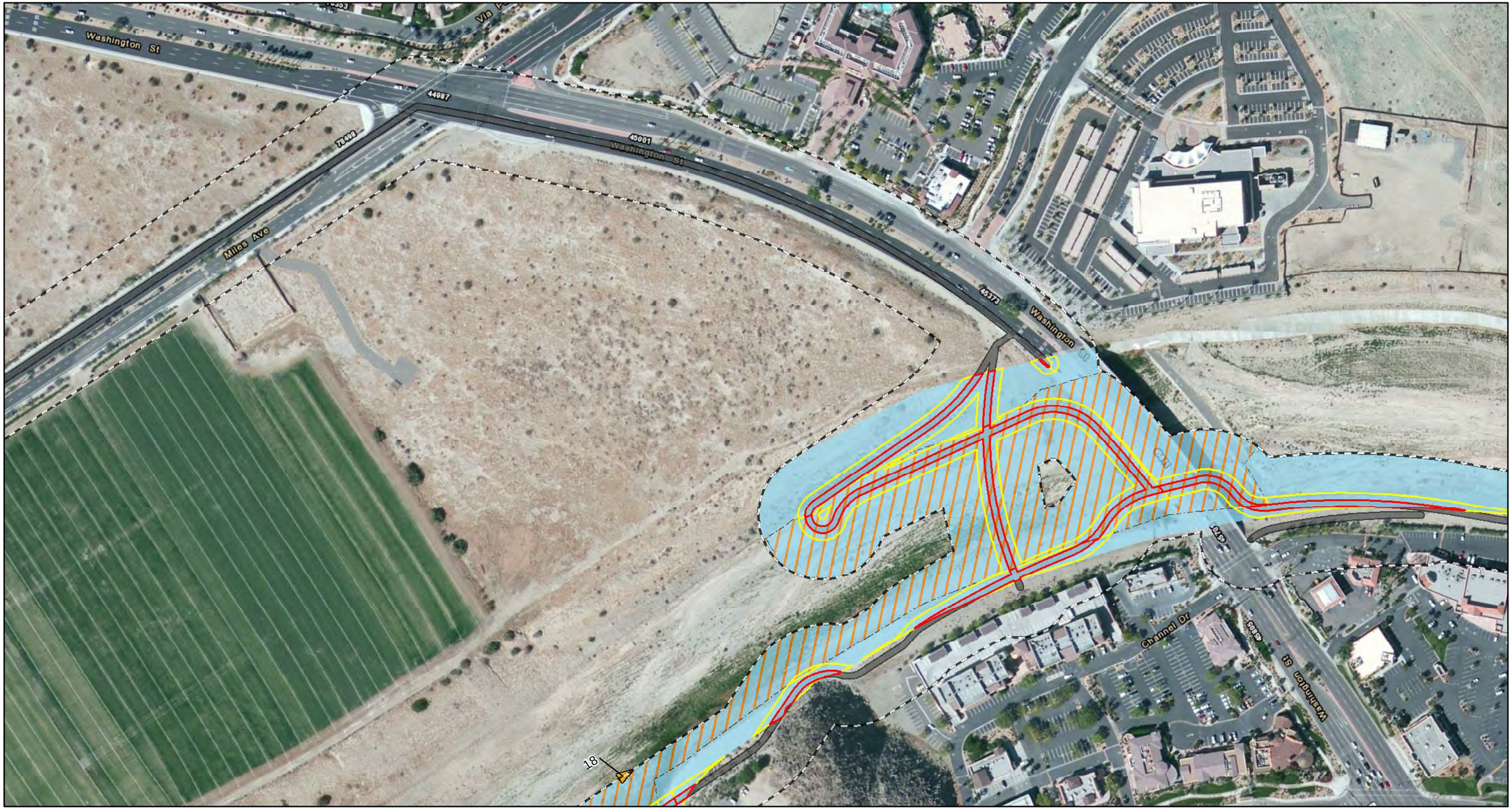

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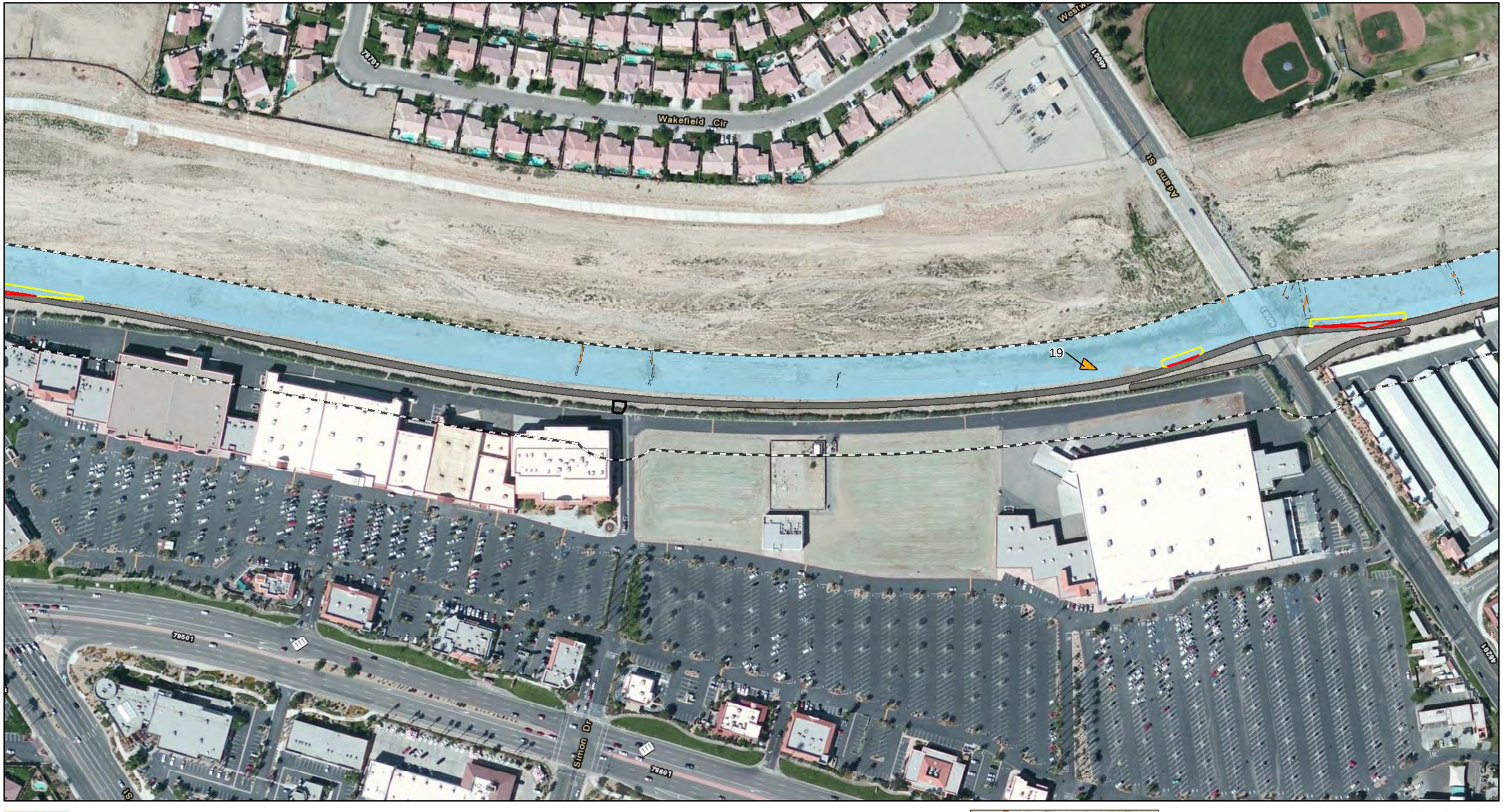

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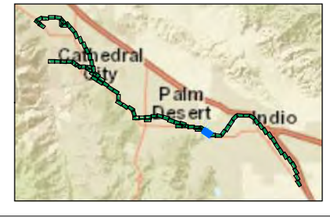

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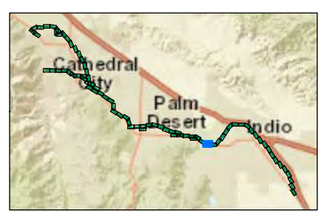

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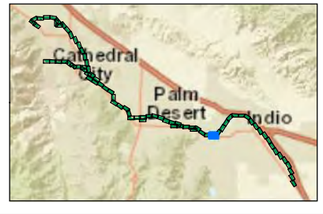

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- Photo Location

CVAG

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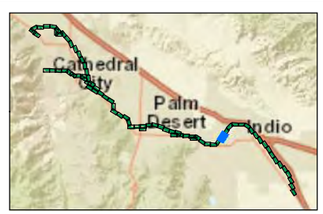

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CV LINK
Jurisdictional Delineation Report

Jurisdictional Delineation

amec foster wheeler

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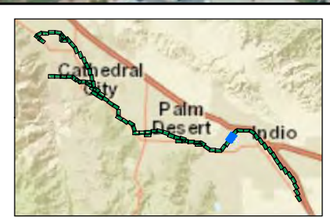
- Survey Area
- CV Link Path
- Staging Area
- Permanent Impact
- Temporary Impact
- Waters of the US/State
- USACE Wetland
- CDFW Streambed
- Photo Location



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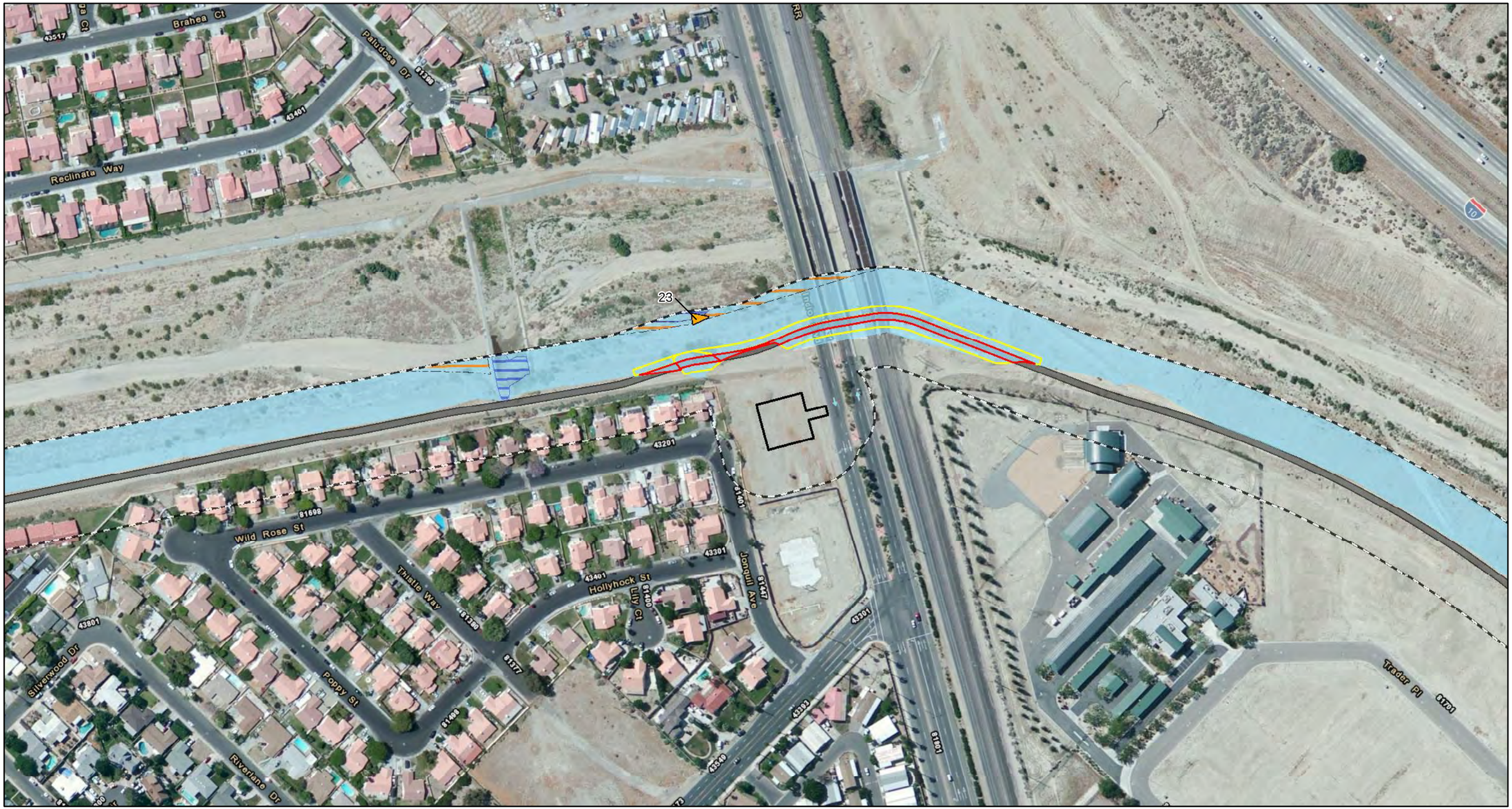

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- Waters of the US/State
- USACE Wetland
- CDFW Streambed
- Photo Location

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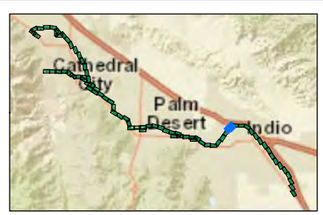

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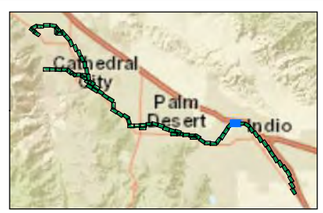

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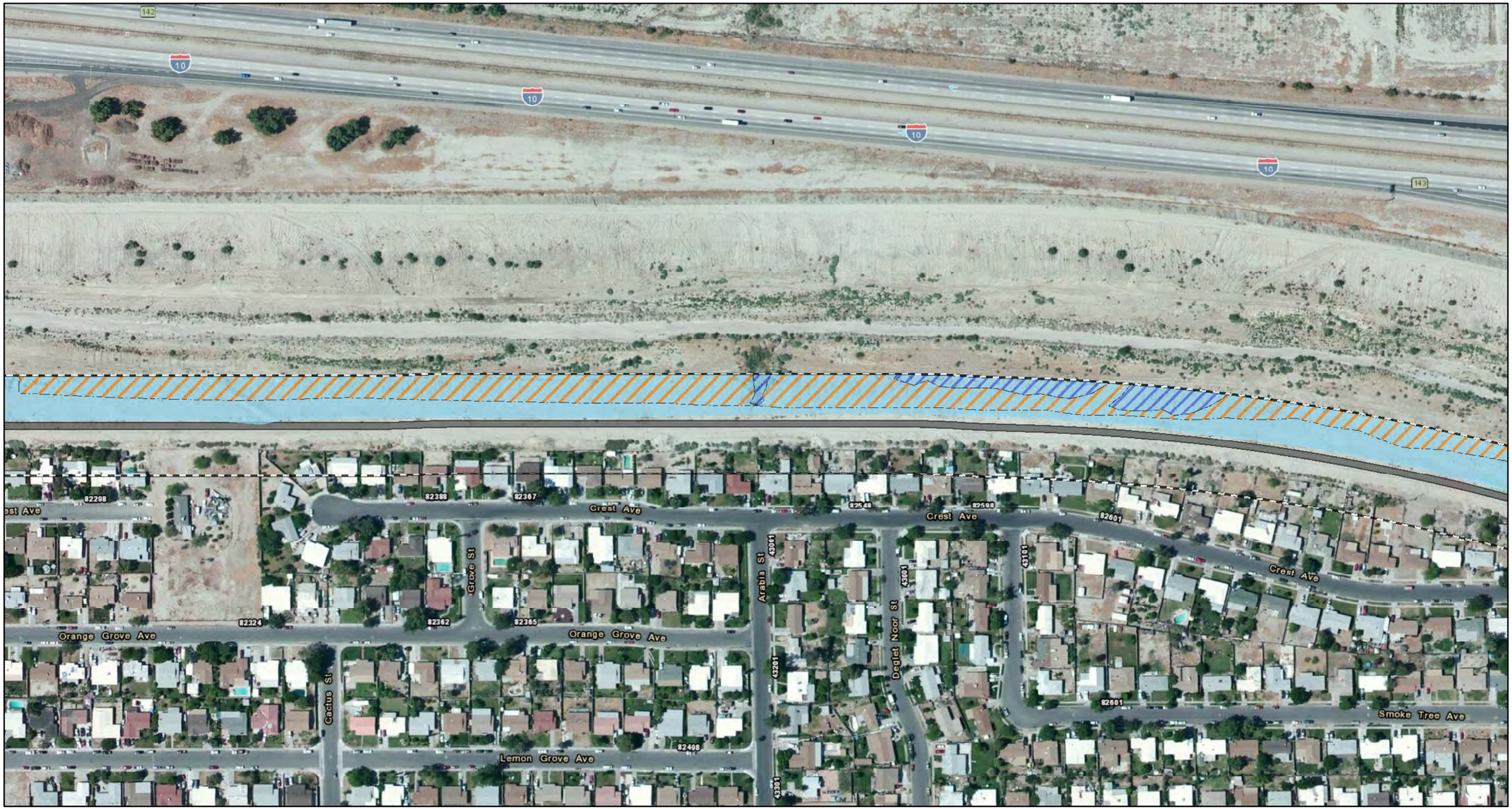

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- USACE Wetland
- CDFW Streambed
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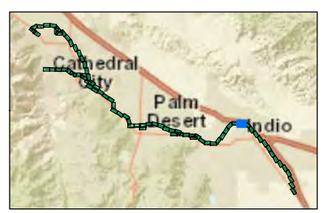

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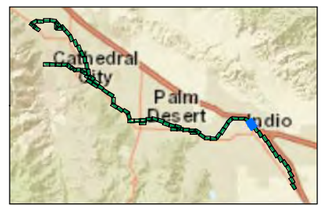

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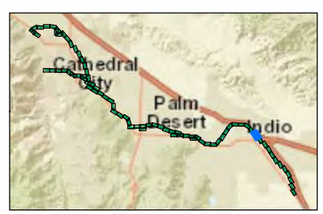

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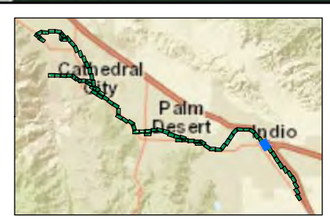

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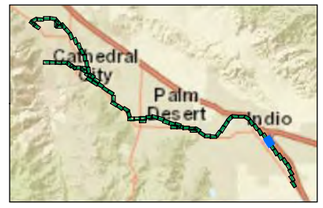

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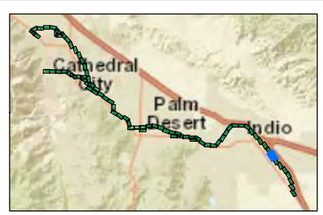

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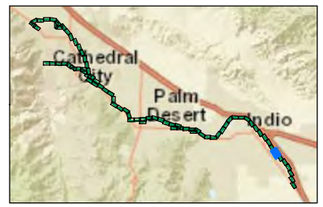

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Jurisdictional Delineation Report

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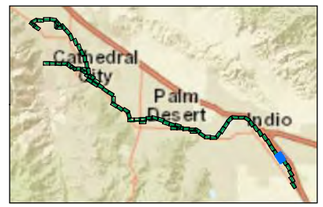

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Jurisdictional Delineation Report

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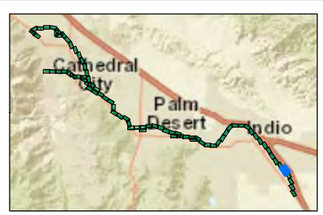

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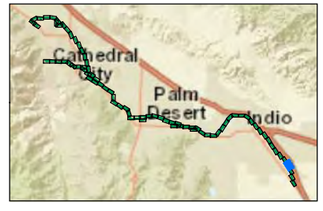

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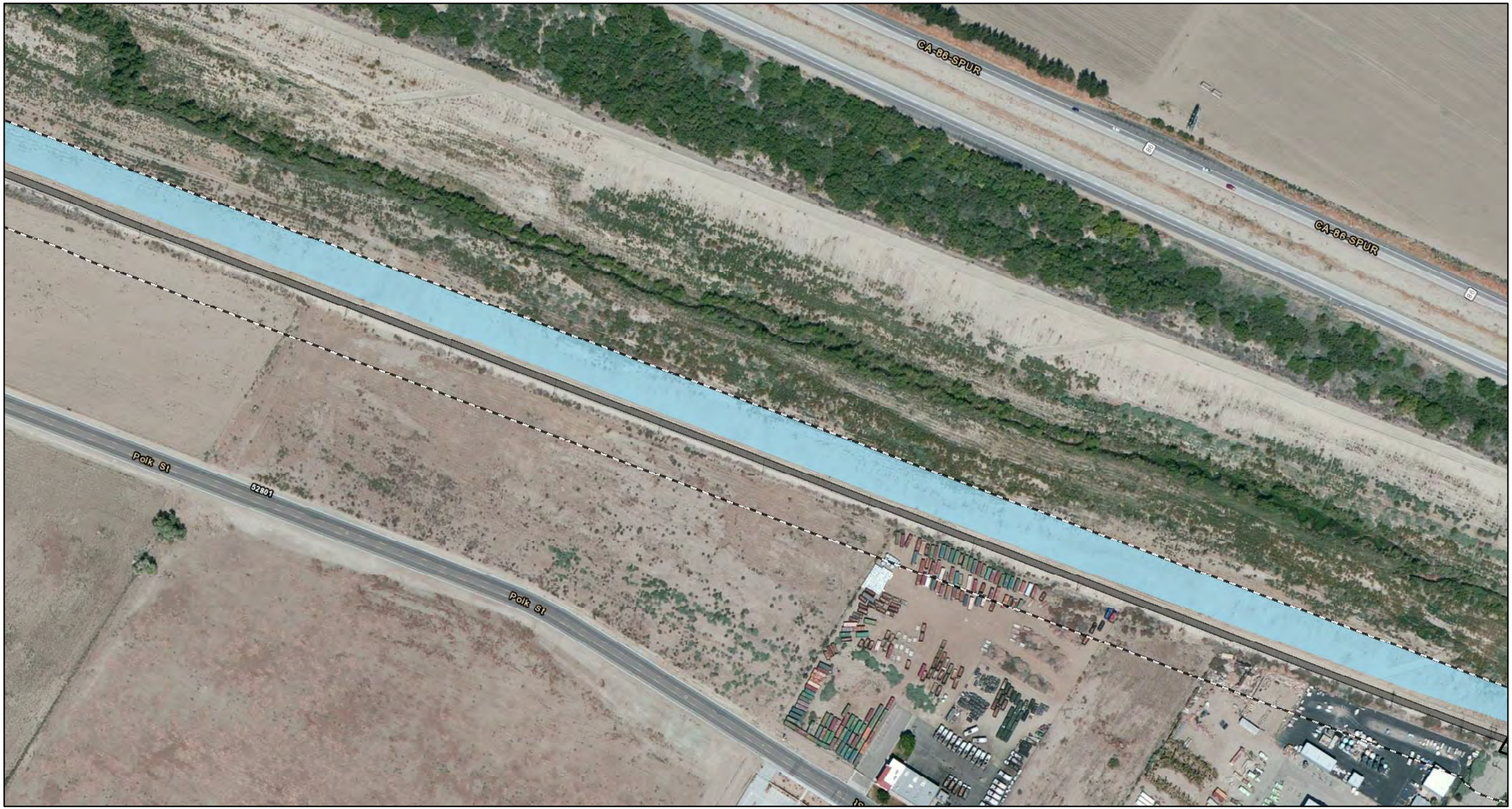

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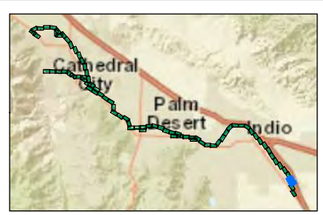

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Jurisdictional Delineation

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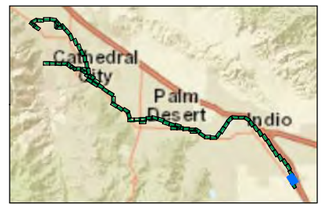

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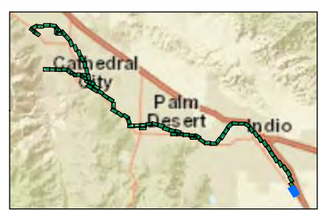

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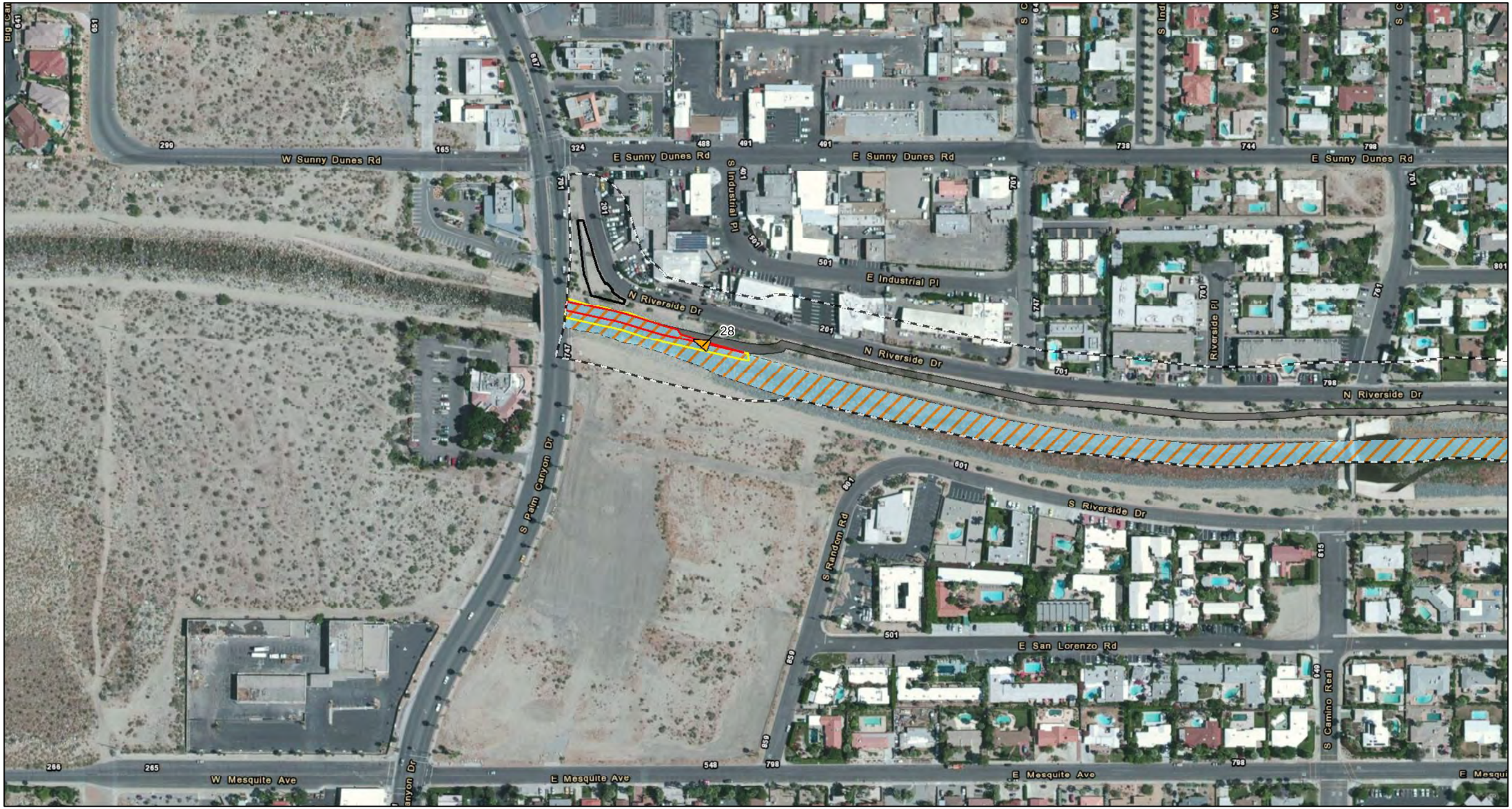

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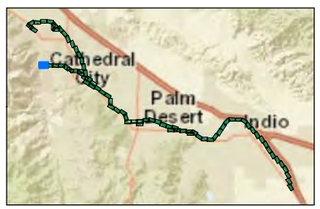

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Jurisdictional Delineation

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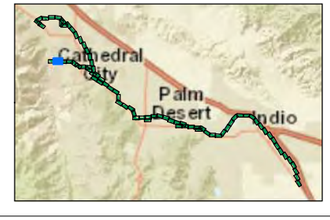

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Jurisdictional Delineation Report

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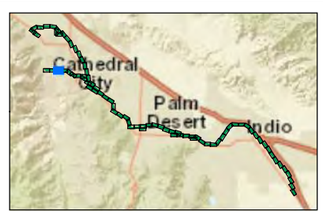

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Jurisdictional Delineation Report

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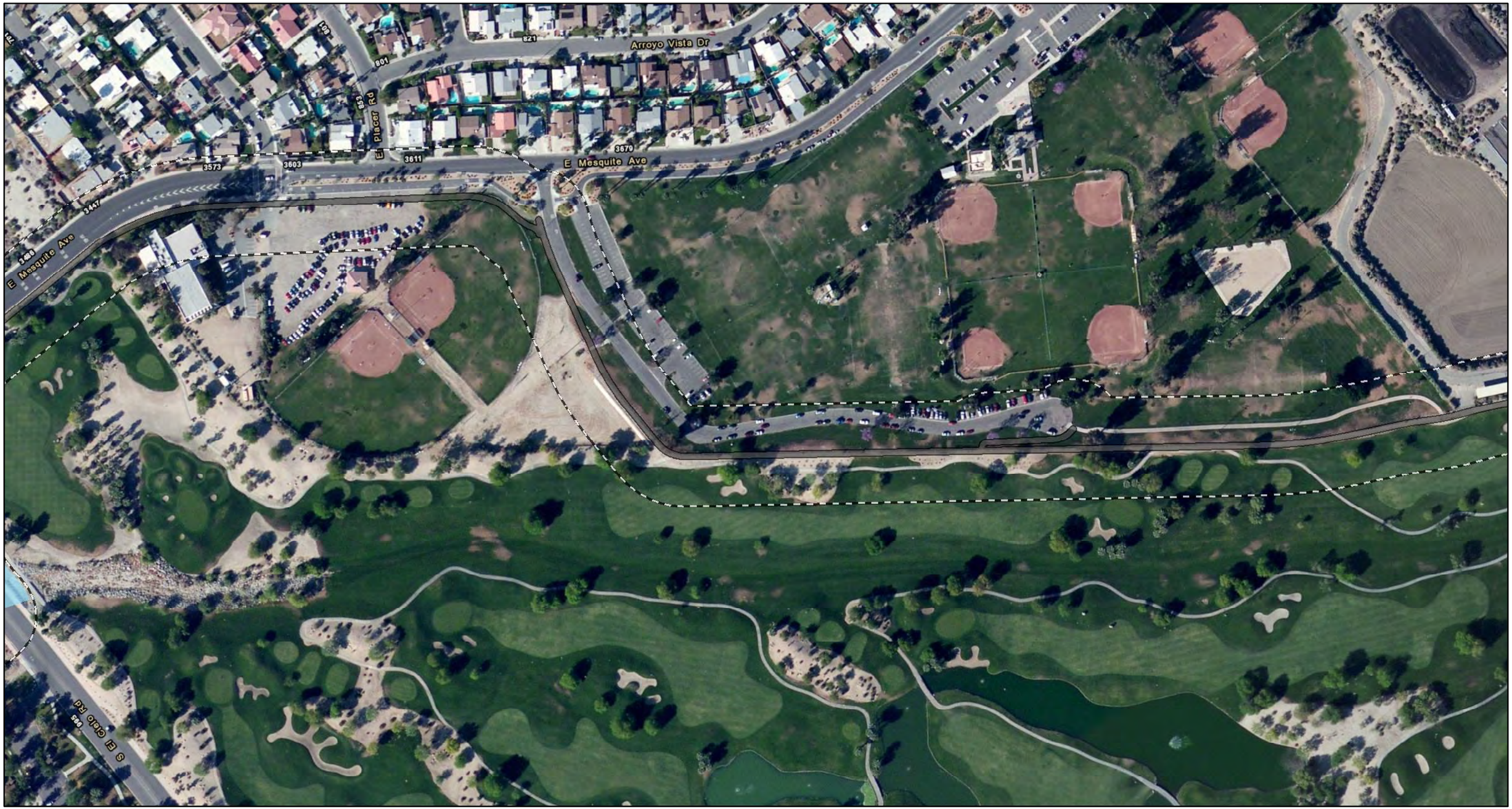

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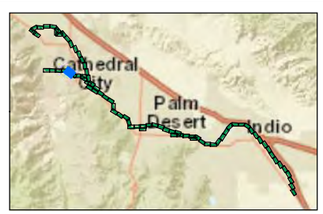

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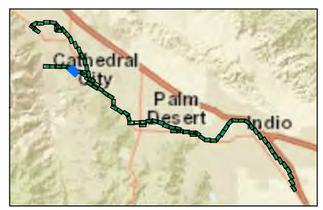

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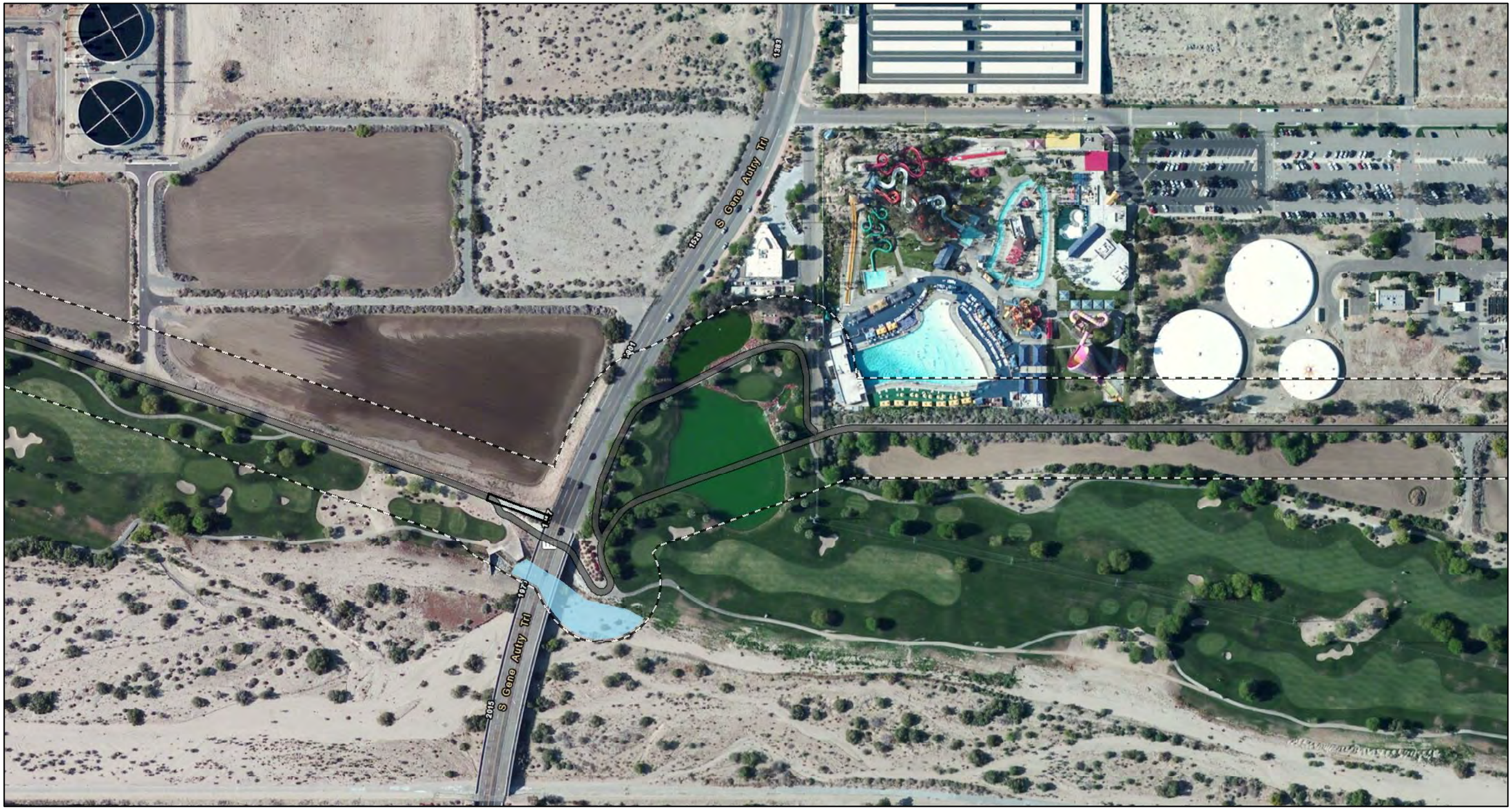

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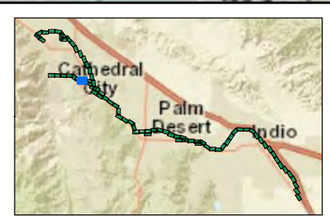

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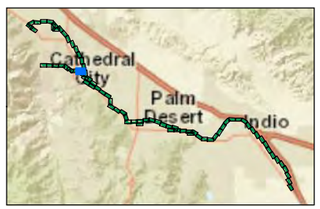

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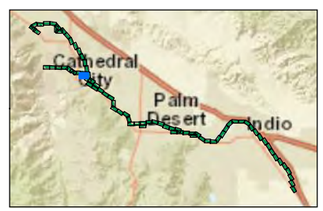

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Jurisdictional Delineation Report

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amec foster wheeler

Appendix B – USFWS Species List

USFWS Species Lists are derived from the Biological Resources Assessment Report for the CV Link Project. Attached are the following:

Biological Resources Assessment Report

- Appendix B: Species List Vascular Plants
- Appendix C: Species List Vertebrate Animals

APPENDIX B
SPECIES LIST: VASCULAR PLANTS

This list reports only plants observed on the various portions of the project alignment during this study. Other species may have been overlooked or undetectable due to their growing season. Unless noted otherwise, nomenclature and systematics follows Jepson Flora Project (2014) = non-native species, sp. = identified only to genus, *cf*= compares favorably with]. Common names not provided by Jepson Flora Project follows those provided by USDA , NRCS (2015b).

DICOTYLEDONEAE	**DICOT FLOWERING PLANTS**
Apocynaceae	**Dogbane Family**
Funastrum cynanchoides ssp. *hartwegii*	climbing milkweed
**Nerium oleander*	oleander
Asteraceae	**Sunflower Family**
Ambrosia acanthicarpa	annual bursage
Ambrosia dumosa	white bursage
Ambrosia salsola	cheesebush
Baccharis glutinosa	mulefat
Baccharis sarothroides	broom baccharis
Baileya multiradiata	desert marigold
Bebbia juncea var. *aspera*	sweetbush
Encelia farinosa	brittlebush
Ericameria sp.	unidentified goldenbush
Erigeron canadensis	horseweed
Dicoria canescens	desert twinbugs
Gnaphalium sp.	Unidentified cudweed
Helianthus annuus	common sunflower
Helianthus petiolaris ssp. *canescens*	dune sunflower
Heterotheca grandiflora	telegraph weed
**Lactuca serriola*	prickly wild lettuce
Lepidospartum squamatum	scale-broom
Malacothrix glabrata	desert dandelion
Palafoxia arida	Spanish needle
Pluchea sericea	arrow weed
Psathyrotes ramosissima	turtleback
**Sonchus oleraceus*	common sow thistle
Stephanomeria exigua	small wirelettuce
**Taraxacum officinale*	common dandelion
Xanthium strumarium	cocklebur
Bignoniaceae	**Trumpet-Creeper Family**
Chilopsis linearis	desert willow
Boraginaceae	**Borage Family**

Cryptantha sp.	cryptantha species
Cryptantha angustifolia	Panamint cryptantha
Cryptantha micrantha	red-root cryptantha
Eriodictyon crassifolium var. *crassifolium*	thick-leaved yerba santa
Phacelia sp.	unidentified phacelia
Tiquilia palmeri	Palmer's tiquilia
Tiquilia plicata	fanleaf crinklemat
Brassicaceae	**Mustard Family**
**Brassica tournefortii*	Sahara mustard
Lepidium sp.	Peppergrass
**Sisymbrium irio*	London rocket
Cactaceae	**Cactus Family**
Cylindropuntia echinocarpa	golden cholla
Ferocactus cylindraceus	California barrel cactus (landscaped)
Chenopodiaceae	**Goosefoot Family**
Atriplex canescens	four-wing saltbush
Atriplex lentiformis	quailbush
Atriplex polycarpa	allscale
**Salsola tragus*	Russian thistle
Cucurbitaceae	**Gourd Family**
Cucurbita palmata	coyote melon
Euphorbiaceae	**Spurge Family**
Croton californicus	California croton
Euphorbia albomarginata	rattlesnake sandmat
Euphorbia polycarpa	smallseed sandmat
**Ricinus communis*	castor bean
Stillingia spinulosa	annual toothleaf
Fabaceae	**Pea Family**
**Acacia sp.*	acacia (landscaped)
**Caesalpinia pulcherrima*	Mexican bird of paradise (landscape)
Dalea mollissima	silky dalea
**Melilotus indicus*	sourclover
**Parkinsonia aculeata*	Mexican Paloverde (landscaped)
Parkinsonia florida	blue palo verde (native & landscaped)
Prosopis glandulosa	honey mesquite
Psorothamnus arborescens var. *simplicifolius*	California indigo bush
Psorothamnus emoryi	Emory dalea
Psorothamnus schottii	Schott's indigo bush
Psorothamnus spinosus	smoke tree
Senegalia greggii	catclaw

***Trifolium** sp.	unidentified nonnative clover
Fouquieriaceae	**Ocotillo Family**
Fouquieria splendens ssp. *splendens*	Ocotillo (landscaped)
Geraniaceae	**Geranium Family**
**Erodium cicutarium*	red-stemmed storksbill
Loasaceae	**Loasa Family**
Petalonyx thurberi	sandpaper plant
Malvaceae	**Mallow Family**
**Malva parviflora*	cheeseweed mallow
Sphaeralcea ambigua	apricot mallow
Myrtaceae	**Myrtle Family**
**Eucalyptus* sp.	gum tree
Nyctaginiaceae	**Bougainvillea Family**
Abronia villosa var. *villosa*	desert sand verbena
**Bougainvillea* sp.	bougainvillea (landscaped)
Oleaceae	**Olive Family**
**Olea europaea*	olive (landscaped)
Onagraceae	**Evening-Primrose Family**
Camissonia sp.	unidentified evening-primrose
Eulobus californicus	mustard-like evening primrose
Oenothera deltoides	basket evening-primrose
Phrymaceae	**Lopseed Family**
Mimulus guttatus	yellow monkey-flower
Plantaginaceae	**Plantain Family**
Plantago ovata	desert plantain
Polemoniaceae	**Phlox Family**
Eriastrum sp.	woollystar
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum	California buckwheat
Eriogonum sp.	unidentified annual buckwheat
Portulacaceae	**Purslane Family**
**Portulaca oleracea*	common purslane

Salicaceae	**Willow Family**
Populus fremontii ssp. *fremontii*	Fremont cottonwood
Salix sp.	unidentified willow
Salix gooddingii	black willow
Scrophulariaceae	**Figwort Family**
**Leucophyllum frutescens*	Texas sage (landscaped)
Solanaceae	**Nightshade Family**
Datura discolor	desert thornapple
**Nicotiana glauca*	tree tobacco
Tamaricaceae	**Tamarisk Family**
**Tamarix ramosissima*	salt cedar
Verbenaceae	**Verbena Family**
**Lantana* sp.	unidentified lantana (landscaped)
Zygophyllaceae	**Caltrop Family**
Larrea tridentata	creosote bush
**Tribulus terrestris*	puncture vine
MONOCOTYLEDONEAE	**MONOCOT FLOWERING PLANTS**
Agavaceae	**Century Plant Family**
**Yucca* sp.	unidentified yucca (landscaped)
Araceae	**Arum Family**
Lemna sp.	unidentified duckweed
Arecaceae	**Palm Family**
Washingtonia filifera	California fan palm (landscaped)
Cyperaceae	**Sedge Family**
Eleocharis sp.	unidentified sedge
Poaceae	**Grass Family**
**Bromus madritensis* ssp. rubens	red brome
**Cynodon dactylon*	Bermuda grass
Distichlis spicata	salt grass
**Hordeum murinum*	wall barley
**Pennisetum setaceum*	fountaingrass
**Polypogon monspeliensis*	rabbitfoot grass
**Schismus barbatus*	Mediterranean schismus
Stipa hymenoides	sand rice grass

Typhaceae	**Cattail Family**
Typha domingensis	southern cattail

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APPENDIX C

SPECIES LIST: VERTEBRATE ANIMALS

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APPENDIX C
SPECIES LIST: VERTEBRATE ANIMALS

This list reports only the vertebrate animals observed during Amec Foster Wheeler's field surveys. Other species may have been overlooked or undetectable due to their activity patterns or weather conditions. Scientific nomenclature for this document follows standard reference sources: for reptiles, Stebbins (2003); for birds, American Ornithologists Union (2015); and for mammals, Laudenslayer and Grenfell (1991). [*†= special status species,* * = non-native species, sp. = identified only to genus, *cf*= compares favorably with]

VERTEBRATES

OSTEICHTHYES	**BONY FISHES**
Pociliidae	**Toothed Carps**
**Gambusia affinis*	mosquitofish (adjacent Whitewater River)

AMPHIBIA	**AMPHIBIANS**
Bufonidae	**True Toads**
Anaxyrus boreas halophilus	California toad (tadpoles)
Hylidae	**Treefrogs and Relatives**
Pseudacris cadaverina	California chorus frog
Ranidae	**True Frogs**
**Lithobates catesbeianus*	bullfrog

REPTILIA	**REPTILES**
Iguanidae	**Iguanid Lizards**
Dipsosaurus dorsalis dorsalis	northern desert iguana
Sauromalus ater	common chuckwalla
Phrynosomatidae	**Horned Lizards, Spiny Lizards & Relatives**
Callisaurus draconoides rhodostictus	western zebra-tailed lizard
Sceloporus magister	desert spiny lizard
Urosaurus graciosus	long-tailed brush lizard
Uta stansburiana	side-blotched lizard
Teiidae	**Whiptails & Relatives**
Aspidoscelis tigris tigris	western whiptail
Colubridae	**Colubrid Snakes**

Chionactis occipitalis occipitalis	Mohave shovel-nosed snake
Viperidae	**Pit Vipers**
Crotalus cerastes laterorepens	Colorado desert sidewinder

AVES	**BIRDS**
Anatidae	**Ducks, Geese, and Swans**
Anas platyrhynchos	mallard
Phalacrocoracidae	**Cormorants**
Phalacrocorax auritus	double-crested cormorant (flyover)
Accipitridae	**Kites, Eagles, Hawks, and Allies**
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	red-tailed hawk
Charadriidae	**Lapwings and Plovers**
Charadrius vociferus	killdeer
Odontophoridae	**New World Quail**
Callipepla gambelii	Gambel's quail
Columbidae	**Pigeons and Doves**
**Columba livia*	rock dove
**Streptopelia decaocto*	Eurasian collared dove
Zenaida macroura	mourning dove
Cuculidae	**Cuckoos, Roadrunners, and Anis**
Geococcyx californianus	greater roadrunner
Strigidae	**Typical Owls**
†Athene cunicularia	burrowing owl
Apodidae	**Swifts**
Aeronautes saxatalis	white-throated swift
Trochilidae	**Hummingbirds**
Calypte costae	Costa's hummingbird
Falconidae	**Caracaras and Falcons**
Falco sparverius	American kestrel
Tyrannidae	**Tyrant Flycatchers**
Sayornis nigricans	black phoebe

Sayornis saya	Say's phoebe
†Pyrocephalus rubinus	vermilion flycatcher (previous survey)
Tyrannus verticalis	western kingbird
Laniidae	**Shrikes**
†Lanius ludovicianus	loggerhead shrike
Corvidae	**Jays, Crows, Magpies**
Corvus corax	common raven
Hirundinidae	**Swallows**
Stelgidopteryx serripennis	northern rough-winged swallow
Petrochelidon pyrrhonota	cliff swallow
Remizidae	**Penduline Tits and Verdins**
Auriparus flaviceps	verdin
Troglodytidae	**Wrens**
Salpinctes obsoletus	rock wren
Campylorhynchus brunneicapillus	cactus wren
Mimidae	**Mockingbirds, Thrashers, and Allies**
Mimus polyglottos	northern mockingbird
Sturnidae	**Starlings and Allies**
**Sturnus vulgaris*	European starling
Emberizidae	**Emberizines**
Pipilo aberti	Abert's towhee
Icteridae	**Blackbirds and Allies**
Euphagus cyanocephalus	Brewer's blackbird
Quiscalus mexicanus	great-tailed grackle
Fringillidae	**Fringilline, Cardueline Finches and Allies**
Haemorhous mexicanus	house finch
Spinus psaltria	lesser goldfinch
Passeridae	**Old World Sparrows**
**Passer domesticus*	house sparrow

MAMMALIA	**MAMMALS**
Leporidae	**Rabbits and Hares**
Lepus californicus	black-tailed jackrabbit

Sylvilagus audubonii	Audubon's cottontail
Sciuridae	**Squirrels, Chipmunks, and Marmots**
†Xerospermophilus tereticaudus chlorus	Coachella Valley round-tailed ground squirrel
Spermophilus beecheyi	California ground squirrel
Ammospermophilus leucurus	white-tailed antelope squirrel
Cricetidae	**Cricetid Rodents**
Neotoma lepida	desert woodrat (middens)
Canidae	**Dogs, Wolves & Relatives**
Canis latrans	coyote (scat)
Procyonidae	**Raccoons and relatives**
Procyon lotor	northern raccoon (tracks)