# Appendix A. Biological Resources Letter Report

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Harris & Associates

April 14, 2020

Mitzy Cuxum
Senior Planner
City of Arvin, Community Development Department
141 Plumtree Drive
Arvin, California 93203

**Subject: Biological Resources Letter Report for the City of Arvin Sanitary Sewer Master Plan**

Dear Ms. Cuxum:

This letter report documents the results of the habitat assessment and biological resources survey (together referred to as "survey") for the proposed City of Arvin Sanitary Sewer Master Plan (project), in the City of Arvin (City), Kern County (County), California (Attachment 1, Figures; Figure 1, Regional Location, and Figure 2 series, Project Site).

## Project Description and Location

The project site is within the City's jurisdiction (Figure 1). The majority of the project site is developed. The project includes improvements to approximately 54,771 linear feet of sanitary sewer pipeline and 257 manholes throughout the City and comprises 17 individual capital improvement projects (CIPs). The 17 CIP sites make up the project site (collectively referred to as the "project site" throughout this letter report). The 17 CIPs are outlined in Table 1, Capital Improvement Projects Details, and described further in the sections below.

**Table 1. Capital Improvement Projects Details**

| CIP | Linear Feet of Sanitary Sewer Pipeline | Number of Manholes |
|---|---|---|
| A Street | 4,306 | 14 |
| Campus Drive Alley | 1,967 | 7 |
| Comanche Drive | 1,110 | 8 |
| East Di Giorgio Park | 3,303 | 9 |
| Haven Drive | 2,797 | 12 |
| Langford Avenue | 2,007 | 10 |
| Meyer Street | 3,706 | 14 |
| Millux Road Pipeline and Pump Station | 6,700 | 0 |
| Plumtree Drive Alleys | 3,878 | 14 |
| Potato-Sycamore | 1,320 | 5 |
| Small Pipeline Replacement | 1,080 | 13 |
| Small Spot Repair | 303 | 3 |
| Southeast Kovacevich Park | 5,669 | 16 |
| Southwest Kovacevich Park | 6,961 | 21 |
| Stand-Alone Manhole Repair and Replacement | 0 | 86 |
| West Di Giorgio Park | 3,651 | 7 |
| West Smothermon Park | 6,013 | 18 |
| **Total** | **54,771** | **257** |

**Notes:** CIP = capital improvement project

The improvements to the existing sanitary sewer infrastructure, including replacement, upgrading, and installation of pipeline segments proposed by the City, are located primarily within existing City rights-of-way but also in undeveloped and vacant parcels throughout the City.

The extent of construction activities associated with the project would remain within a 25-foot-wide construction activity zone. Within the construction activity zone, 5-foot-wide trenches would be excavated in the roadway or ground surface directly over the pipelines to provide construction access to the pipelines. For the manhole improvement component of the project, construction would remain within a 15-foot-wide construction activity zone. Construction staging areas would be in developed areas within the City's right-of-way. Upon completion of each CIP, the roadway and ground surface areas disturbed during construction would be restored to their previous condition and function. Vegetation on the project site is dominated by agriculture, non-native grassland, and disturbed land. Extensive agricultural activity, homeless encampments, and abandoned industrial properties exist around the periphery of the project site and include areas of disturbed or bare ground with accumulated trash and human-made debris.

## Descriptions of Capital Improvement Projects

### A Street

The A Street CIP is in three alleys east of A Street generally bounded by Tucker Street to the north, Derby Street to the east, A Street to the west, and Haven Drive to the south (Figure 2 series). This CIP includes replacing 2,611 feet of existing 8-inch pipe with new 8-inch pipe, replacing 321 feet of existing 10-inch pipe with new 10-inch pipe, lining 1,268 feet of existing pipe, performing spot repair on 106 feet of existing pipe, and replacing 14 manholes.

### Campus Drive Alley

The Campus Drive Alley CIP is in the alley west of Campus Drive between Varsity Avenue and Bear Mountain Boulevard (Figure 2 series). The CIP includes replacing 1,634 feet of existing 8-inch pipe with new 8-inch pipe, lining 198 feet of existing pipe, performing spot repair on 135 feet of existing pipe, and replacing seven manholes.

### Comanche Drive

The Comanche Drive CIP is generally located in Comanche Drive between Sycamore Road and El Camino Real and includes replacing 1,110 feet of existing 18-inch pipe with new 18-inch pipe and replacing eight manholes (Figure 2 series).

### East Di Giorgio Park

The East Di Giorgio Park CIP is east of Di Giorgio Park and is generally bounded by Holden Street to the north, A Street to the east, Hill Street to the west, and Langford Avenue to the south and includes a pipeline that crosses Di Giorgio Park (Figure 2 series). This CIP includes replacing 2,059 feet of existing 6-inch pipe with new 8-inch pipe, replacing 899 feet of existing 8-inch pipe with new 8-inch pipe, lining 345 feet of existing pipe, and replacing nine manholes.

### Haven Drive

The Haven Drive CIP is within Haven Drive, Monroe Street, Santa Rosa Street, and Walnut Drive (Figure 2 series). The CIP includes replacing 563 feet of existing 6-inch pipe with new 8-inch pipe, replacing 1,899 feet of existing 8-inch pipe with new 8-inch pipe, replacing 335 feet of existing 15-inch pipe with new 15-inch pipe, and replacing 12 manholes.

### Langford Avenue

The Langford Avenue CIP is in Langford Avenue between Stockton Avenue and A Street and is generally bounded by Franklin Street to the north, Stockton Avenue to the east, A Street to the west, and Fallbrook Avenue to the

south (Figure 2 series). This CIP includes replacing 945 feet of existing 8-inch pipe with new 8-inch pipe, lining 977 feet of existing pipe, performing spot repair on 85 feet of existing pipe, replacing seven manholes, and repairing three manholes.

### Meyer Street

The Meyer Street CIP is generally bounded by Bear Mountain Boulevard to the north, Acala Street to the east, Meyer Street to the west, and Haven Drive to the south (Figure 2 series). This CIP includes replacing 1,952 feet of existing 6-inch pipe with new 8-inch pipe, replacing 1,808 feet of existing 12-inch pipe with new 12-inch pipe, and replacing 14 manholes.

### Millux Road Pipeline and Pump Station

The Millux Road Pipeline and Pump Station CIP is generally located in Millux Road between Malovich Road and Comanche Road (Figure 2 series). The CIP includes installing 6,700 feet of new 15-inch pipe between the intersection of A street and El Camino Real and the intersection of Millux Road and Comanche Drive. In addition, the CIP includes constructing a 0.06-acre fenced pump station in the vicinity of the intersection of Millux Road and Comanche Drive. A 6-inch force main would be installed in Comanche Drive between Millux Road and El Camino Real.

### Plumtree Drive Alleys

The Plumtree Drive Alleys CIP is generally located in the alleys east and west of Plumtree Drive between Orchard Drive and 4th Avenue (Figure 2 series). The CIP includes replacing 641 feet of existing 8-inch pipe with new 8-inch pipe, lining 2,987 feet of existing pipe, performing spot repair on 250 feet of existing pipe, replacing nine manholes, and repairing five manholes.

### Potato-Sycamore

The Potato-Sycamore CIP is in Sycamore Road between Walnut Drive and Comanche Drive (Figure 2 series). The CIP includes replacing approximately 1,320 feet of existing 15-inch sewer in Sycamore Road between Walnut Drive and Comanche Drive with new 24-inch pipe and installing five new manholes in the alignment. This CIP also includes the future development of industrial land uses northeast of the intersection of Derby Street and Sycamore Road.

### Small Pipeline Replacement

The Small Pipeline Replacement CIP includes six small replacement projects throughout the City (Figure 2 series). This CIP includes replacing 1,080 feet of existing 8-inch pipe with new 8-inch pipe and replacing 13 manholes.

### Small Spot Repair

The Small Spot Repair CIP includes 10 small spot repair projects throughout the City (Figure 2 series). This CIP includes repairing 303 feet of existing pipe and repairing three manholes.

### Southeast Kovacevich Park

The Southeast Kovacevich Park CIP is southeast of Kovacevich Park; generally bounded by 5th Avenue to the north, Derby Street to the east, B Street to the west, and the alley south of Bear Mountain Boulevard to the south; and includes an additional pipe in 5th Avenue east of Derby Street (Figure 2 series). This CIP includes replacing 2,438 feet of existing 8-inch pipe with new 8-inch pipe, lining 3,070 feet of existing pipe, performing spot repair on 161 feet of existing pipe, replacing 13 manholes, and repairing 3 manholes.

### Southwest Kovacevich Park

The South Kovacevich Park CIP is southwest of Kovacevich Park and generally bounded by 5th Avenue to the north, B Street to the east, Hill Street to the west, and Bear Mountain Boulevard to the south, with some additional pipes in and around Bear Mountain Boulevard west of Hill Street (Figure 2 series). The CIP includes replacing 227 feet of existing 6-inch pipe with new 8-inch pipe, replacing 4,361 feet of existing 8-inch pipe with new 8-inch pipe, replacing 335 feet of existing 10-inch pipe with new 10-inch pipe, lining 226 feet of existing 12-inch pipe, lining 1,729 feet of existing 8-inch pipe, performing spot repair on 83 feet of existing pipe, and replacing 21 manholes.

### Stand-Alone Manhole Repair and Replacement

The Stand-Alone Manhole Repair and Replacement CIP includes repairing 62 manholes and replacing 24 manholes throughout the City (Figure 2 series).

### West Di Giorgio Park

The West Di Giorgio Park CIP is west of Di Giorgio Park and generally bounded by Haven Drive to the north, Meyer Street to the east, Walnut Drive to the west, and Franklin Street to the south (Figure 2 series). This CIP includes replacing 938 feet of existing 8-inch pipe with new 8-inch pipe, lining 2,656 feet of existing pipe, performing spot repair on 57 feet of existing pipe, and replacing seven manholes.

### West Smothermon Park

The West Smothermon Park CIP is west of Smothermon Park and generally bounded by Mark Street to the north, Walnut Drive to the east, Comanche Drive to the west, and the alley parallel to and south of Durham Street to the south, with some additional pipelines in and around Bush Street east of Walnut Drive (Figure 2 series). This CIP includes replacing 4,004 feet of existing 6-inch pipe with new 8-inch pipe, replacing 1,976 feet of existing 8-inch pipe with new 8-inch pipe, performing spot repair on 33 feet of existing pipe, replacing 17 manholes, and repairing 1 manhole.

## Environmental Setting

Following is a description of the existing conditions on the project site.

### Land Use

The project is in the City of Arvin, a rural city in Kern County. The majority of the project site is within the City-owned rights-of-way but includes some developed and disturbed lands. Surrounding land uses include rural low-, medium-, and high-density residential, commercial, light and heavy industrial, and agricultural. The land uses surrounding the City are primarily agricultural, including orchards, vineyards, and row crops.

### Topography and Soils

The project site is relatively level topographically and ranges in elevation from 384 to 465 feet above mean sea level (Figure 3, USGS Topographic Map). The U.S. Department of Agriculture Natural Resources Conservation Service soil series identifies the soils on the project site as dominated by Hesperia sandy loam, Di Giorgio sandy clay loam, and Hesperia loamy sand (USDA 2019) (Figure 4, Soils). Hesperia sandy loam is across the majority of the project site, with DiGiorgio sandy clay loam in the southern portion of the project site and Hesperia loamy sand along the western edge of the project site (Figure 4). A small area of Cerini loam is in the southwestern corner of the project site.

### Hydrology

The project site is in the Tulare-Buena Vista Lakes Watershed (Hydrologic Unit 180300) (USGS 2019). The Tulare-Buena Vista Lakes Watershed encompasses the majority of the County and is bordered to the north by the San Joaquin River watershed, to the west by the Central Coast Watershed, and to the south and east by the North and South Lohontan Watersheds, respectively. Historically, the Tulare-Buena Vista Lakes Watershed has been influenced by shifts in the Kings River and its division of flows between the Tulare Lake Basin and the San Joaquin Basin (USGS 2019).

The Tulare-Buena Vista Lakes Watershed is composed of 12 hydrologic areas, Hydrologic Areas 18030001 through 18030012, which have been delineated by the U.S. Geological Survey based on drainage patterns. The project site is within Hydrologic Area 18030012, also named Tulare-Buena Vista Lakes Watershed. The majority of the land in the watershed is used for agricultural production or is undeveloped. The next largest land uses in the watershed are residential and industrial. The highest concentration of the County's population is in the central and western portions of the watershed, particularly around urban centers like the Cities of Bakersfield and Fresno (USGS 2019).

### Climate

Meteorological data for the project site are gathered at the San Joaquin Valley weather forecast office, northwest of the project site (NOAA 2019). On the project site, the normal daily maximum temperature is 99 degrees Fahrenheit (°F) in August, and the normal daily minimum temperature is 41°F in December. The average annual temperature is approximately 69°F, with days frequently exceeding 100°F and very few dropping below freezing (NOAA 2019). Due to the temperate climate, the growing season is typically year-round.

The average precipitation on the project site is approximately 4.7 inches annually, primarily occurring from September through April. Based on data from the San Joaquin Valley weather forecast office, the vicinity of the project site receives the greatest amount of rain, an average of approximately 2.5 inches, in March (NOAA 2019).

# Regulatory Setting

## Federal

### Federal Clean Water Act (U.S. Code, Title 33, Sections 1251 through 1376)

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires a project operator to obtain a federal license or permit that allows activities resulting in a discharge to waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by the U.S. Army Corps of Engineers (USACE) that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. The USACE implementing regulations are found at the Code of Federal Regulations, Title 33, Parts 320 and 330. Guidelines for implementation are referred to as the "Section 404(b)(1) Guidelines," which were developed by the U.S. Environmental Protection Agency in conjunction with the USACE (40 CFR 230). These guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

### Federal Endangered Species Act (U.S. Code, Title 16, Sections 1531 through 1543)

The federal Endangered Species Act (FESA) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems on which they depend. In addition, FESA defines species as threatened or endangered and provides regulatory protection for listed species. FESA also provides a

program for the conservation and recovery of threatened and endangered species and the conservation of designated critical habitat that the U.S. Fish and Wildlife Service (USFWS) determines to be required for the survival and recovery of these listed species.

Section 7 of FESA requires federal agencies, in consultation with and with assistance from the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that actions the federal agencies authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. The USFWS and National Marine Fisheries Service share responsibilities for administering FESA. Regulations governing interagency cooperation under Section 7 are found in California Code of Regulations, Title 50, Part 402. The opinion issued at the conclusion of consultation will include a statement authorizing "take" (e.g., to harass, harm, pursue, hunt, wound, kill) that may occur incidentally to an otherwise legal activity.

Section 9 lists those actions that are prohibited under FESA. Although take of a listed species is prohibited, it is allowed when it is incidental to an otherwise legal activity. Section 9 prohibits take of listed species of fish, wildlife, and plants without special exemption. The definition of "harm" includes significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns related to breeding, feeding, or shelter. "Harass" is defined as actions that create the likelihood of injury to listed species by significantly disrupting normal behavioral patterns related to breeding, feeding, and shelter.

Section 10 provides a means whereby a nonfederal action with the potential to result in take of a listed species can be allowed under an incidental take permit. Application procedures are found in the Code of Federal Regulations, Title 50, Parts 13 and 17, for species under the jurisdiction of the USFWS and Code of Federal Regulations, Title 50, Parts 217, 220, and 222, for species under the jurisdiction of the National Marine Fisheries Service.

### Migratory Bird Treaty Act (U.S. Code, Title 16, Sections 703 through 711)

The Migratory Bird Treaty Act (MBTA) is the domestic law that affirms or implements a commitment by the United States to four international conventions (Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. The MBTA makes it unlawful at any time, by any means, or in any manner to pursue, hunt, take, capture, or kill migratory birds. The law also applies to the removal of nests occupied by migratory birds during the breeding season. The MBTA makes it unlawful to take, pursue, molest, or disturb these species, their nests, or their eggs anywhere in the United States.

### Wetlands and Other Waters of the United States

Aquatic resources, including riparian areas, wetlands, and certain aquatic vegetation communities, are considered sensitive biological resources and can fall under the jurisdiction of several regulatory agencies. The USACE exerts jurisdiction over waters of the United States, including waters that are subject to the ebb and flow of the tide; wetlands and other waters such as lakes, rivers, streams (including intermittent or ephemeral streams), mudflats, sandflats, sloughs, prairie potholes, vernal pools, wet meadows, playa lakes, or natural ponds; and tributaries of the previously mentioned features. The extent of waters of the United States is generally defined as the portion that falls within the limits of the ordinary high water mark. Typically, the ordinary high water mark corresponds to the 5- to 7-year flood event.

Wetlands, including swamps, bogs, seasonal wetlands, seeps, marshes, and similar areas, are defined by the USACE as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3[b]; 40 CFR 230.3[t]). Indicators of three wetland parameters (i.e., hydric soils, hydrophytic vegetation, and wetlands hydrology), determined by field investigation, must be present for a site to be classified as a wetland by the USACE (USACE 1987).

## State

### California Endangered Species Act (California Fish and Game Code, Sections 2050 et seq.)

The California Endangered Species Act (CESA) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitat. CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives that would avoid jeopardy are available. There are no state agency consultation procedures under CESA. For projects that would affect a listed species under both CESA and FESA, compliance with FESA would satisfy CESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with CESA under California Fish and Game Code, Section 2080.1. For projects that would result in take of a species only listed under CESA, the project operator would have to apply for a take permit under Section 2081(b).

### California Environmental Quality Act Guidelines, Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, California Environmental Quality Act (CEQA) Guidelines, Section 15380(b), provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and Sections 2050 through 2059.26 of the California Fish and Game Code dealing with rare or endangered plants or wildlife. This section was included in CEQA primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not been listed by either the USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not currently have legal protection of any kind, CEQA calls for an assessment of whether any such resources would be affected and requires findings of significance if there would be substantial losses. Natural communities listed as sensitive by the California Natural Diversity Database (CNDDB) are considered by the CDFW to be significant resources and fall under the CEQA Guidelines to address impacts. Local planning documents, such as general plans, often identify these resources as well.

### California Fish and Game Code, Section 1602

Under this section of the California Fish and Game Code, the project operator is required to notify the CDFW prior to the start of any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Pursuant to the code, a “stream” is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel that has banks and supports fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that supports or has supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial watercourses valuable to fish and wildlife are subject to CDFW jurisdiction. The CDFW also has jurisdiction over dry washes that carry water during storm events.

Preliminary notification and project review generally occur during the environmental analysis process. When an existing fish or wildlife resource may be substantially adversely affected, the CDFW is required to propose reasonable project changes to protect the resource. These modifications are formalized in a streambed alteration agreement, which becomes part of the plans, specifications, and bid documents for the project.

### California Fish and Game Code, Sections 2080 and 2081

Section 2080 of the California Fish and Game Code states that “no person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission [California Fish and Game Commission] determines to be an endangered species or

threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act." Pursuant to Section 2081 of the code, the CDFW may authorize individuals or public agencies to import, export, take, or possess state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or memoranda of understanding if the take is incidental to an otherwise lawful activity, impacts of the authorized take are minimized and fully mitigated, the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and the project operator ensures adequate funding to implement the measures required by the CDFW. The CDFW makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

### California Fish and Game Code, Sections 3503, 3503.5, 3513, and 3800

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically states that it is unlawful to take, possess, or destroy any raptor (i.e., species in the orders *Falconiformes* and *Strigiformes*), including nests or eggs. Typical violations of this code include destruction of active nests resulting from removal of vegetation in which the nests are located. Violation of Section 3503.5 could also include failure of active raptor nests resulting from disturbance of nesting pairs by nearby project construction. This statute does not provide for the issuance of any type of incidental take permit.

Section 3513 of the California Fish and Game Code upholds the MBTA by prohibiting any take or possession of birds that are designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations promulgated pursuant to the MBTA.

Section 3800 of the California Fish and Game Code affords protection to nongame birds, which are birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds.

### California Fish and Game Code, Sections 3511, 4700, 5050, and 5515

California fully protected species are described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species. The CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species.

### California Wetland Definition

Unlike the federal government, California has adopted the Cowardin et al. (1992) definition of "wetlands." For this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes (at least 50 percent of the aerial vegetative cover); (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is non-soil and saturated with water or covered by shallow water at some time during the growing season of each year.

Under normal circumstances, the federal definition of wetlands requires all three wetland identification parameters to be met, whereas the Cowardin et al. (1992) definition requires the presence of at least one of these parameters. For this reason, identification of wetlands by state agencies consists of the union of all areas that are periodically inundated or saturated or in which at least seasonal dominance by hydrophytes may be documented or in which hydric soils are present.

### Native Plant Protection Act (California Fish and Game Code, Sections 1900 through 1913)

California's Native Plant Protection Act requires state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the act prohibit the take of listed plants from the wild and require notification to the CDFW at least 10 days in advance of any change in land use. This notification allows the CDFW to salvage listed plant species that would otherwise be destroyed. The project operator is required to

conduct botanical inventories and consult with the CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

### Porter-Cologne Water Quality Control Act

The State Water Resources Control Board works in coordination with the nine RWQCBs to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region and may approve, with or without conditions, or deny projects that could affect waters of the state. Their authority comes from the CWA and the state's Porter-Cologne Water Quality Control Act. The act broadly defines waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state." Because the act applies to any water, whereas the CWA applies only to certain waters, California's jurisdictional reach overlaps and may exceed the boundaries of waters of the United States. For example, Water Quality Order No. 2004-0004-DWQ states that "shallow" waters of the state include headwaters, wetlands, and riparian areas. Moreover, in practice, the RWQCBs claim jurisdiction over riparian areas. Where riparian habitat is not present, which may be the case in headwaters, jurisdiction is taken to the top of bank.

Under the act, the State Water Resources Control Board and the nine RWQCBs also have the responsibility of granting CWA National Pollutant Discharge Elimination System permits and waste discharge requirements for certain point-source and nonpoint-source discharges to waters. These regulations limit impacts on aquatic and riparian habitats from a variety of urban sources.

## Local

### City of Arvin General Plan Update

The Conservation and Open Space Element of the City's General Plan Update (City of Arvin 2012) provides the following goals and policies that apply to vegetation and wildlife habitat:

> **Goal 6:** Preserve wildlife, endangered and/or rare species and natural habitats and eco-systems in the Arvin Planning area.
>
> **Policy CO-6.1**: Protect sensitive and significant ecological areas of unique vegetation and wildlife.
>
> **Policy CO-6.2**: Protect from extinction the identified endangered species which recognize the Arvin area as part of their natural range.
>
> **Policy CO-6.3**: Consider the establishment of protected open space areas, planted with native valley vegetation, to serve as wildlife habitat and natural laboratory for public education purposes.
>
> **Policy CO-6.4**: Implement a relocation program for any rare and/or endangered animal species found in urbanized areas.

### Kern County General Plan

The Land Use, Open Space, and Conservation Element of the County's General Plan (Kern County 2009) provides the following policies and implementation measures that apply to threatened and endangered species and oak tree conservation:

*Policies*

1. Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.
2. County should work closely with State and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.

3. The County will seek cooperative efforts with local, State, and federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.
4. The County will promote public awareness of endangered species laws to help educate property owners and the development community of local, State, and federal programs concerning endangered species conservation issues.
5. Under the provisions of the California Environmental Quality Act (CEQA), the County, as lead agency, will solicit comments from the California Department of Fish and Game and the U.S. Fish and Wildlife Service when an environmental document (Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report) is prepared.
6. Riparian areas will be managed in accordance with United States Army Corps of Engineers, and the California Department of Fish and Game rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.
7. Oak woodlands and large oak trees shall be protected where possible and incorporated into project developments.
8. Promote the conservation of oak tree woodlands for their environmental value and scenic beauty.

*Implementation Measures*

a. Discretionary projects shall consider effects to biological resources as required by the California Environmental Quality Act.
b. Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to the California Environmental Quality Act.
c. Pursue the development and implementation of conservation programs with State and federal wildlife agencies for property owners desiring streamlined endangered species mitigation programs.
d. The following applies to discretionary development projects (General Plan Amendment, zone change, conditional use permit, tract maps, parcel maps, precise development plan) that contains oak woodlands, which are defined as development parcels having canopy cover by oak trees of at least ten percent (10%), as determined from base line aerial photography or by site survey performed by a licensed or certified arborist or botanist. If this study is used in an Environmental Impact Report, then a Registered Professional Forester (RPF) shall perform the necessary analysis.
    i. Development parcels containing oak woodlands are subject to a minimum canopy coverage retention standard of thirty percent (30%). The consultant shall include recommendations regarding thinning and diseased tree removal in conjunction with the discretionary project.
    ii. Use of aerial photography and a dot grid system shall be considered adequate in determining the required canopy coverage standard.
    iii. Adjustments below thirty percent (30%) minimum canopy standard may be made based on a report to assess the management of oak woodlands.
    iv. Discretionary development, within areas designated as meeting the minimum canopy standard, shall avoid the area beneath and within the trees unaltered drip line unless approved by a licensed or certified arborist or botanist.
e. The following applies to development of parcels having oak tree canopy cover of less than ten percent (10%), but containing individual oak trees equal to or greater than a 12-inch diameter trunk at 4.5 feet breast height.
    i. Such trees shall be identified on plot plans.
    ii. Discretionary development shall avoid the area beneath and within the trees unaltered drip line unless approved by a licensed or certified arborist or botanist.
    iii. Specified tree removal related to the discretionary action may be granted by the decision making body upon showing that a hardship exists based on substantial evidence in the record.

### Draft Kern County Valley Floor Habitat Conservation Plan

The Draft Kern County Valley Floor Habitat Conservation Plan (VFHCP) includes the City (Kern County 2006). The development of the VFHCP Program began in 1989 with a Memorandum of Understanding among the USFWS; CDFW; Bureau of Land Management; California Energy Commission; California Division of Oil, Gas, and Geothermal Resources; and Kern County. The Draft VFHCP Program Area encompasses 3,110 square miles (approximately 1,990,400 acres) and generally includes most of the San Joaquin Valley Floor portion of the County up to an elevation of 2,000 feet. The Draft VFHCP-proposed covered species include plants and wildlife with both state- and federally listed status of threatened or endangered and California species of special concern status. Upon approval, the Draft VFHCP is designed to result in issuance of a Section 10(a) Incidental Take Permit from the USFWS and a Section 2081 Incidental Take Permit from the CDFW (Kern County 2006). In total, 14 plant species and 11 wildlife species known to occur in the VFHCP Program Area are addressed by the VFHCP. The VFHCP is intended to provide adequate conservation of sensitive vegetation communities, including non-native grassland, valley sink saltbrush, and valley sink scrub, in the VFHCP Program Area. Because the Draft VFHCP has not yet been approved, the City is not a signatory for the plan. However, the City complies with the Conservation and Open Space Element of the City's General Plan Update and the Land Use, Open Space, and Conservation Element of the County's General Plan, which include similar goals and policies outlined in the Draft VFHCP (City of Arvin 2012; Kern County 2009).

## Methods

This biological resources analysis includes a database review and survey to document the existing biological conditions of the CIP sites. The results of this review provide information on the potential constraints to project development due to the presence of special-status biological resources.

### Environmental Document Review

The County's General Plan, VFHCP, and City's General Plan Update were reviewed to gather biological resources data pertinent to the project.

### Database Review

Review of online databases including the CNDDB, USFWS National Wetlands Inventory (NWI) Wetlands Mapper, USFWS Information for Planning and Consultation (IPaC), Consortium of California Herbaria database, Calflora database, and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California was conducted for the project. The VFHCP was also reviewed.

#### California Department of Fish and Wildlife California Native Diversity Database

The CNDDB searches were conducted for 0.25-, 1-, and 3-mile radii of the project site to identify previously mapped resources within these areas (CDFW 2018). The results of the searches are presented in the Results section of this letter report.

#### U.S. Fish and Wildlife Service Information for Planning and Consultation

The USFWS IPaC report was created by drawing a perimeter around the project site. The results of the location search are provided in the Results section of this letter report.

#### U.S. Fish and Wildlife Service National Wetland Inventory

USFWS NWI maps were reviewed to identify any wetlands and waters that were mapped on the CIP sites (USFWS 2019a). The USFWS NWI search was conducted by drawing a perimeter around the project within the web map

that identified the location of any USACE jurisdictional wetlands and waters surrounding the project. The results of the NWI search are provided in the Results section of this letter report.

### California Native Plant Society Inventory of Rare and Endangered Plants of California

The CNPS Inventory of Rare and Endangered Plants of California (online version) assists in the determination of special-status plant species potentially present within a given area (CNPS 2019). CNPS status codes are defined by the CNPS California Rare Plant Rank (CRPR) system described as follows (CNPS 2019): CRPR 1A plants are presumed extirpated in California and either rare or extinct elsewhere; CRPR 1B plants are rare, threatened, or endangered in California and elsewhere; CRPR 2A plants are presumed extirpated in California but common elsewhere; CRPR 2B plants are rare, threatened, or endangered in California but more common elsewhere; CRPR 3 plants lack the necessary information needed to assign them to one of the other ranks or to reject them; and CRPR 4 plants are of limited distribution or infrequent throughout a broader area in California, and their status requires more regular monitoring.

The CNPS CRPR at each level also includes a threat rank defined as follows: 0.1, seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat); 0.2, moderately threatened in California (20–80 percent occurrences threatened/moderate degree and immediacy of threat); and 0.3, not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known).

### Consortium of California Herbaria and Calflora Databases

The California Herbaria database, a gateway to information for California vascular plant specimens housed in participant herbaria (CCH 2019), and the Calflora database, a database for currently recognized vascular plants in California (Calflora 2019), were reviewed.

### Special-Status Plants

After generating a list of potentially occurring special-status plant species, species were categorized based on the likelihood of observance using literature and database searches and the survey. The special-status plant species categories are as follows:

- **No Potential**: No suitable habitat exists or a species is not known to occur in the area surrounding the project site (i.e., generally more than 15 miles outside of the project site). The definition of habitat includes the major vegetation communities (e.g., non-native grassland), as well as microhabitat conditions such as specific soil type requirements. In addition, the elevation range where the species occurs may be more than 300 feet above or below the elevation range on the project site, or the species is known to be extirpated from the project site.
- **Low Potential**: Habitat for the species is present, but the geographic or elevation ranges on the project site differ from those documented for the species. Specifically, the species occurs between 5 and 15 miles of the project site, if all occurrences within 5 miles are more than 30 years old, or the elevation range where the species occurs is between 100 and 300 feet above or below the elevation range on the project site.
- **Moderate Potential**: Habitat for the species is present, the geographic and elevation ranges on the project site are consistent with those documented for the species, and the species has been documented within 1 to 5 miles of the project site within the last 10 years.
- **High Potential**: Habitat for the species is present, the geographic and elevation ranges on the project site are consistent with those documented for the species, and the species has been documented within 1 mile of the project site within the last 3 years.

### Special-Status Wildlife

The potential for special-status wildlife species to occur on or near the project site was determined using information from the literature and database searches and the survey. The following criteria were used to determine the potential for special-status wildlife species to occur on the project site:

- **No Potential**: The project site is outside of the range of this species, no habitat for the species exists on the project site, and the species has been sporadically observed on the project site based on literature, or no recent occurrences for this species have been recorded within 5 miles of the project site. Alternatively, any occurrences within 5 miles of the project site are now documented as extirpated.
- **Low Potential**: No habitat exists on the project site, but it cannot be ruled out that a species could potentially move through, perch, or be on the project site for a short duration; that some habitat exists on or near the project site but is extremely limited, fragmented, or isolated with no connectivity to other habitat for the species; or that occurrences for the species have been recorded on or near the project site, but the land use has since changed in a way that has eliminated all former habitat.
- **Moderate Potential**: Habitat for the species is present on or near the project site, and historical (i.e., over 30 years old) occurrences for the species have been recorded, or some habitat exists on or near the project site that is limited, fragmented, or isolated, but recent (i.e., less than 10 years old) occurrences for the species have been recorded.
- **High Potential**: Habitat for the species is present, and recent (i.e., less than 10 years old) occurrences for the species have been recorded on or near the project site (i.e., within 5 miles of the project site).
- **Present**: The species or its sign (e.g., scat, tracks, or feathers) was observed on the project site during the field survey.

## Field Reconnaissance Survey

A survey of the project site was conducted by Harris & Associates biologist Katie Laybourn on October 14 and 15, 2019. The area surveyed included the 17 CIP sites plus a 500-foot buffer (survey area). Vegetation communities and land cover types were mapped in the survey area. The survey was conducted on CIP sites that were in or adjacent to undeveloped areas by walking meandering transects throughout the survey area and documenting plant and wildlife species and evaluating the potential for occurrence of special-status plant and wildlife species. The biologist identified the vegetation communities in the survey area by documenting visually observed habitat features present along the meandering transects, including existing plant species, structural characteristics, and general habitat quality.

# Results

The results presented in this section provide data from the survey conducted in the survey area.

## Vegetation Communities and Land Cover Types

The survey area is in the central California region of the California Floristic Province (Jepson 2019). Specifically, the survey area includes the rural community of the City.

Six CIP sites were identified as being completely surrounded by urban development and not bordering other vegetation communities or land cover types and were mapped as developed. The six CIPs include A Street, East Di Giorgio Park, Langford Avenue, Meyer Street, Southwest Kovacevich Park, and West Di Giorgio Park (Figure 2 series). The remaining 11 CIPs were identified as being within or adjacent to undeveloped areas and included in the survey area. The 11 CIPs include Campus Drive Alley, Comanche Drive, Haven Drive, Millux Road Pipeline and Pump Station, Plumtree Drive Alleys, Potato-Sycamore, Small Pipeline Replacement, Small Spot Repair, Southeast Kovacevich Park, Stand-Alone Manhole Repair and Replacement, and West Smothermon Park. These 11 CIPs were surveyed and mapped for vegetation communities and land cover types as described in the Methods section of this letter report.

Vegetation communities and land cover types identified in the survey area include open water, disturbed potential aquatic resource, non-native grassland, southern willow scrub, agriculture, developed land, and disturbed land (Kern County 2006) (Figure 5 series, Vegetation Communities) (Table 2, Vegetation Communities in the Survey Area and Project Site). The vegetation communities and land cover types on the project site include non-native grassland, agriculture, developed land, and disturbed land.

**Table 2. Vegetation Communities in the Survey Area and Project Site**

| Vegetation Community and Land Cover Type | Survey Area (acres) | Project Site (acres) |
|---|---|---|
| **Aquatic** | | |
| Open Water | 5.77 | 0 |
| **Subtotal** | **5.77** | **0** |
| **Riparian** | | |
| Southern Willow Scrub | 1.51 | 0 |
| **Subtotal** | **1.51** | **0** |
| **Upland** | | |
| Non-Native Grassland (and Burned) | 82.24 | 0.98 |
| **Subtotal** | **82.24** | **0.98** |
| **Developed/Disturbed** | | |
| Disturbed Potential Aquatic Resource | 0.80 | 0 |
| Agriculture | 272.75 | 2.35 |
| Developed Land | 476.92 | 9.40 |
| Disturbed Land | 63.66 | 6.40 |
| **Subtotal** | **814.13** | **18.15** |
| **Total** | **903.65** | **19.13** |

**Source:** Kern County 2006; Holland 1986.

## Aquatic Vegetation Communities

### *Open Water*

Open water habitat is composed of year-round bodies of water in the form of lakes, streams, ponds, or rivers. This includes portions of water bodies that are usually covered by water and contain less than 10 percent vegetative cover.

Approximately 5.77 acres of open water occurs in the southern and eastern portions of the survey area. Although no open water habitat occurs on the project site, the Millux Road Pipeline and Pump Station, Potato-Sycamore, and Small Spot Repair CIPs are adjacent to the open water areas (Figure 5 series). The five open water areas appear to be artificial freshwater ponds associated with the surrounding agricultural industry and residential development. The southwestern open water pond, approximately 100 feet south of Millux Road and 100 feet east of South Comanche Road, is surrounded by a narrow strip of southern willow scrub habitat. The two southeastern open water ponds, approximately 100 feet south of Millux Road and 150 feet on either side of Blue Loop Lane, are surrounded by ornamental vegetation associated with the residential development between the ponds. One of the two ponds in the eastern portion of the survey area is approximately 80 feet south of El Camino Real between Tejon Highway and Malovich Road. The other pond in the eastern portion of the survey area is approximately 70 feet south of Sycamore Road between Mayer Street and Tejon Highway. These two eastern ponds have no associated vegetation and appear to be irrigation ponds used by the surrounding agricultural industry.

## Riparian Vegetation Communities

### *Southern Willow Scrub*

Southern willow scrub (and disturbed) consists of dense, broad-leafed, winter-deciduous riparian thickets dominated by several willow species, with scattered emergent Fremont cottonwood (*Populus fremontii*) and California sycamore (*Platanus racemosa*). Most stands are too dense to allow much understory development. Common plant species observed in southern willow scrub include cottonwood species, Goodding's black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), and red willow (*Salix laevigata*).

Approximately 1.51 acres of southern willow scrub occurs in the southwestern corner of the survey area on the banks of an artificial pond appearing to be associated with the surrounding agricultural industry. Although no southern willow scrub habitat occurs on the project site, the Millux Road Pipeline and Pump Station CIP is adjacent to this habitat (Figure 5 series). The southern willow scrub is dominated by arroyo willow and red willow.

## Upland Vegetation Communities

### *Non-Native Grassland (and Burned)*

Non-native grassland is the most widespread vegetation type in the region surrounding the survey area (Kern County 2006). The original composition of the vast Central Valley native grasslands was dominated by perennial bunchgrass known as purple needlegrass (*Stipa* [=*Nassella*] *pulchra*). Perennial broad-leaved herbs, especially plants with bulbs, and a large diversity of annuals were also significant components of the grassland ecosystem. The introduction and spread of exotic and invasive annual grasses (non-native grasses) and forbs contributed significantly to the decline of native vegetation types in the Central Valley. Much of the land dominated by non-native grassland has been managed by the agricultural industry for livestock grazing for a substantial length of time, often in excess of 100 years. Non-native grasses make a dense to sparse ground cover and are often associated with numerous species of native annual wildflowers, especially in years of favorable rainfall. Many special-status wildlife species use large, contiguous areas of non-native grassland for habitat and movement corridors between more suitable habitats. Dominant non-native grasses and forbs include wild oats (*Avena barbata* and *A. fatua*), filaree (*Erodium botrys* and *E. cicutarium*), bromes (*Bromus hordeaceus*, *B. diandrus*, and *B. rubens [=B. madritensis]*), and Italian ryegrass (*Festuca perennis*). Common native grasses and forbs include alkali peppergrass (*Lepidium dictyotum*), fescue (*Vulpia microstachys*), California poppy (*Eschscholzia californica*), baby blue eyes (*Nemophila menziesii*), lupines (*Lupinus* spp.), gilias (*Gilia* spp.), and tarweeds (*Deinandra* spp.).

Approximately 82.24 acres of non-native grassland (including burned) occurs in the survey area, with the largest areas in the southern and eastern portions of the survey area. Approximately 0.98 acre of non-native grassland habitat occurs on the project site (Figure 5 series). Approximately 0.28 acre of non-native grassland occurs on the Campus Drive Alley CIP site, and approximately 0.70 acre of non-native grassland occurs on the Potato-Sycamore CIP site. In the survey area and project site, non-native grassland is dominated by wild oat, bromes, western ragweed (*Ambrosia psilostachya*), prickly lettuce (*Lactuca serriola*), Russian thistle (*Salsola tragus*), and black mustard (*Brassica nigra*). The non-native grassland is characterized by high structural diversity and a variety of non-native grasses. The dominant wild oat and bromes appear in thick, thatched arrangements throughout this vegetation community. An approximately 3.69-acre area of burned non-native grassland occurs in the northwestern portion of the survey area and appears to have been burned shortly before the October 14 and 15, 2019, survey dates.

## Developed and Disturbed Land Cover Types

### *Disturbed Aquatic Resource*

Disturbed aquatic resources are areas that are permanently or periodically inundated by water and have been significantly modified by human activity.

Approximately 0.80 acre of disturbed potential aquatic resources occurs in two locations in the southwestern portion of the survey area. Although no disturbed aquatic resources occur on the project site, the Small Spot Repair CIP is adjacent to the two disturbed potential aquatic resources (Figure 5 series). The disturbed potential aquatic resources in the survey area contained ponded water during the survey on October 14 and 15, 2019. Both disturbed potential aquatic resources are human-made water detention basins enclosed by a gated fence created to collect runoff from surrounding developed areas. The disturbed potential aquatic resources were dominated by narrowleaf cattail (*Typha angustifolia*), saltcedar (*Tamarix ramosissima*), California mugwort (*Artemisia douglasiana*), and sedges (*Carex* spp.).

### *Agriculture*

Agricultural lands support an active agricultural operation and can include orchards, vineyards, planted fields, livestock pastures, or row crops.

Approximately 272.75 acres of agricultural lands occur throughout the survey area, primarily where the survey area occurs at the perimeter of the City. Approximately 2.35 acres of agriculture occurs on the project site (Figure 5 series). Of the agriculture area on the project site, approximately 0.02 acre occurs on the Comanche Drive CIP site, approximately 1.73 acres occurs on the Millux Road Pipeline and Pump Station CIP site, and 0.60 acre occurs on the Potato-Sycamore CIP site. The primary crops being produced on the agricultural lands appeared to be orchards of almonds and apples, vineyards, and row fields of alfalfa (*Medicago sativa*).

### *Developed Land*

Developed land consists of areas that have been constructed on or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas where no natural land is evident due to a large amount of debris or other materials being placed on it may also be considered developed (e.g., recycling plant, quarry).

Approximately 476.92 acres of developed land occurs throughout the survey area, including residential, commercial, and industrial areas and portions of the paved rights-of-way that make up the center of the majority of the survey area. Approximately 9.40 acres of developed land occurs on the project site (Figure 5 series). Of the developed land on the project site, approximately 0.52 acre occurs on the Campus Drive Alley CIP site, 0.55 acre occurs on the Comanche Drive CIP site, 0.04 acre occurs on the Haven Drive CIP site, 0.01 acre occurs on the Millux Road Pipeline and Pump Station CIP site, 0.35 acre occurs on the Plumtree Drive Alleys CIP site, 4.21 acres occurs on the Potato-Sycamore CIP site, 0.16 acre occurs on the Small Pipeline Replacement CIP site, 1.12 acres occurs on the Small Spot Repair CIP site, 0.60 acre occurs on the Southeast Kovacevich Park CIP site, 0.09 acre occurs on the Stand-Alone Manhole Repair and Replacement CIP site, and 1.75 acres occurs on the West Smothermon Park CIP site. The residential areas include ornamental plant species including oleander (*Nerium oleander*), Mexican fan palm (*Washingtonia robusta*), and bird of paradise (*Strelitzia reginae*).

### *Disturbed Land*

Disturbed land consists of previously disturbed areas that either are devoid of vegetation (dirt roads/trails) or support scattered non-native species such as mustard, ragweed, sweet fennel (*Foeniculum vulgare*), Russian

thistle, and thistle (*Centaurea* spp.). These species are non-native and are typically found along the borders between native and naturalized vegetation communities and disturbed areas.

Approximately 63.66 acres of disturbed land is throughout the survey area, primarily where the survey area occurs at the perimeter of the City. Approximately 6.40 acres of disturbed land occurs on the project site (Figure 5 series). Of this disturbed land, approximately 0.32 acre occurs on the Campus Drive Alley CIP site, 6 acres occurs on the Millux Road Pipeline and Pump Station CIP site, less than 0.01 acre occurs on the Potato-Sycamore CIP site, and 0.08 acre occurs on the Small Spot Repairs CIP site. As a component of the Millux Road Pipeline and Pump Station CIP, a 0.06-acre fenced pump station would be in the disturbed land at the southwestern corner of Millux Road and Comanche Drive (Figure 5 series). These disturbed areas consist primarily of bare ground, dirt roads, and undeveloped dirt lots and include patchy, non-native vegetation dominated by mustard, ragweed, Russian thistle, telegraph weed (*Heterotheca grandiflora*), and bromes. The disturbed areas throughout the survey area are characterized by open, sparse vegetation and are littered with debris and signs of human disturbance such as tire tread, trash, and makeshift structures.

## Aquatic Resources

The USFWS NWI report conducted for the survey area identified two small freshwater ponds in the survey area. These ponds are in an industrial facility in the eastern portion of the City and are likely human-made and associated with the existing agricultural and industrial activity in and surrounding the survey area.

Two disturbed potential aquatic resources with associated riparian vegetation were documented in the survey area during the survey conducted on October 14 and 15, 2019 (Figure 6 series, Aquatic Resources). Three open water ponds, one in the southwestern portion of the survey area and two in the eastern portion, were documented. Although no open water habitat occurs on the project site, the Millux Road Pipeline and Pump Station, Potato-Sycamore, and Small Spot Repair CIPs are adjacent to these aquatic resource areas (Figure 6 series). The open water pond in the southwestern portion of the survey area is surrounded by southern willow scrub. The two open water ponds in the eastern portion of the survey area have no associated vegetation surrounding them. All three of these open water ponds appear to be used as stock or irrigation ponds by the surrounding agricultural industry. Two additional open water ponds were mapped in the southeastern portion of the survey area. However, these ponds were artificially created for a residential development and are surrounded by associated ornamental vegetation.

An aquatic resources delineation was not completed for the 0.80 acre of disturbed potential aquatic resources or 5.77 acres of open water. However, standing water and hydrophytic vegetation were observed in and around the aquatic areas and one of the open water ponds in the southwestern portion of the survey area. The vegetation observed included narrowleaf cattails, saltcedar, California mugwort, and sedges. The 6.57 acres of aquatic area is detailed in Table 3, Aquatic Resources in the Survey Area.

**Table 3. Aquatic Resources in the Survey Area**

| Feature | USACE (acres) | Central Valley RWQCB (acres) | CDFW (acres) |
|---|---|---|---|
| **Aquatic Resources** | | | |
| Open Water | 5.77 | 5.77 | 5.77 |
| Disturbed Potential Aquatic Resource | 0.80 | 0.80 | 0.80 |
| **Total** | **6.57** | **6.57** | **6.57** |

**Notes:** CDFW = California Department of Fish and Wildlife; **Central Valley** RWQCB = **Central Valley** Regional Water Quality Control Board; USACE = U.S. Army Corps of Engineers

## Plant Species

A total of 21 plant species were observed in the survey area during the survey, 8 (38 percent) of which were native and 13 were non-native (62 percent). Attachment 2, Plant and Wildlife Species Observed, presents the list of plant species observed. Dominant plant species include bromes, black mustard, Russian thistle, wild oats, and willow species. Additional dominant species are listed previously under Vegetation Communities and Land Use Types. Dominant ornamental and landscape species observed in the disturbed and developed lands include oleander and bird of paradise.

## Wildlife Species

A total of 26 wildlife species were observed in the survey area during the survey, 23 of which were native and 3 were non-native (1 amphibian species, 22 bird species, 2 mammal species, and 1 reptile species). Attachment 2 presents the list of wildlife species observed. Within the riparian habitat, the dominant species were American coot (*Fulica americana*), American crow *(Corvus brachyrhynchos*), and song sparrow (*Melospiza melodia*). Dominant species in the upland habitat included American crow, white-crowned sparrow (*Zonotrichia leucophrys*), house finch (*Haemorhous mexicanus*), and California ground squirrel (*Spermophilus beecheyi*). Within the developed and disturbed lands, dominant species included American crow, Brewer's blackbird (*Euphagus cyanocephalus*), common raven (*Corvus corax*), rock pigeon (*Columba livia*), song sparrow, and California ground squirrel.

## Sensitive Species

Based on a list compiled using the CNDDB (CDFW 2018), CNPS (CNPS 2019) and USFWS IPaC (USFWS 2019b), 11 special-status plant species and 17 special-status wildlife species have been documented within 3 miles of the survey area (Attachment 3). The results of the USFWS IPaC report provide a list of potential endangered and threatened federal species known to be present in the survey area.

### Plant Species

Based on the literature and database review, 11 special-status plant species were considered for potential to occur in the survey area (Attachment 3). No species were determined to have a high potential to occur in the survey area. Bakersfield cactus (*Opuntia basilaris* var. *treleasei*), a perennial succulent shrub, would have been observed if present. Bakersfield cactus was not observed in the survey area during the survey and, therefore, was determined not to be present.

The following determinations were made for the other 10 special-status plant species:

- One species was determined to have a moderate potential to occur: San Joaquin woollythreads (*Monolopia congdonii*).
- Nine species were determined to have a low potential to occur: alkali mariposa lily (*Calochortus striatus*), California jewelflower (*Caulanthus californicus*), Comanche point layia (*Layia leucopappa*), Kern mallow (*Eremalche parryi* ssp. *kernensis*), Horn's milk vetch (*Astragalus hornii* var. *hornii*), Munz's tidy-tips (*Layia munzii*), Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*), Piute Mountains Navarretia (*Navarretia setiloba*), and Tejon poppy (*Eschscholzia lemmonii* ssp. *kernensis*).

No special-status plant species were observed in the survey area during the survey.

### Wildlife Species

Based on the literature and database review and field observations, 17 special-status wildlife species were considered for potential to occur within the survey area (Attachment 3). Delta smelt (*Hypomesus transpacicus*) populations have historically been found in the San Joaquin River watershed, tributaries of which cross into Kern County and areas in close proximity to the survey area. However, as a result of water diversions and drought, this species has been recently documented exclusively in the Sacramento-San Joaquin delta, more than 300 miles

northwest of the survey area. Furthermore, no suitable riverine habitat exists for the delta smelt within the survey area and this species was considered to have no potential to occur.

The following determinations were made for the remaining 16 special-status wildlife species:

- Northern harrier (*Circus hudsonius*) was observed within the survey area.
- Three species were determined to have a high potential to occur: burrowing owl (*Athene cunicularia*), San Joaquin kit fox (*Vulpes macrotis mutica*), and Swainson's hawk (*Buteo swainsoni*).
- Five species were determined to have a moderate potential to occur: Crotch bumble bee (*Bombus crotchii*), tricolored blackbird (*Agelaius tricolor*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides),* American badger (*Taxidea taxus),* and blunt-nosed leopard lizard (*Gambelia sila*).
- Seven species were determined to have a low potential to occur: California red-legged frog (*Rana draytonii*), long-eared owl (*Asio otus*), California condor (*Gymnogyps californianus*), southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), giant garter snake (*Thamnophis gigas*), and vernal pool fairy shrimp (*Branchinecta lynchi*).

Wildlife species that were observed or have a high potential to occur in the survey area are described in detail below.

### *Wildlife Species Observed*

#### Northern Harrier

Northern harrier, a state species of special concern, is a medium-sized raptor that inhabits grasslands, open rangelands, and salt and freshwater wetlands throughout California. Northern harrier is found at elevations from sea level to 5,700 feet above mean sea level. Individuals may migrate to breeding grounds in northeastern and coastal California, although the species is widespread and common in suitable habitat throughout California during the winter. Northern harrier hunts on the wing, making low quartering flights as low as 3 feet from the ground in open habitat. Individuals feed mainly on rodents and ground-dwelling songbirds but may also take fish, small reptiles, and amphibians. Northern harrier relies heavily on hearing to capture prey. Nests are constructed on the ground by both the males and females on large platforms in wetland or dry upland habitats in shrubby vegetation including willows, grasses, sedges, grains, or sagebrush. Due to the nest position, eggs and nestlings are vulnerable to predation and trampling, although adults vigorously protect the nest. Agricultural practices may often prove beneficial for northern harrier by creating open hunting grounds, provided shrubby habitat for nesting is preserved.

One northern harrier was observed foraging in the fallow agricultural fields west of Tejon Highway, near the intersection of Millux Road, during the field survey on October 14, 2019. No nests or nesting behavior were observed, although the field survey occurred outside of the typical breeding season for northern harrier. The abundance of small mammal burrows and small lizards observed in the non-native grassland, disturbed land, and agricultural land suggests ample prey availability for northern harrier on and directly adjacent the following CIP sites:

- On and adjacent to the Millux Road Pipeline and Pump Station CIP site
- On and adjacent to the portions of the Potato-Sycamore CIP site east of Tejon Highway and between Walnut Drive and Meyer Street
- West of the manhole replacements along South Comanche Road on the Stand-Alone Manhole Replacement CIP site
- On the portion of the Campus Drive Alley Pipeline CIP site north of Nectarine Court
- West of the Comanche Drive CIP site

In addition, the dense non-native grassland on and surrounding the Millux Road Pipeline and Pump Station CIP site and the Potato-Sycamore CIP site may provide nesting habitat for northern harrier.

*Wildlife Species with a High Potential to Occur*

### Burrowing Owl

Burrowing owl, a state species of special concern, is a small owl that occurs in open, treeless areas with low, sparse vegetation, usually on gently sloping terrain. Its range includes most portions of California, with the exception of the northwestern forests and mountain tops. This species can be found year-round in grasslands, deserts, and steppe environments, as well as agricultural areas, vacant lots, and disturbed edges of urban areas at elevations from sea level to 5,300 feet above mean sea level. Burrowing owl forages day or night on insects, small mammals, reptiles, and amphibians and typically occupies burrows with openings at least 4 inches wide created by ground squirrels, prairie dogs, badgers, tortoises, and skunks. However, the species has also been observed in culverts, pipes, and nest boxes. Resident burrowing owls will use burrows year-round for nesting and wintering. Burrowing owls in California do not excavate their own burrows and, therefore, are generally associated with high densities of burrowing wildlife, especially ground squirrels. Burrowing owl typically prefers slightly elevated burrows in more open vegetation with small perches nearby for hunting. Perches may include fence posts, taller shrubs, or roadside signs. Burrowing owl typically decorates burrow openings with trash, excrement, feathers, and grass. Because the species nests in the ground, eggs and nestlings are vulnerable to predation by ground predators including foxes, coyotes, and domestic dogs and cats. In addition, burrowing owl populations in California have declined due to vehicle collisions and habitat loss, including the extermination of ground squirrels and other burrowing mammals.

No burrowing owl individuals or sign were observed in the survey area during the survey. Suitable nesting and foraging habitat is present in the tracts of non-native grassland and disturbed land on the following CIP sites:

- On and surrounding the Millux Road Pipeline and Pump Station Replacement CIP site
- West of the manhole replacements along South Comanche Road on the Stand-Alone Manhole Replacement CIP site
- West of the Comanche Drive CIP site
- On and surrounding the portions of the Potato-Sycamore CIP site east of Tejon Highway
- On the portion of the Campus Drive Alley Pipeline CIP site north of Nectarine Court

Numerous suitable burrows wider than 4 inches were observed in these stands. In addition, ground squirrels were extremely abundant in these tracts. Several fence posts and agricultural equipment in these stands offered short perches for foraging as well. In addition, the undeveloped foothills of the Tehachapi Mountains are approximately 3 miles east of the survey area, and the area between these hills and the survey area consists mainly of agricultural land. This land may offer a dispersal route for burrowing owl that avoids urban development. Two burrowing owls were observed near the intersection of Tesoro Drive and El Camino Real on January 4, 2016, in the vicinity of the Millux Road Pipeline and Pump Station Replacement CIP site (eBird 2019). In addition, several recent burrowing owl occurrences have been recorded within 3 miles of the survey area.

### San Joaquin Kit Fox

San Joaquin kit fox, a federally endangered and state threatened species, occurs in San Joaquin scrub and grasslands with loose, textured soils suitable for burrowing, but modification of the burrows of other wildlife facilitates denning in other soil types. The entrances of San Joaquin kit fox burrows are typically 5 to 8 inches wide, and vacant kit fox burrows are often used by other ground-dwelling wildlife. San Joaquin kit fox can use small remnants of suitable habitat interspersed with development, provided there is minimal disturbance, dispersal corridors, and a sufficient prey base. However, San Joaquin kit fox has suffered from habitat conversion to urban and agricultural uses. San Joaquin kit fox hunts mostly at night for black-tailed jackrabbit (*Lepus californicus*) and desert cottontail (Sylvilagus audubonii), rodents, insects, reptiles, bird eggs, and some birds.

No San Joaquin kit fox was observed during the survey. Suitable burrowing and foraging habitat for San Joaquin kit fox exists in non-native grassland and disturbed land on and around the following CIP sites:

- On and surrounding the Millux Road Pipeline and Pump Station Replacement CIP site
- On and surrounding the portions of the Potato-Sycamore CIP site east of Tejon Highway
- On the portion of the Campus Drive Alley Pipeline CIP site north of Nectarine Court

Numerous suitable burrows wider than 5 inches were observed in these CIPs. In addition, ground squirrels were extremely abundant in these areas. The undeveloped foothills of the Tehachapi Mountains, which are known to support San Joaquin kit fox, are approximately 3 miles east of the survey area, and the area between these hills and the survey area consists mainly of agricultural land. This land may offer a movement corridor that avoids urban development for San Joaquin kit fox. San Joaquin kit fox was documented in 2012 in the foothills of the Tehachapi Mountains approximately 3.4 miles southeast of the survey area (CDFW 2018).

### Swainson's Hawk

Swainson's hawk, a state threatened species, is a large hawk that breeds throughout open habitat in California and western North America. This species migrates from North America as far south as central South America. Swainson's hawk inhabits open grasslands, agricultural land, and rangeland with nearby tall trees. Swainson's hawk forages primarily on rodents and lagomorphs found in open habitats and may soar, fly low, or even walk along the ground to hunt. Males choose nest sites, generally in trees up to 100 feet tall, along streams or next to open grasslands or agricultural areas for foraging. In the Central Valley, these sites often include windbreak or shelterbelt trees along row crops, fallow fields, or rangeland. Nests are built by both male and female adults and may reach 2 feet in width and 1 foot in height. Swainson's hawk may reuse previous year's nests or refurbish crow or raven nests. Consolidation of small farms into industrial farming operations has reduced nesting sites for Swainson's hawk.

No Swainson's hawk individuals or sign were observed during the 2019 survey. Suitable nesting and foraging habitat for Swainson's hawk exists in the survey area in the large mature trees near the non-native grassland, disturbed land, and agricultural lands on and near the following CIP sites:

- On and adjacent to the Millux Road Pipeline and Pump Station CIP site
- On and adjacent to the portions of the Potato-Sycamore CIP site east of Tejon Highway and between Walnut Drive and Meyer Street
- West of the manhole replacements along South Comanche Drive on the Stand-Alone Manhole Replacement CIP site
- On the portion of the Campus Drive Alley Pipeline CIP site north of Nectarine Court
- West of the Comanche Drive CIP site

Swainson's hawk had been documented near the intersection of SR-223 and Tejon Highway on September 16, 2007. In addition, several active Swainson's hawk nests were documented in 2016 within 5 miles of the survey area, including at the Kern County Waste Management facility, approximately 5 miles west of the survey area, and near the intersection of Sycamore Road and South Edison Road, approximately 1.7 miles west of the survey area (eBird 2019).

#### *Nesting Birds*

The survey area provides potential nesting habitat for several bird species, including raptors, which are protected under the California Fish and Game Code and MBTA. Several potentially active and inactive nests, including northern mockingbird (*Mimus polyglottos*) nests, were observed during the survey at the 17 CIP sites.

## Critical Habitat

No critical habitat occurs in the survey area (USFWS 2019b, 2019c).

## Wildlife Corridors

Prior to the field survey, the VFHCP was reviewed to confirm the presence of designated habitat linkages and dispersal corridors in the survey area. The VFHCP does not identify any areas in or surrounding the survey area as functioning as official or potential wildlife migration corridors or habitat linkages. Due to the agricultural and urban land uses present throughout most of the County, potential wildlife corridors and habitat connectors in the VFHCP can include cultivated lands, such as canals, ditches, roads, and utility rights-of-way, and culverts under roadways.

During the field survey, the biologist assessed the areas identified in the VFHCP in the survey area for potential wildlife corridor functions. Habitat characteristics considered included topography, habitat quality, and adjacent land uses. In addition to evaluating the survey area for the presence of continuous corridors, the biologist also inspected it for potential migration corridors for sensitive migratory species based on habitat type and quality, size of habitat patches, and distance separating habitat patches.

The County is within the major bird migration corridor of the western United States, the Pacific Flyway. Wildlife refuges in the County, such as the Kern National Wildlife Refuge, have been designated to provide rest stops along the annual migration routes for migratory bird species. Because the survey area is within the Pacific Flyway migratory corridor, the survey area has the potential to provide habitat for migratory birds traveling between their nesting and wintering areas.

The survey area is not likely to be used as a wildlife movement corridor because it lacks native vegetation communities; is surrounded by agricultural and urban land uses, including SR-223; and is not connected to any other open space areas.

## Significance of Project Impacts and Proposed Mitigation

### Significance Criteria

Direct impacts occur when biological resources are altered or destroyed during the course of or as a result of project implementation. Examples of such impacts include removing or grading vegetation, filling wetland habitat, or severing or physically restricting the width of wildlife corridors. Other direct impacts may include loss of foraging or nesting habitat and loss of individual species as a result of habitat clearing. Indirect impacts may include elevated levels of noise or lighting, change in surface water hydrology within a floodplain, and increased erosion or sedimentation. These types of indirect impacts can affect vegetation communities or their potential use by sensitive species. Permanent impacts may result in irreversible damage to biological resources. Temporary impacts are interim changes in the local environment due to construction and would not extend beyond project-associated construction, including revegetation of temporarily disturbed areas adjacent to native habitat.

Appendix G of the CEQA Guidelines (CEQA Guidelines, Section 15000 et seq.) defines “significant effect on the environment” as a “substantial, or potentially substantial adverse change in the environment.” Appendix G of the CEQA Guidelines further indicates that there may be a significant effect on biological resources if the project would:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrologic interruption, or other means.
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

## Threshold A

Potential impacts to special-status plant and wildlife species are discussed in the following subsections.

### *Special-Status Plant Species*

The project has the potential to result in direct and indirect impacts to special-status plant species, including the federally endangered and California Rare Plant Rank listed 1B.1 species San Joaquin woollythreads (*Monolopia congdonii*) (CDFW 2019, CNPS 2019). In total, 0.98 acre of suitable grassland habitat for San Joaquin woollythreads exists on the Campus Drive Alley and Potato-Sycamore CIP sites. However, the non-native grasslands on the Campus Drive Alley and Potato-Sycamore CIP sites are dominated by non-native grasses and forbs like bromes and wild oat, potentially reducing the likelihood of the presence of this native sensitive species. Because the survey was not conducted during the blooming period for this and other special-status plant species, the presence of this sensitive plant species may not have been identified if it were dormant or difficult to identify. Therefore, if this species was present but went undetected before construction activities commenced, significant direct and indirect impacts would result.

In addition, potential indirect impacts to San Joaquin woollythreads could result from the introduction of invasive weed species and soil erosion and sedimentation during construction in the 0.98 acre of suitable non-native grassland habitat on the Campus Drive Alley and Potato-Sycamore CIP sites.

Potential direct and indirect impacts to 0.98 acre of non-native grassland habitat during construction of the Campus Drive Alley and Potato-Sycamore CIPs could represent a significant impact to special-status plant species, and avoidance, minimization, or mitigation measures would be required. Implementation of standard erosion-control measures and stormwater-quality best management practices (BMPs) (required through the construction permit process) during construction would reduce potential indirect impacts to special-status plant species from soil erosion and sedimentation to less than significant. As a condition of approval, implementation of Mitigation Measures BIO-1 through BIO-5 for the 0.28 acre of non-native grassland habitat impacted during construction of the Campus Drive Alley CIP and 0.70 acre of non-native grassland habitat impacted by the Potato-Sycamore CIP would reduce direct and indirect impacts to special-status plant species to less than significant.

### *Special-Status Wildlife Species*

The project has the potential to result in direct and indirect impacts to special-status wildlife species, including the state species of special concern burrowing owl (*Athene cunicularia*), the state species of special concern northern harrier (*Circus hudsonius*), the state critically threatened Swainson's hawk (*Buteo swainsoni*), the federally endangered and state threatened San Joaquin kit fox (*Vulpes macrotis mutica*), and the federally endangered and state endangered blunt-nosed leopard lizard (CDFW 2019, USFWS 2019). Approximately 0.98 acre of non-native grassland and 6.40 acres of disturbed areas with patches of bare ground and numerous mammal burrows that burrowing owl could use for nesting exist on the project sites for the Campus Drive Alley, Comanche Drive, Millux Road Pipeline and Pump Station, Potato-Sycamore, and Small Spot Repair CIPs. These habitats are also suitable for San Joaquin kit fox and blunt-nosed leopard lizard to use for burrowing and foraging. Large, mature trees adjacent to non-native grassland, disturbed areas, and agricultural lands occur throughout the survey area and are suitable for nesting by northern harrier and Swainson's hawk. The Campus Drive Alley, Comanche Drive, Millux Road Pipeline and Pump Station, Potato-Sycamore, and Small Spot Repair CIP sites include 0.98 acre of non-native grassland, 2.35 acres of agricultural fields, and 6.40 acres of disturbed areas for burrowing owl, northern harrier, and Swainson's hawk to use for foraging. Construction activities associated with these CIPs occurring in the habitats that could

support northern harrier, burrowing owl, San Joaquin kit fox, Swainson's hawk, and blunt-nosed leopard lizard could result in significant direct and indirect impacts to these special-status wildlife species.

The potential impacts to 0.98 acre of non-native grassland, 2.35 acres of agricultural fields, and 6.40 acres of disturbed land resulting from construction of the Campus Drive Alley, Comanche Drive, Millux Road Pipeline and Pump Station, Potato-Sycamore, and Small Spot Repair CIPs could represent a significant impact to special-status wildlife species, and avoidance, minimization, or mitigation measures would be required. Table 4**,** Direct and Indirect Impacts to Special-Status Wildlife Species, summarizes the CIPs that have the potential to result in direct or indirect impacts to special-status wildlife species.

**Table 4. Direct and Indirect Impacts to Special-Status Wildlife Species**

| Species | Campus Drive Alley CIP | Comanche Drive CIP | Millux Road Pipeline and Pump Station CIP | Potato-Sycamore CIP | Stand-Alone Manhole Replacement CIP |
|---|---|---|---|---|---|
| Northern harrier | Direct and indirect | Indirect only | Direct and indirect | Direct and indirect | Indirect only |
| Blunt-nosed leopard lizard | Direct and indirect | Indirect only | Direct and indirect | Direct and indirect | Indirect only |
| Burrowing owl | Direct and indirect | Indirect only | Direct and indirect | Direct and indirect | Indirect only |
| San Joaquin kit fox | Direct and indirect | No impacts | Direct and indirect | Direct and indirect | No impacts |
| Swainson's hawk | Direct and indirect | Indirect only | Direct and indirect | Direct and indirect | Indirect only |

**Note:** Only CIPs that may result in direct or indirect impacts to special-status wildlife species are listed. All other CIPs would not likely result in direct or indirect impacts to special-status wildlife species.

As a condition of approval, implementation of Mitigation Measures BIO-2, BIO-3, and BIO-6 through BIO-8 for the 0.28 acre of non-native grassland habitat on the Campus Drive Alley CIP site, 0.02 acre of agricultural land and 0.32 acre of disturbed land on the Comanche Drive CIP site, 1.73 acres of agricultural land and 6 acres of disturbed land on the Millux Road Pipeline and Pump Station CIP site, 0.70 acre of non-native grassland on the Potato-Sycamore CIP site, and 0.08 acre of agricultural land on the Small Spot Repair CIP site would reduce direct and indirect impacts to special-status wildlife species to less than significant.

Implementation of the 17 CIPs has the potential to impact bird species that are protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code, Section 3504. If construction is conducted during the bird-breeding season (January 1 through August 31), temporary direct impacts from disturbance and displacement of nesting birds during vegetation removal could result in significant direct impacts to bird species protected under the MBTA. Indirect impacts from construction noise and vibration during clearing, grubbing, and trenching activities, if conducted during the bird-breeding season, could result in significant indirect impacts to bird species protected under the MBTA. As a condition of approval, implementation of Mitigation Measure BIO-8 for the 17 CIPs would reduce potential direct and indirect impacts to nesting birds to less than significant.

### Threshold B

While no southern willow scrub riparian habitat would be directly impacted during project construction, potential indirect impacts could result from the introduction of invasive weed species and soil erosion and sedimentation during construction of the Millux Road Pipeline and Pump Station CIP adjacent to the southern willow scrub habitat (Figure 7 series, Impacts to Vegetation Communities). Construction activities associated with the Campus Drive Alley and Potato-Sycamore CIPs would result in temporary direct impacts to approximately 0.98 acre of non-native grassland on these CIP sites (Figure 7 series). In addition, potential indirect impacts to non-native grassland

could result from the introduction of invasive weed species and soil erosion and sedimentation during construction in the 0.98 acre of non-native grassland on the Campus Drive Alley and Potato-Sycamore CIP sites. The temporary direct and indirect impacts to non-native grassland during construction of the Campus Drive Alley and Potato-Sycamore CIPs would be significant and would require mitigation.

Upon completion of the Campus Drive Alley and Potato-Sycamore CIPs, the 0.98 acre of non-native grassland disturbed during construction would be restored to its previous condition and function. Implementation of standard erosion-control measures and stormwater-quality BMPs (required through the construction permit process) during construction of the Millux Road Pipeline and Pump Station CIP would reduce potential indirect impacts to southern willow scrub and non-native grassland from soil erosion and sedimentation to less than significant. As a condition of approval, implementation of Mitigation Measures BIO-1 and BIO-5 for the 0.28 acre of non-native grassland habitat impacted during construction of the Campus Drive Alley CIP and the 0.70 acre of non-native grassland habitat impacted by the Potato-Sycamore CIP would reduce direct and indirect impacts to non-native grassland habitat to less than significant.

### Threshold C

While impacts to aquatic resources are not expected from implementation of the project, indirect impacts could result from the introduction of invasive weed species and soil erosion and sedimentation during construction of the Millux Road Pipeline and Pump Station, Potato-Sycamore, and Small Spot Repair CIPs adjacent to the aquatic resources. Implementation of Mitigation Measure BIO-1 and standard erosion-control measures and stormwater-quality BMPs (required through the construction permit process) during construction of the Millux Road Pipeline and Pump Station, Potato-Sycamore, and Small Spot Repair CIPs would reduce potential indirect impacts to aquatic resources from invasive plant species and soil erosion and sedimentation to less than significant. As discussed previously, direct impacts to potential state or federal jurisdictional aquatic resources adjacent to the project site are not anticipated to occur as a result of project construction. Therefore, impacts to state or federally protected aquatic resources would not occur.

### Threshold D

The CIP sites are not likely to be used as wildlife movement corridors or nursery sites because the sites lack native vegetation communities; are surrounded by agricultural and urban land uses, including State Route 223; and are not connected to any other open space areas. Furthermore, no critical habitat is present in or around the CIP sites. Therefore, no impacts to wildlife corridors or nursery sites would occur from implementation of the project.

### Threshold E

Projects in the City are required to comply with policies protecting biological resources identified in the Conservation and Open Space Element of the City's General Plan Update and the County's General Plan Land Use, Open Space, and Conservation Element (City of Arvin 2012; Kern County 2009). Therefore, no impacts related to conflicts with applicable policies or ordinances protecting biological resources would occur from implementation of the project.

### Threshold F

Since the City requires compliance with the conservation policies identified in the City's and County's General Plans, no impacts to local conservation plans would occur from the implementation of the project.

## Proposed Mitigation

The following biological resources mitigation measures would be implemented during construction:

### General Measures

**BIO-1:** **Weed Control**. The project proponent(s) shall implement the following weed control methods to minimize the establishment and spread of non-native and invasive weed species on the project site during construction activities:

1. Seeds and plant materials used for revegetation shall be certified weed free.
2. Straw materials such as those used for erosion control shall be certified weed free.
3. Temporarily disturbed non-native grassland areas shall be revegetated with local native plant species as soon as construction is complete to reduce erosion and to inhibit the establishment of non-native and invasive weeds.

**BIO-2:** **Qualified Biologist**. Prior to the start of construction, the project proponent(s) shall submit written documentation to the City of Arvin Community Development Department Senior Planner for approval, stating that a qualified biologist(s) has been retained to implement the project mitigation measures in areas designated as biologically sensitive in the Biological Resources Letter Report. The qualified biologist(s) shall be responsible for implementing project mitigation measures, coordinating and communicating requirements to the project proponent(s) and the City of Arvin Community Development Department Senior Planner, and facilitating consultation with the wildlife and resource agencies as required.

**BIO-3:** **Flagging, Fencing, and Demarcation**. The project proponent(s), in consultation with the qualified biologist(s), shall designate the limits of the construction area, where accessible, within the City of Arvin rights-of-way using fencing, signage, or stakes in the field and shall review the placement of fencing, signage, or stakes with the contractor in accordance with the construction plans. Aquatic resources and riparian areas within 50 feet of the construction area, where accessible and feasible, shall also be demarcated in the field and avoided by construction personnel and activity.

### Rare Plants

**BIO-4:** **Rare Plant Surveys.** During the spring (April 1 through June 30) and prior to construction, the qualified biologist shall conduct a preconstruction rare plant survey in the 0.98-acre non-native grassland potential impact area.

In the event a rare or listed plant species is observed, the project proponent(s) shall consult with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife to establish avoidance, minimization, and mitigation measures. If the wildlife agencies require the measures, species-specific protocol surveys shall be conducted by the qualified biologist pursuant to the agreed-upon terms.

### Upland Habitat

**BIO-5:** **Temporary Impacts to Non-Native Grassland.** Temporary impacts to 0.98 acre of non-native grassland shall be mitigated by the project proponent(s) through revegetation of the areas impacted during project construction using a weed-free native plant seed palette.

### Special-Status Wildlife Species

**BIO-6:** **Preconstruction Surveys.** Prior to the start of construction, a preconstruction survey shall be completed by the qualified biologist(s) checking suitable non-native grassland and disturbed land on the project site for presence or sign of burrowing owl (*Athene cunicularia*), San Joaquin kit fox (*Vulpes macrotis mutica*),

Swainson's hawk (*Buteo swainsoni*), blunt-nosed leopard lizard (*Gambelia sila*), and any other sensitive wildlife species. If sensitive wildlife species are observed during the preconstruction survey or during construction activities, the qualified biologist(s), in coordination with the City of Arvin Community Development Department Senior Planner, shall designate the limits (including appropriate buffers) of the occupied habitat using fencing, signage, or stakes for avoidance by construction personnel and activity.

**BIO-7:** **U.S. Fish and Wildlife Service and California Department of Fish and Wildlife Permitting.** If impacts to the special-status species including burrowing owl (*Athene cunicularia*), San Joaquin kit fox (*Vulpes macrotis mutica*), Swainson's hawk (*Buteo swainsoni*), and blunt-nosed leopard lizard (*Gambelia sila*) cannot be avoided, the qualified biologist(s), on behalf of the project proponent(s), shall consult with the U.S. Fish and Wildlife and California Department of Fish and Wildlife for authorization through the context of an incidental take permit.

### Nesting Birds

**BIO-8:** **General Nest Surveys.** No grubbing, trimming, or clearing of vegetation, primarily non-native grassland species and a few shrubs, from the project site shall occur during the general bird-breeding season (January 1 through August 31). If grubbing, trimming, or clearing of vegetation cannot feasibly occur outside of the general bird-breeding season, the qualified biologist(s) shall perform a preconstruction nesting bird survey no more than 72 hours prior to the start of vegetation grubbing, trimming, or clearing to determine if active bird nests are present in the affected areas. Should an active migratory bird nest be located, the qualified biologist(s) shall direct vegetation clearing away from the nest until the project biologist has determined that the young have fledged or the nest has failed. If there are no nesting birds (including nest building or other breeding or nesting behavior) on the project site, grubbing, trimming, or clearing shall proceed.

## Significance After Mitigation

The project would not result in significant impacts to wildlife corridors and linkages, conflicts with local policies and ordinances, or regional conservation planning. Project implementation may result in potentially significant impacts to sensitive non-native grassland habitat, special-status plant and wildlife species, nesting birds, and aquatic resources. With implementation of the Mitigation Measures BIO-1 through BIO-8, impacts to sensitive biological resources from implementation of the project would be reduced to less than significant.

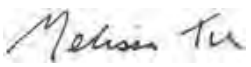
# Preparers

## Harris & Associates

Melissa Tu, Senior Biologist
Katie Laybourn, Biologist

If you have any questions about this letter report, please contact Melissa Tu at (619) 814-9514 or Melissa.Tu@WeAreHarris.com and Katie Laybourn at (619) 643-0808 or Katie.Laybourn@WeAreHarris.com.

Sincerely,



Melissa Tu
Senior Biologist

Katie Laybourn
Biologist

**Attachments**

1, Figures
2, Plant and Wildlife Species Observed
3, Special-Status Plant and Wildlife Species Potential to Occur Tables

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# Attachment 1. Figures

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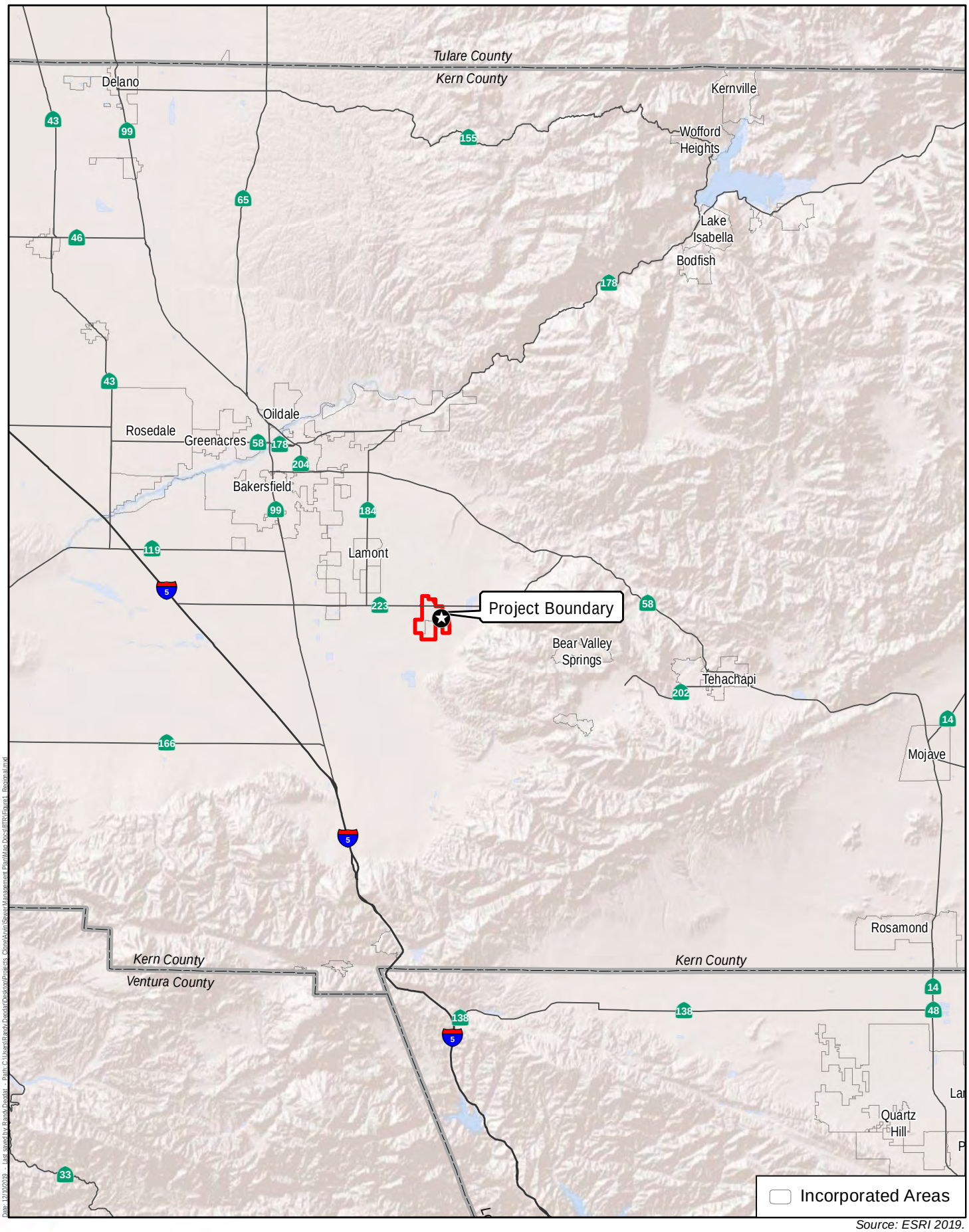


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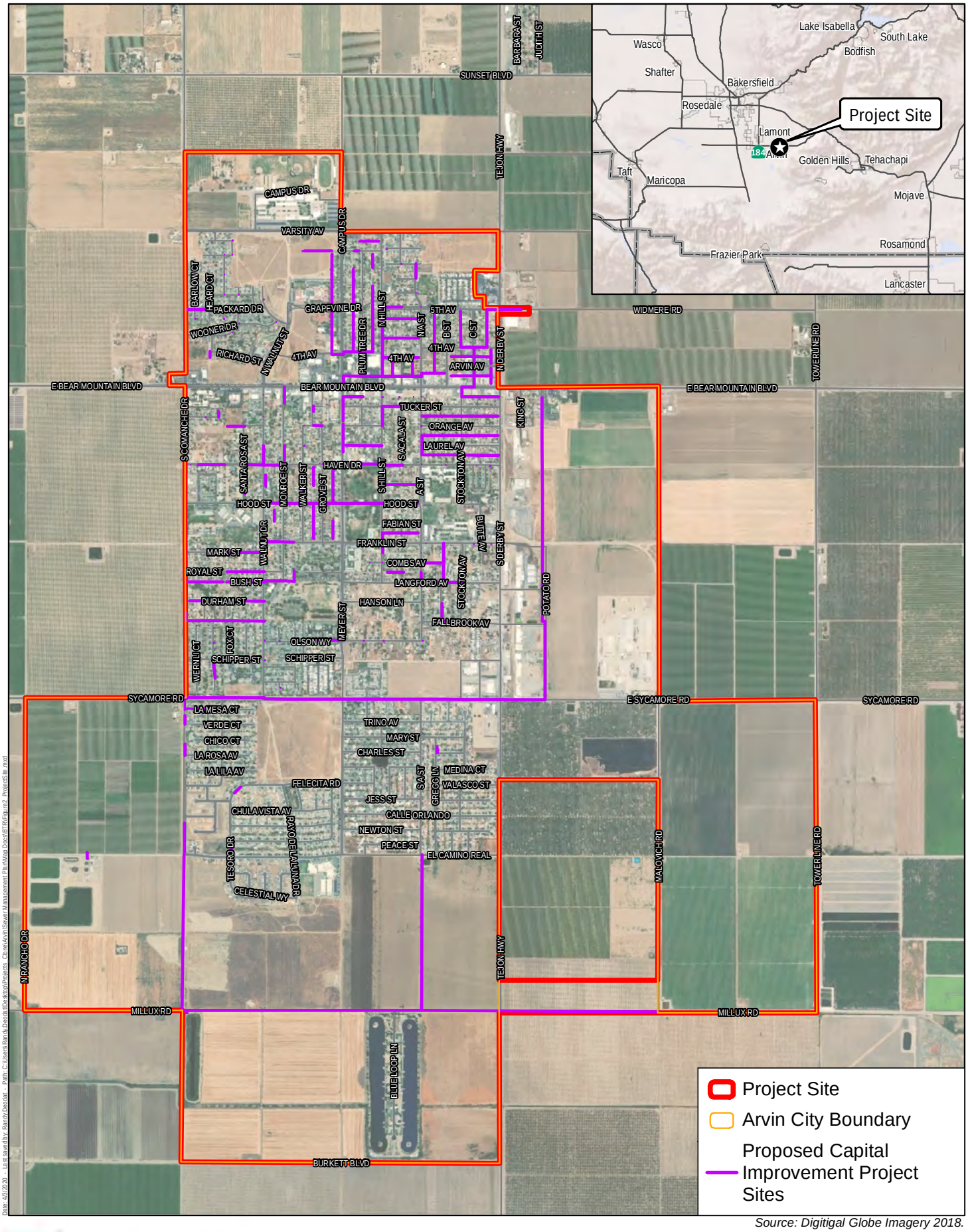
**Figure 1**

Regional Location




*Source: Digitigal Globe Imagery 2018.*

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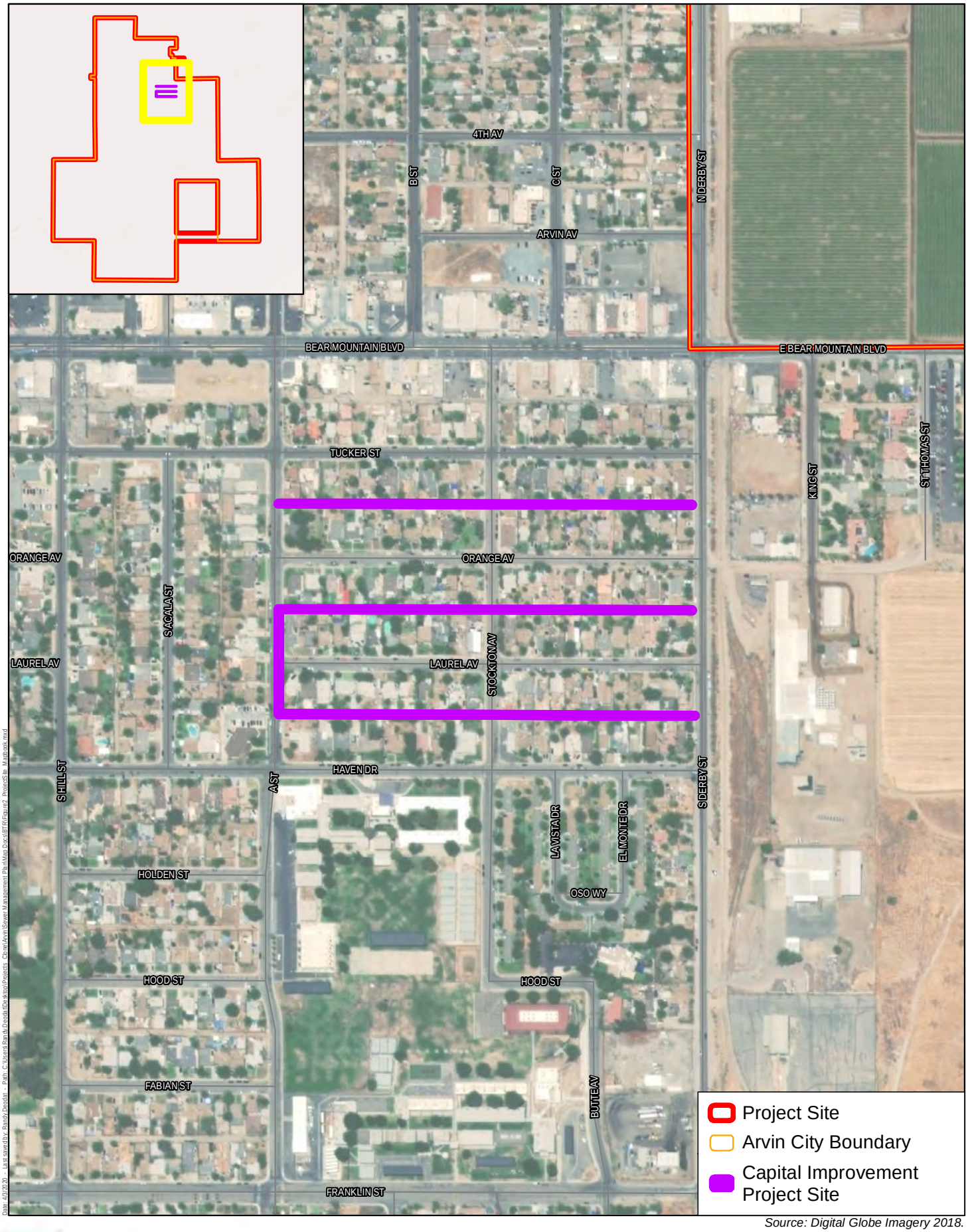
Feet

**Figure 2**

Project Site Overview




*Source: Digital Globe Imagery 2018.*

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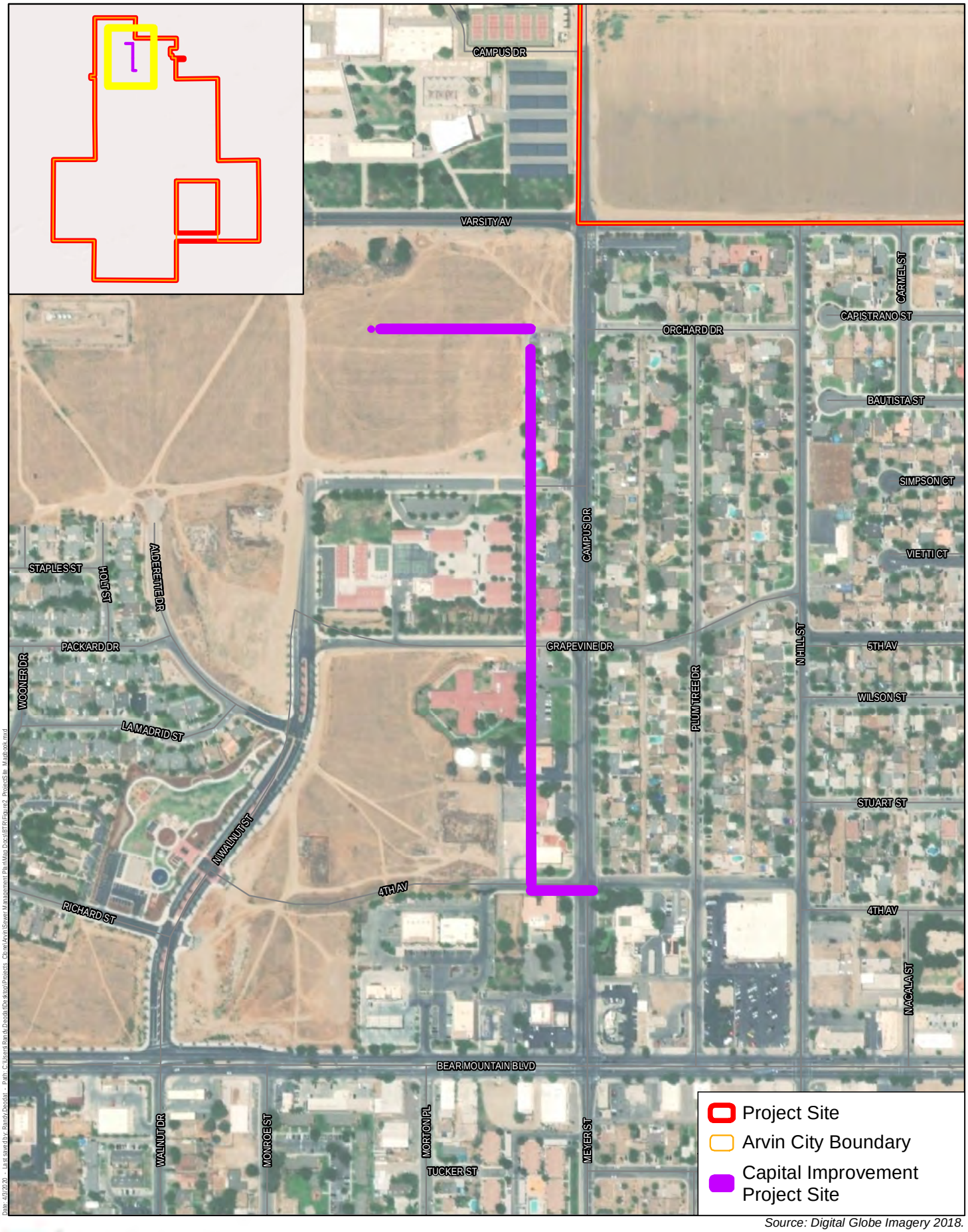
**Figure 2a**

A Street CIP




*Source: Digital Globe Imagery 2018.*

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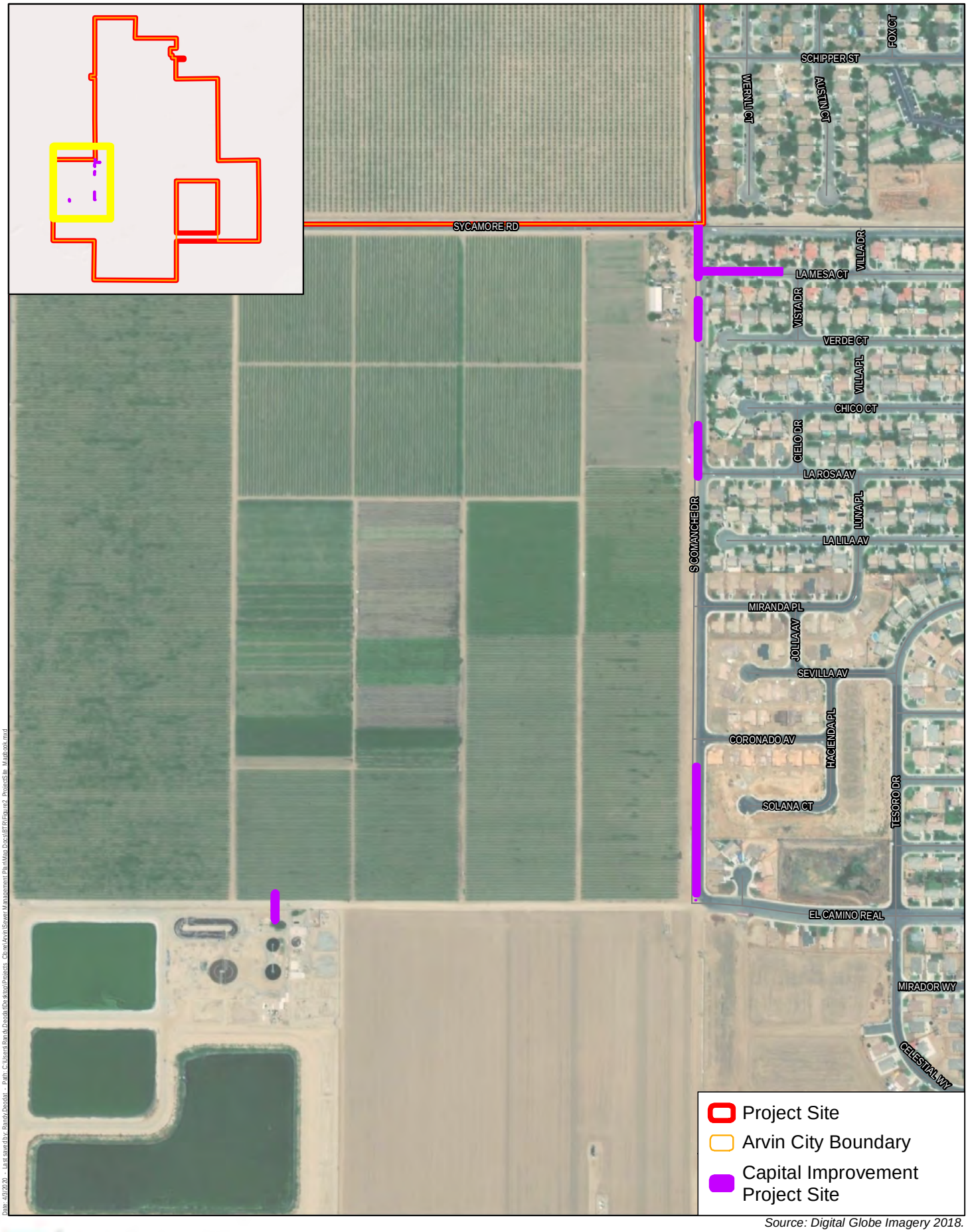
**Figure 2b**

Campus Drive Alley CIP




*Source: Digital Globe Imagery 2018.*

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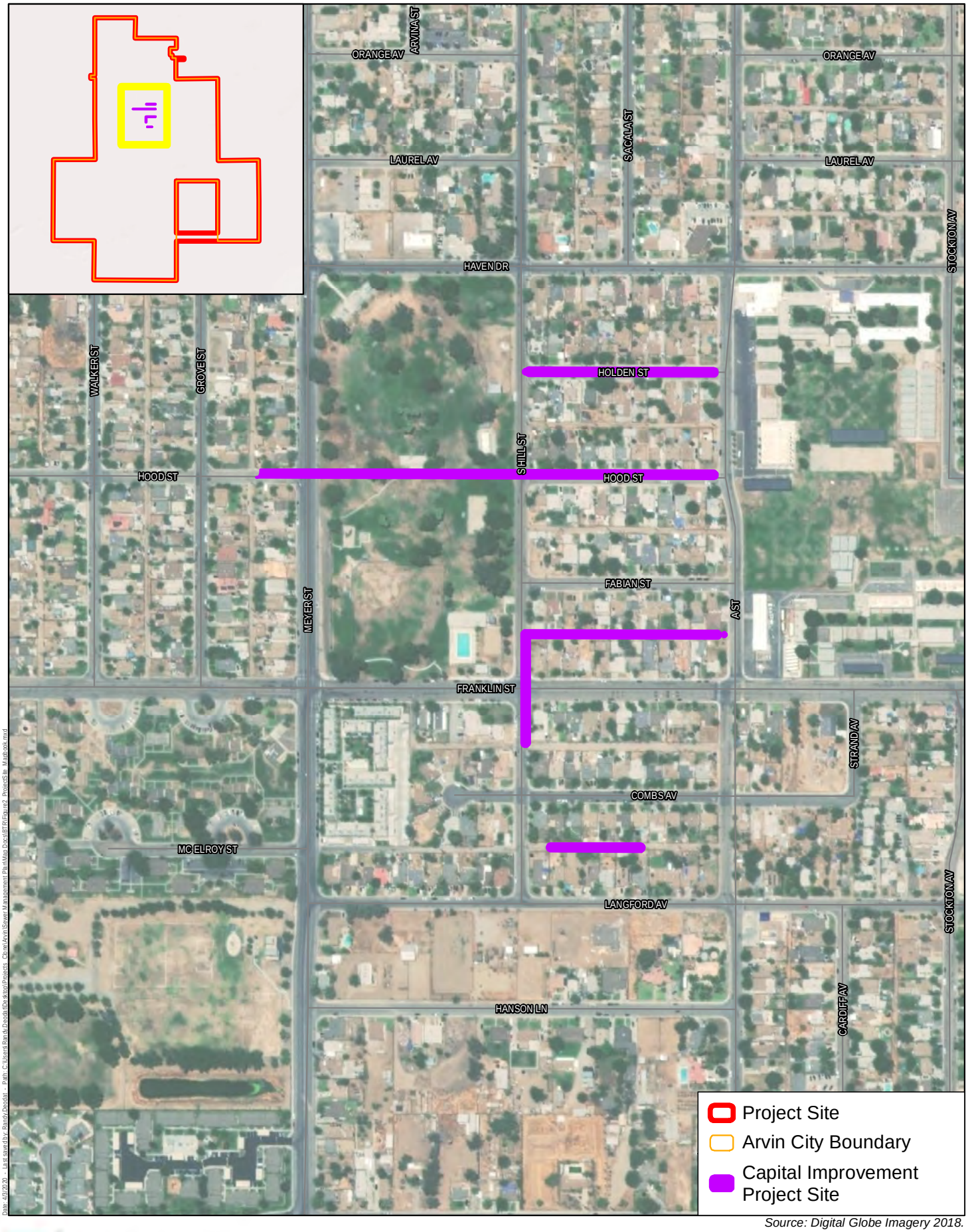
**Figure 2c**

Comanche Drive CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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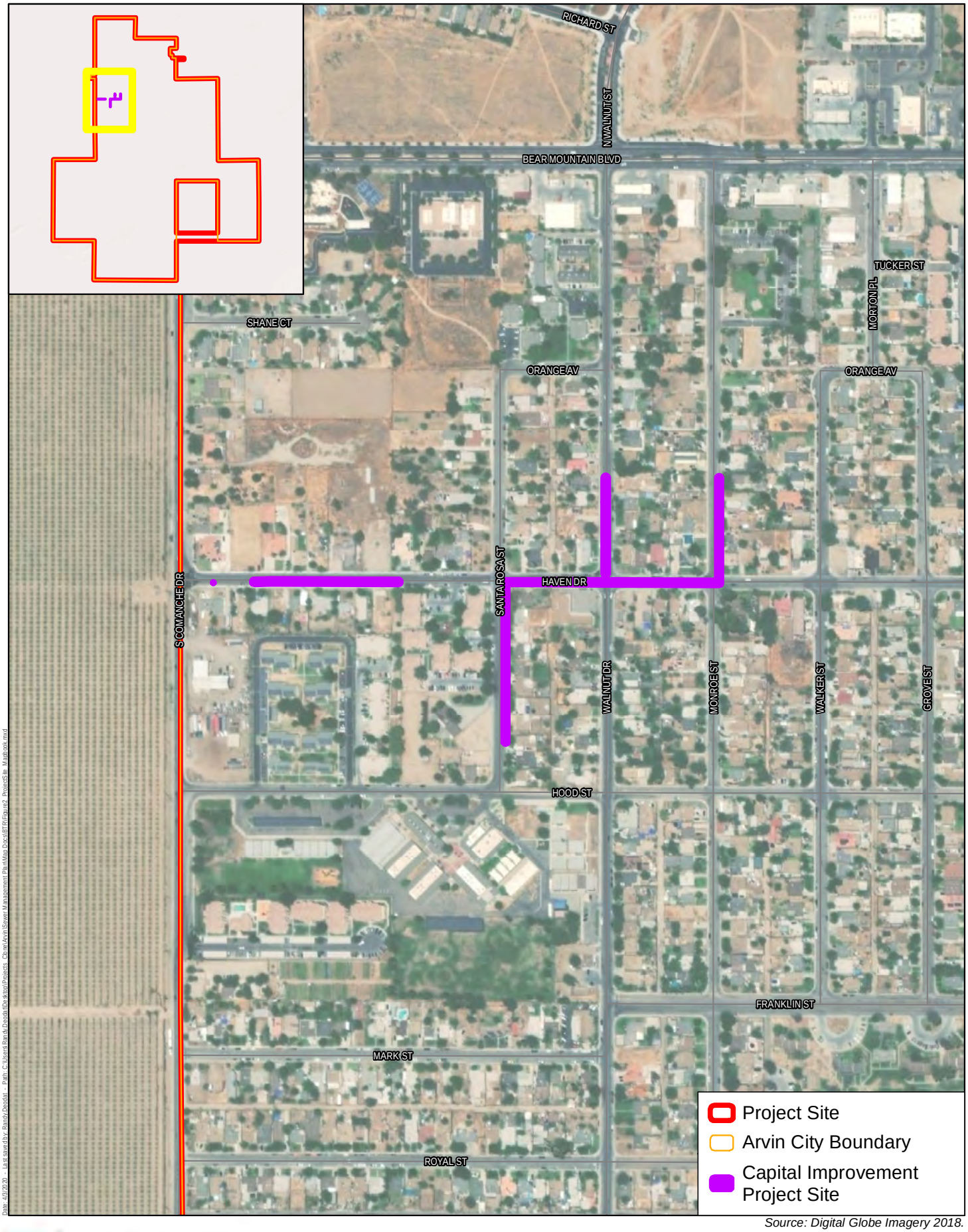
Feet

**Figure 2d**

East Di Giorgio Park CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

N

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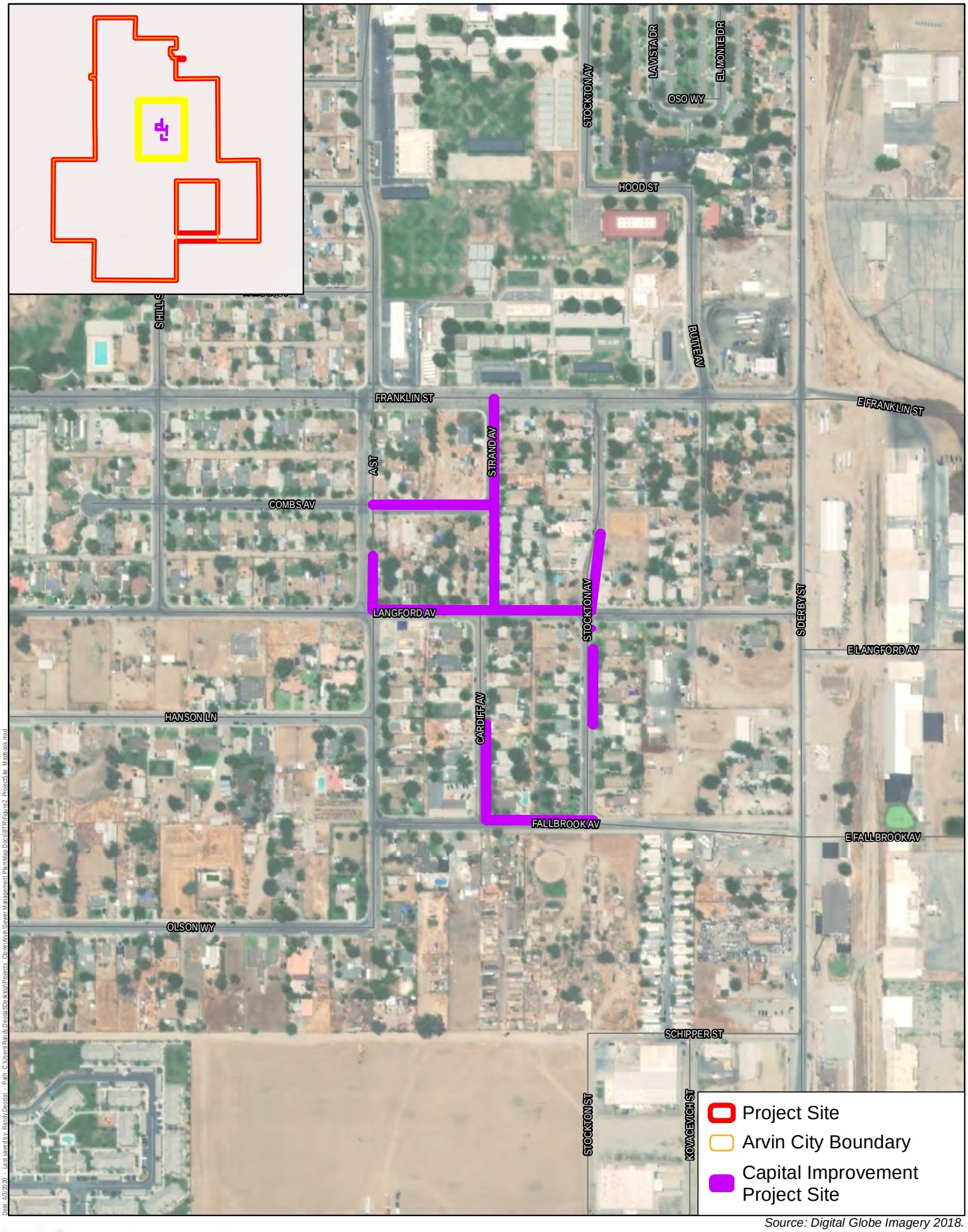
Feet

**Figure 2e**

Haven Drive CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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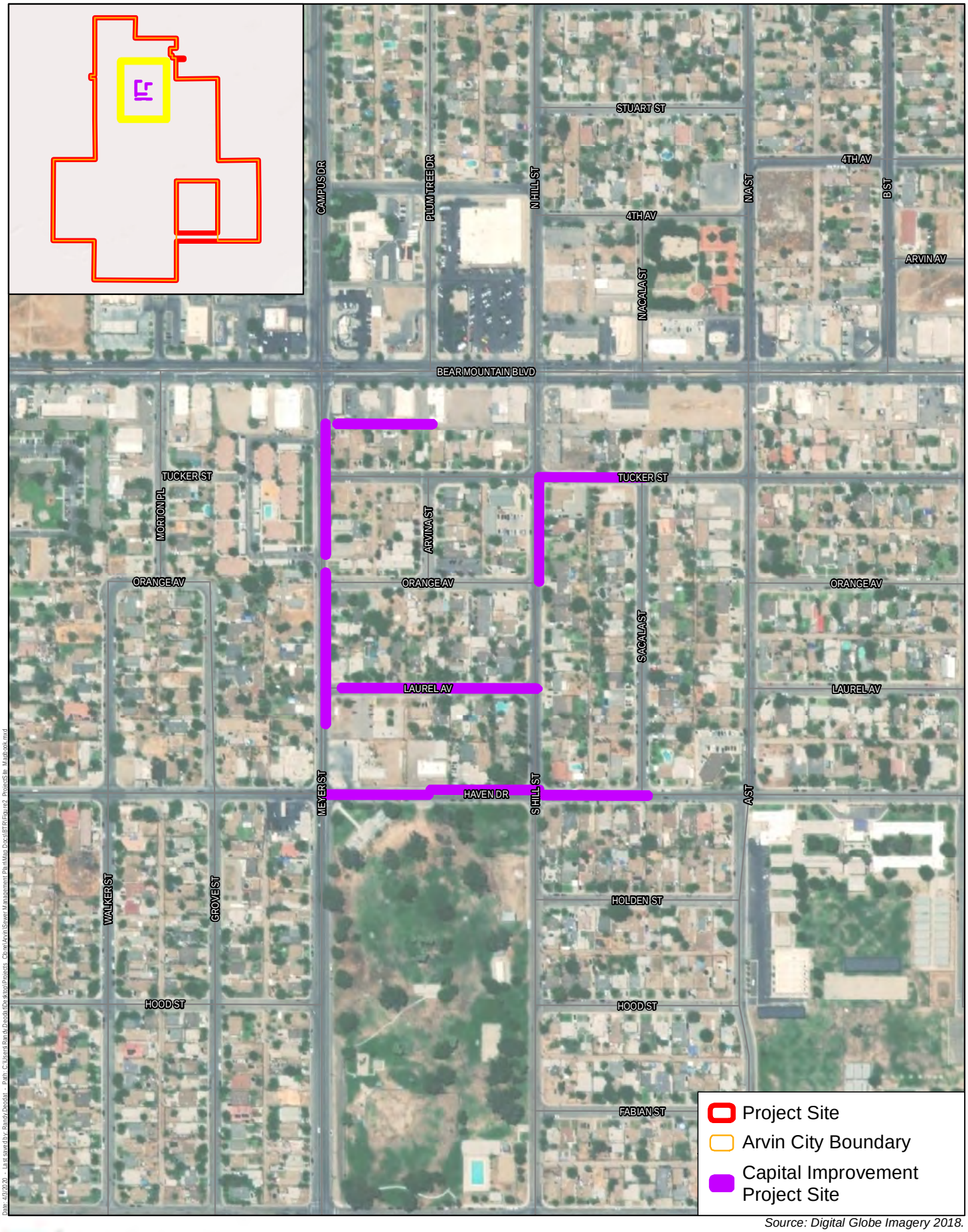
Feet

**Figure 2f**

Langford Avenue CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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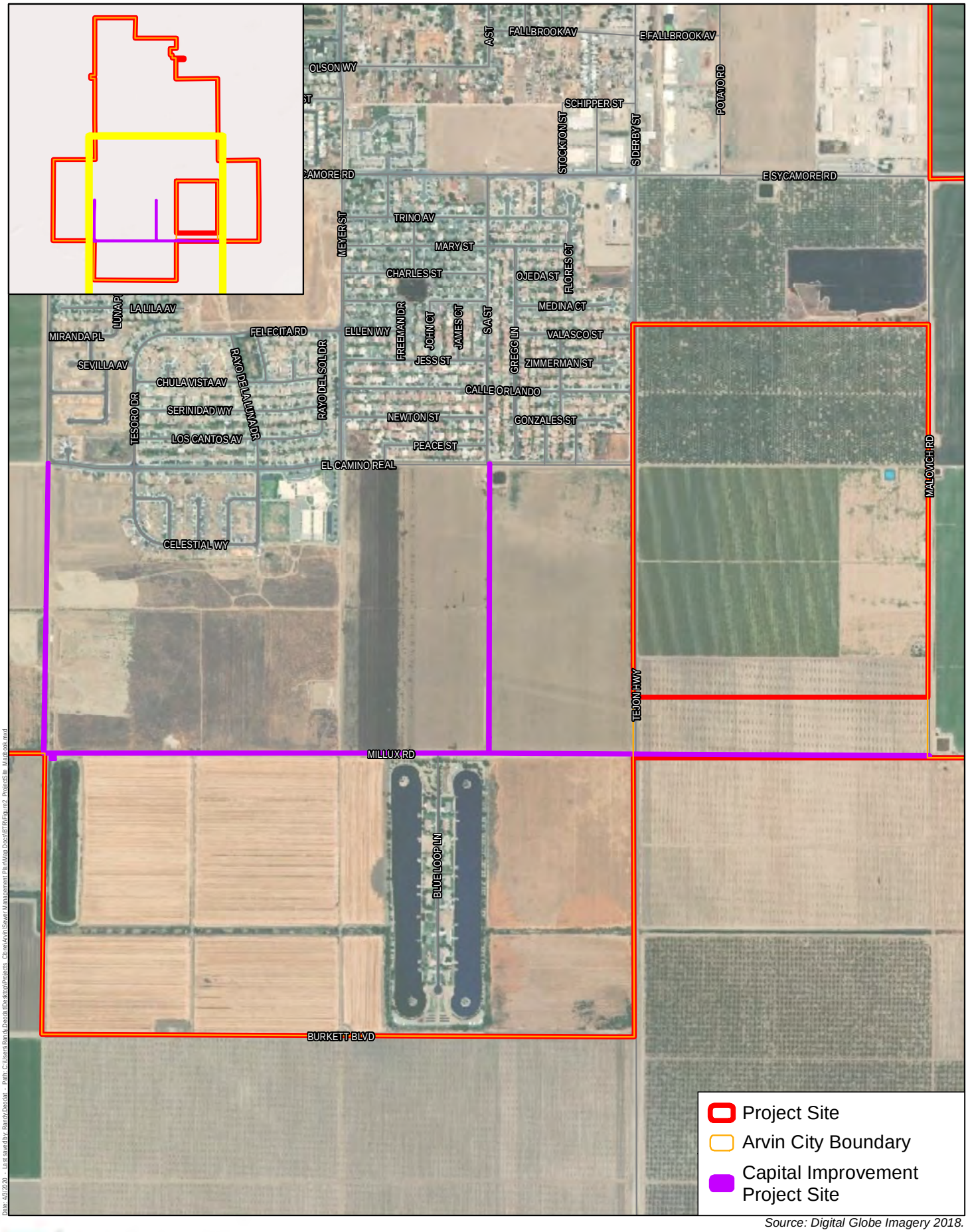
0 300 600

Feet

**Figure 2g**

Meyer Street CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

N

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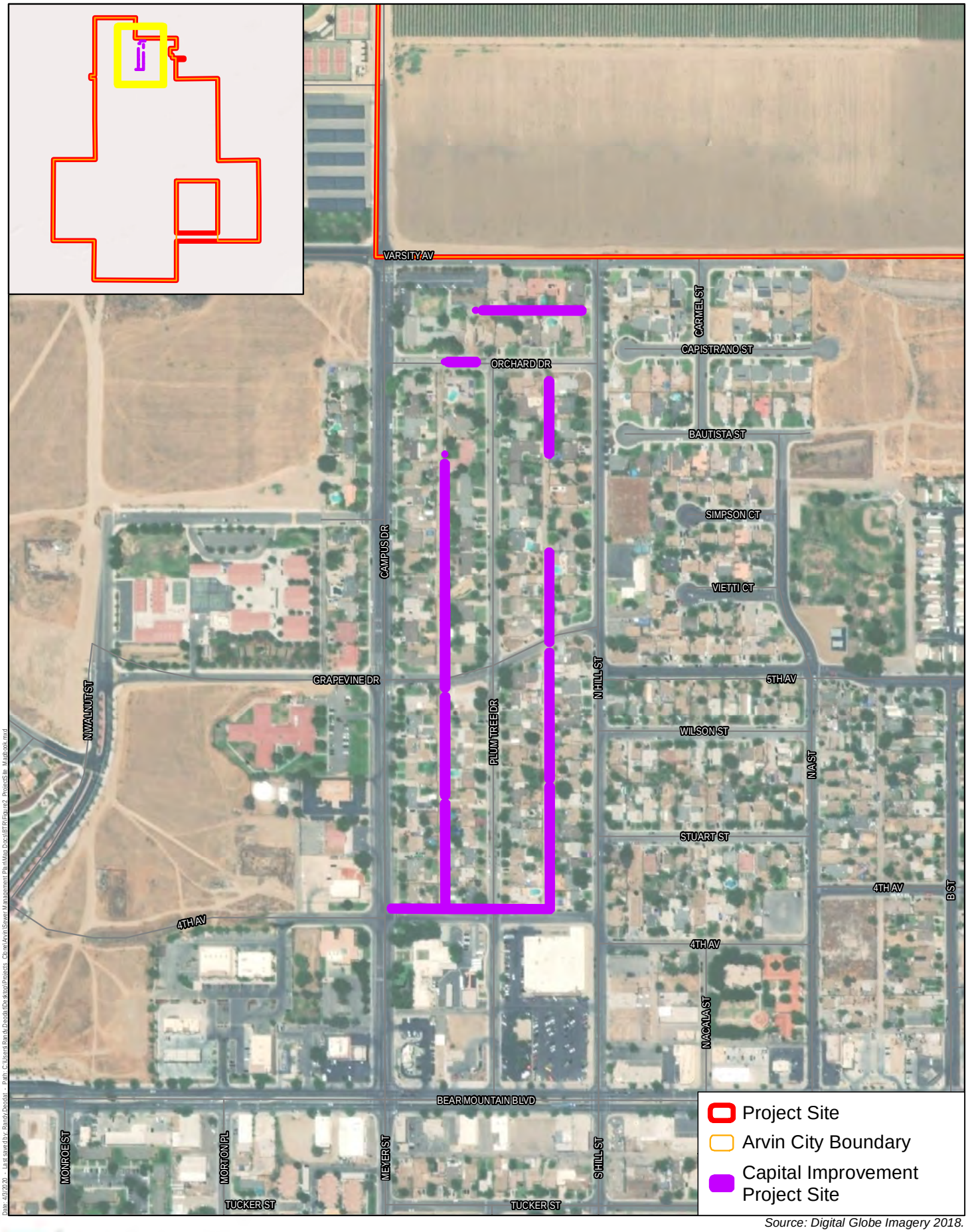
Feet

**Figure 2h**

Millux Road Pipeline and Pump Station CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

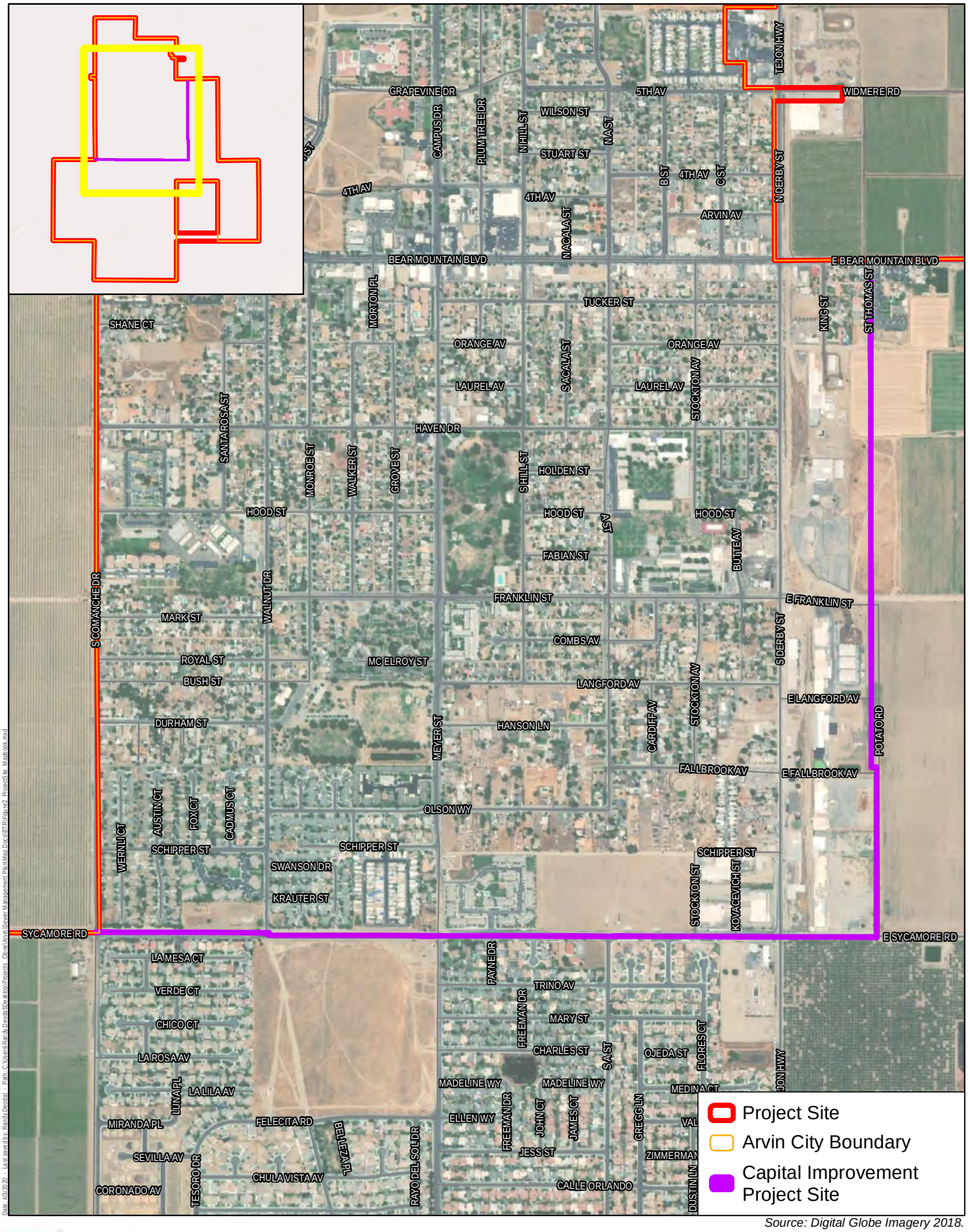
N

0 300 600

Feet

**Figure 2i**

Plumtree Drive Alleys CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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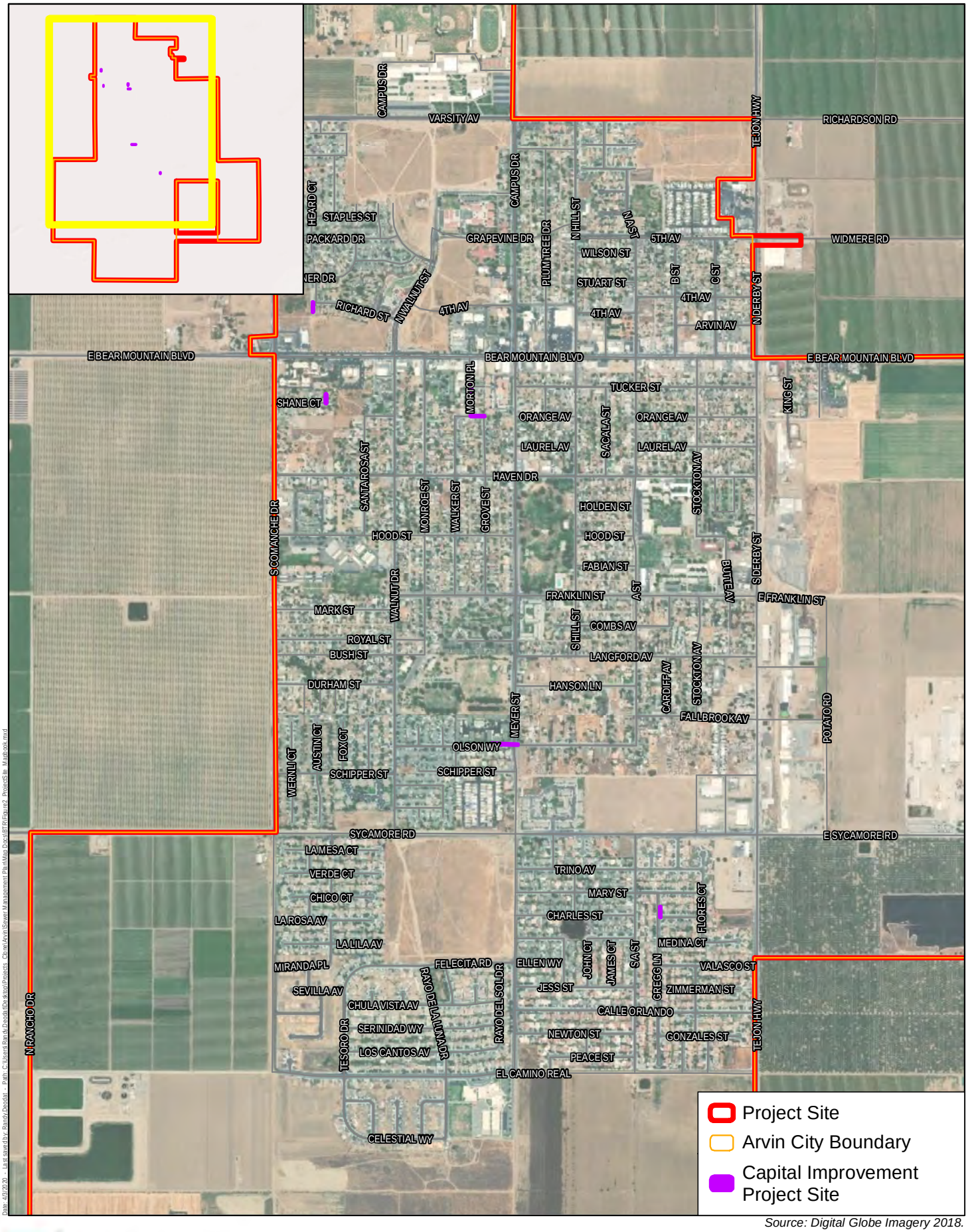
Feet

**Figure 2j**

Potato-Sycamore CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

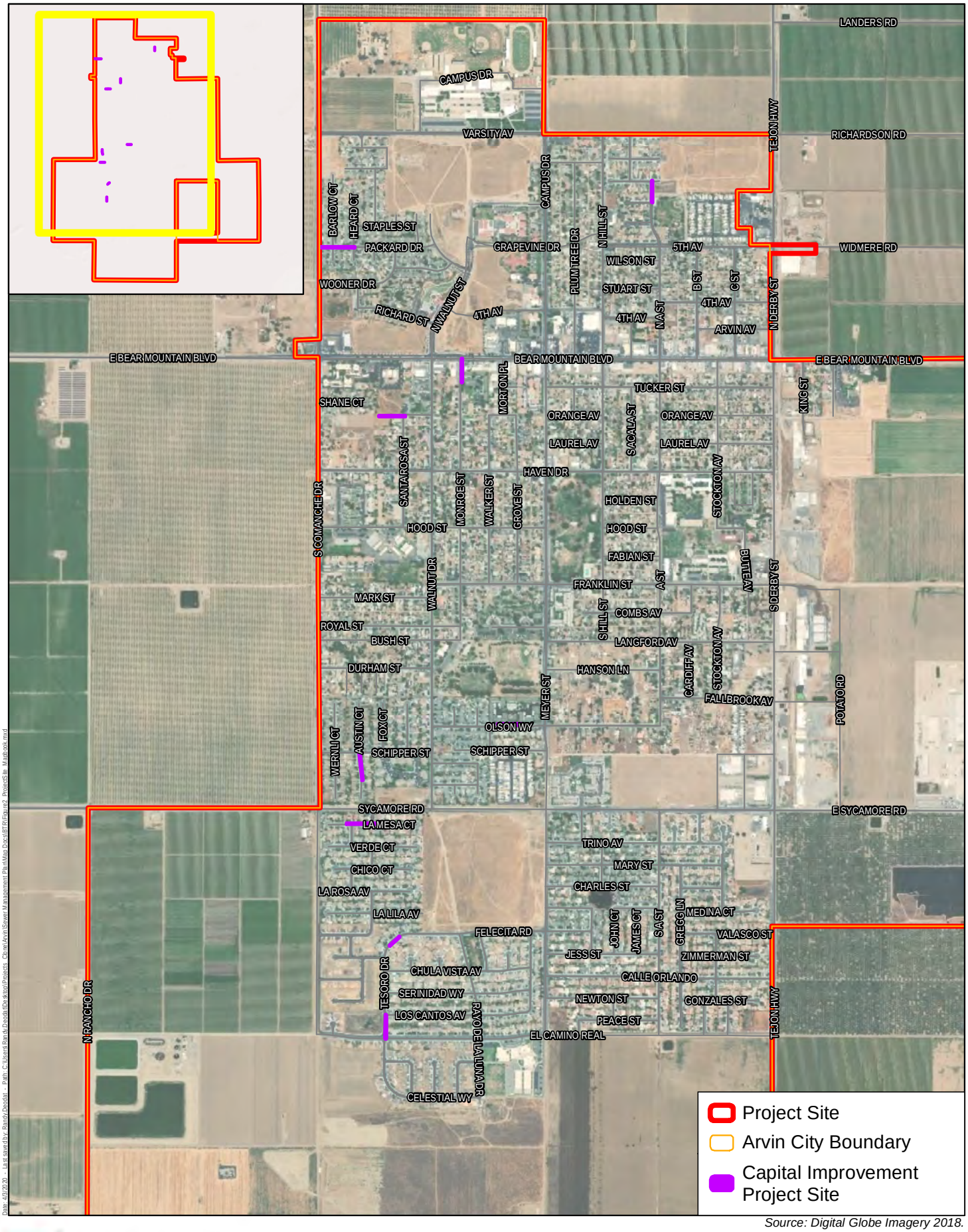
N

0 300 600

Feet

**Figure 2k**

Small Pipeline Replacement CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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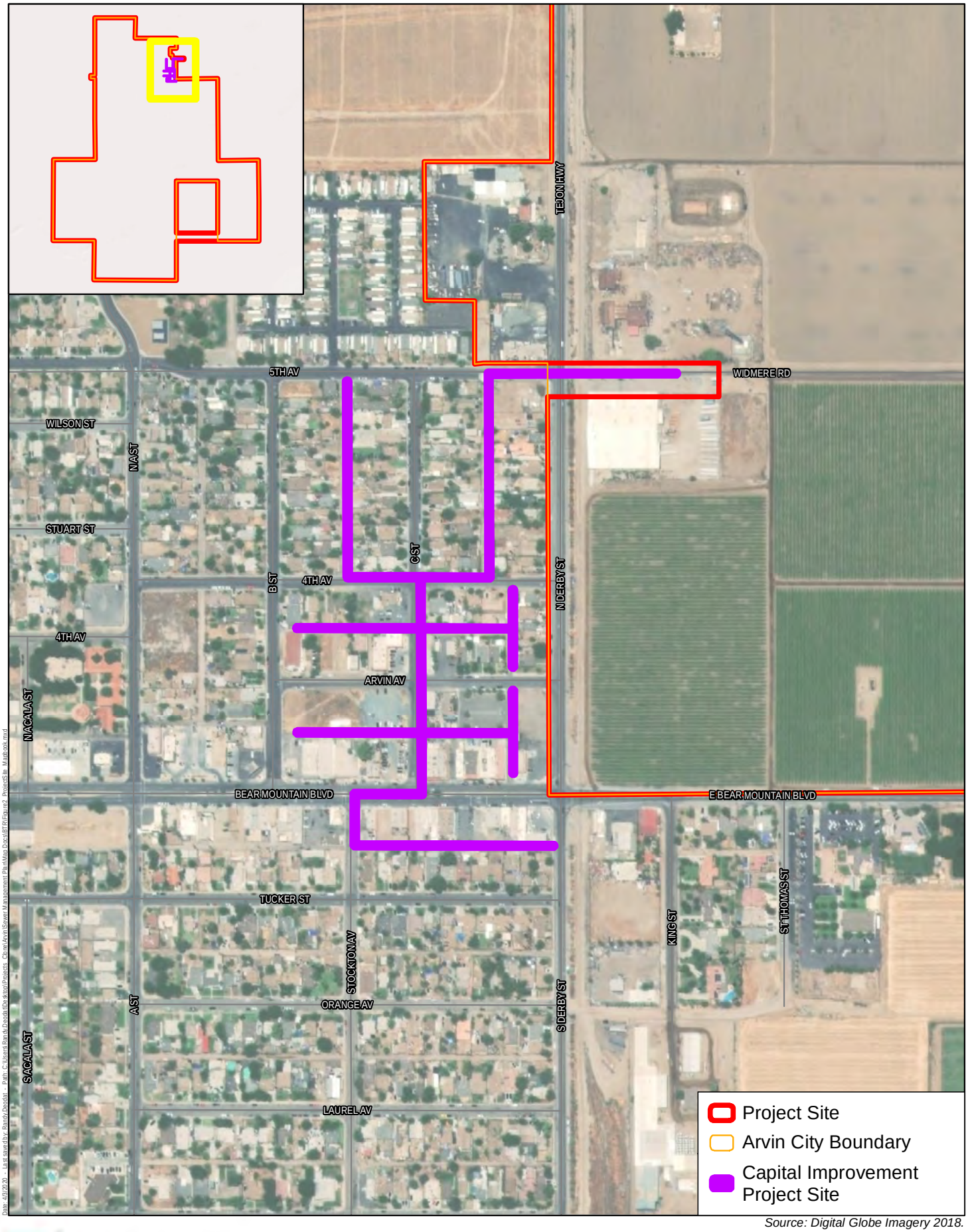
0 300 600

Feet

**Figure 2I**

Small Spot Repair CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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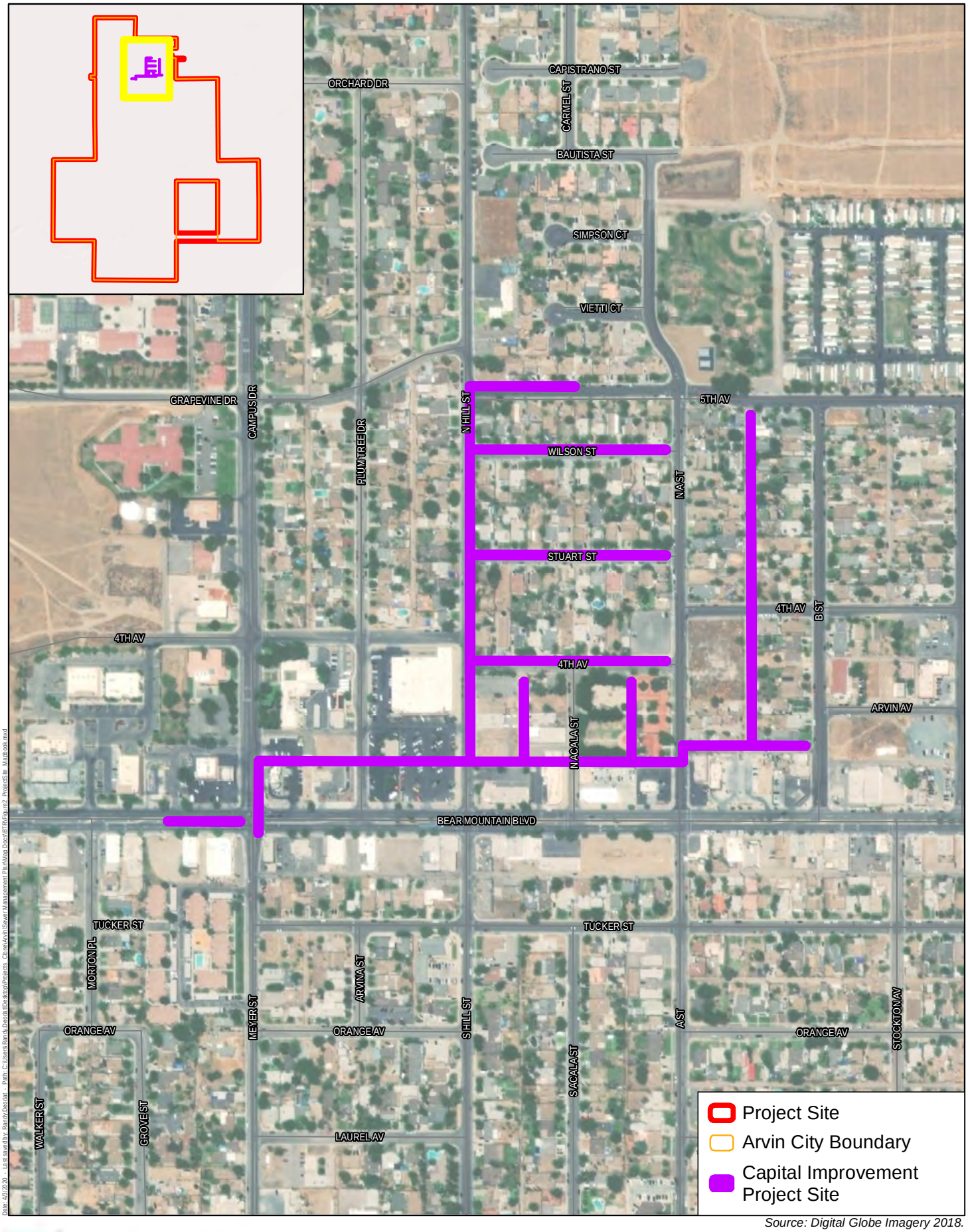
Feet

**Figure 2m**

Southeast Kovacevich Park CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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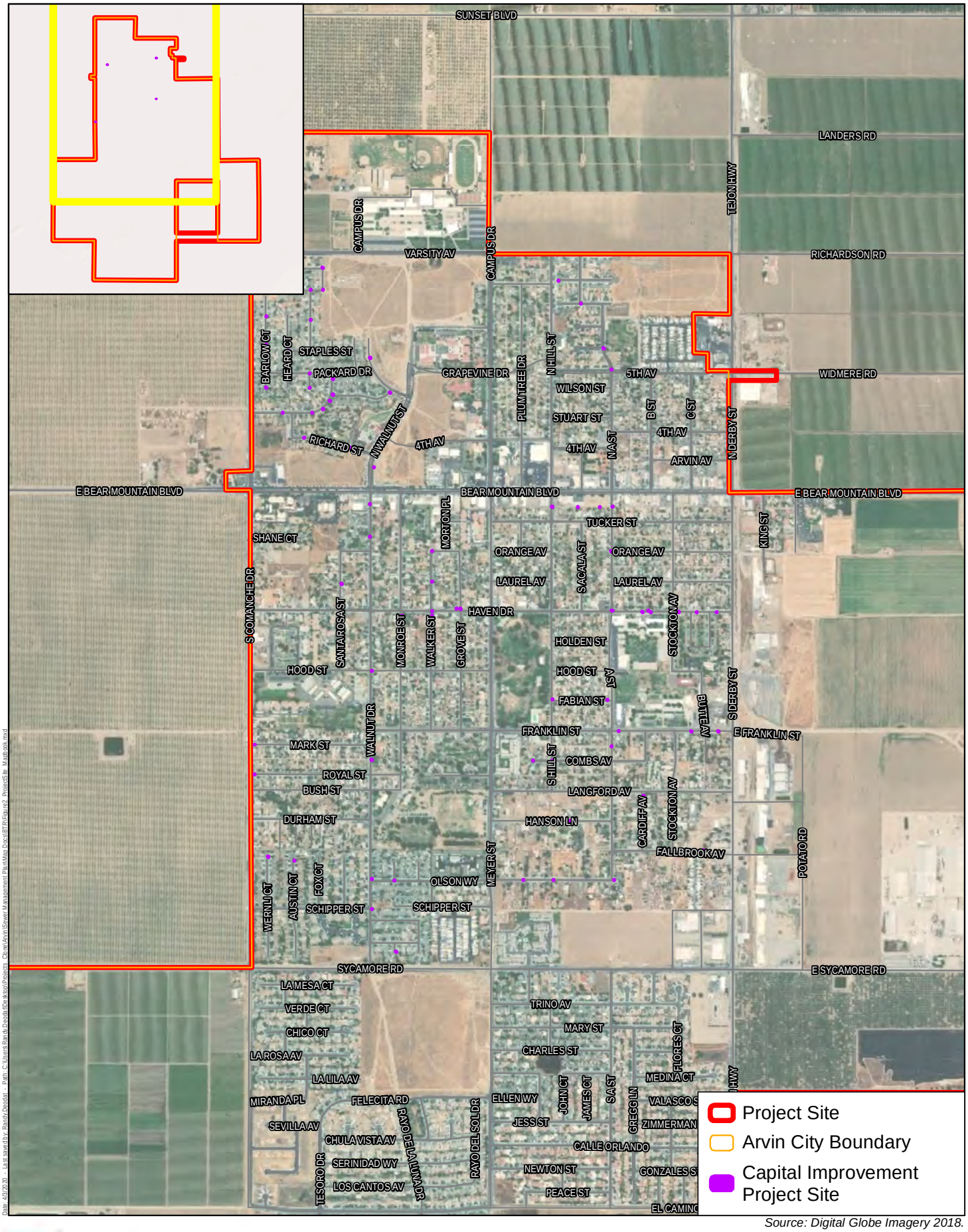
Feet

**Figure 2n**

Southwest Kovacevich Park CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

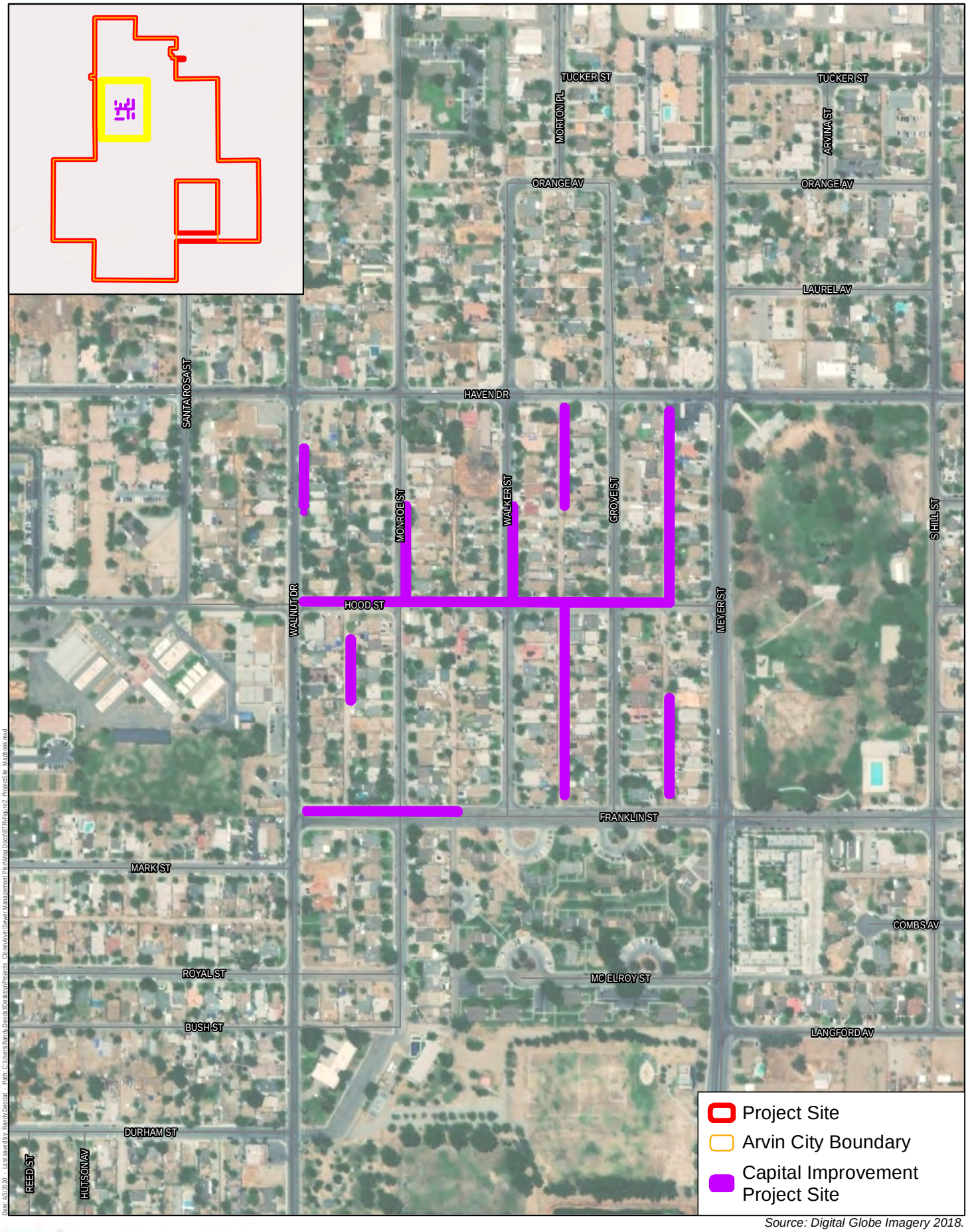
N

0 300 600

Feet

**Figure 2o**

Stand-Alone Manhole Repair and Replacement CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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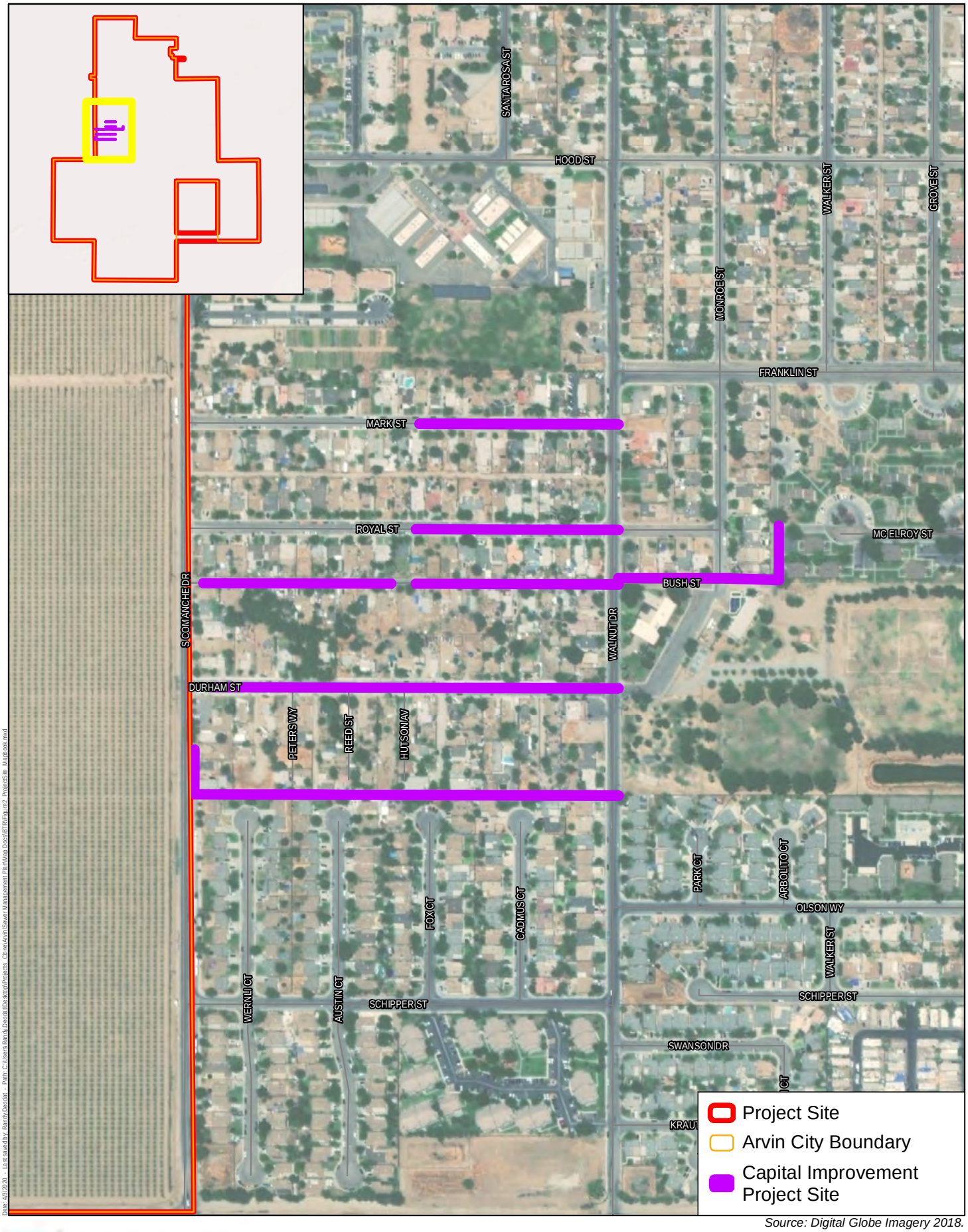
0 300 600

Feet

**Figure 2p**

West Di Giorgio Park CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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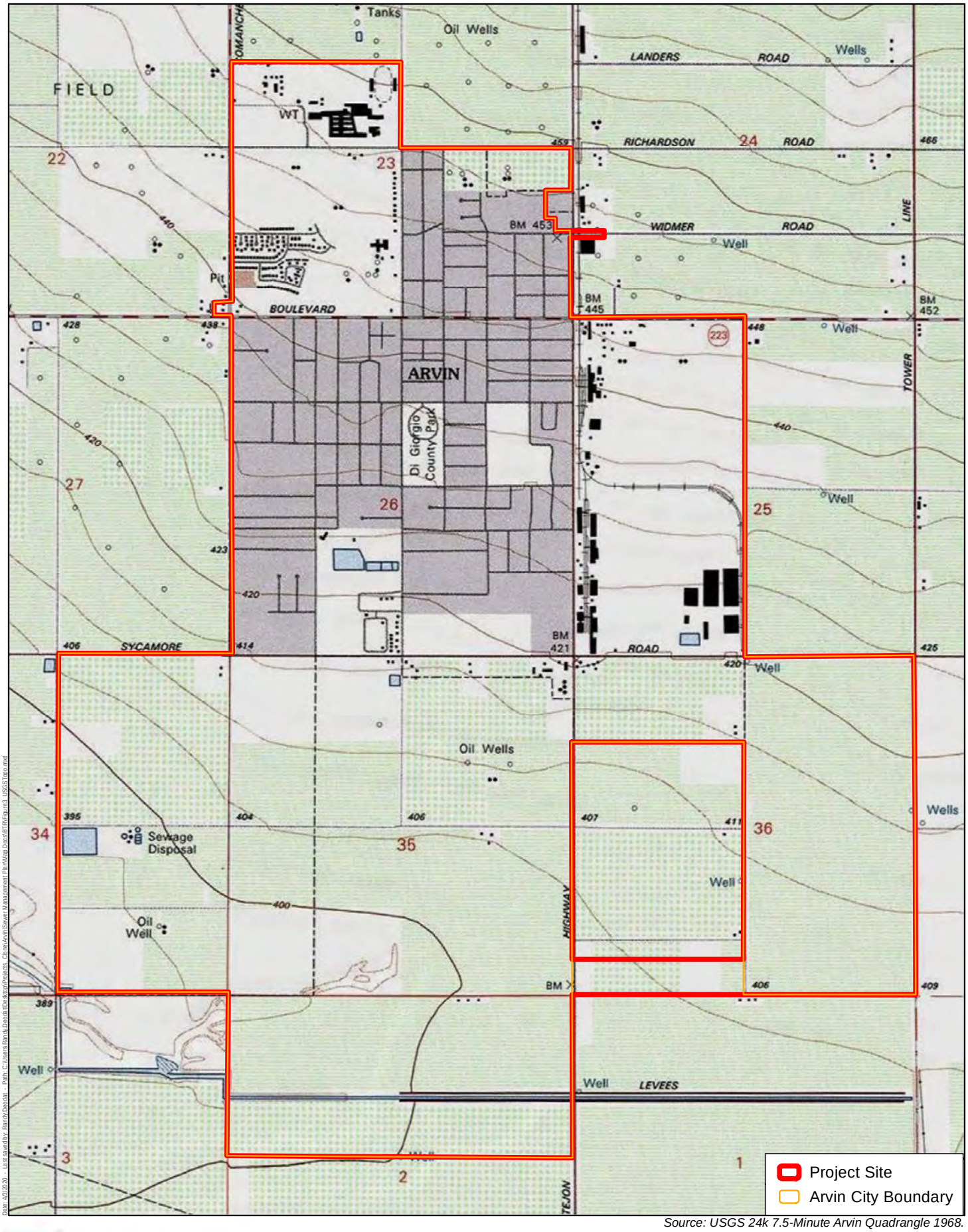
0 300 600

Feet

**Figure 2q**

West Smothermon Park CIP




*Source: USGS 24k 7.5-Minute Arvin Quadrangle 1968.*

Harris & Associates

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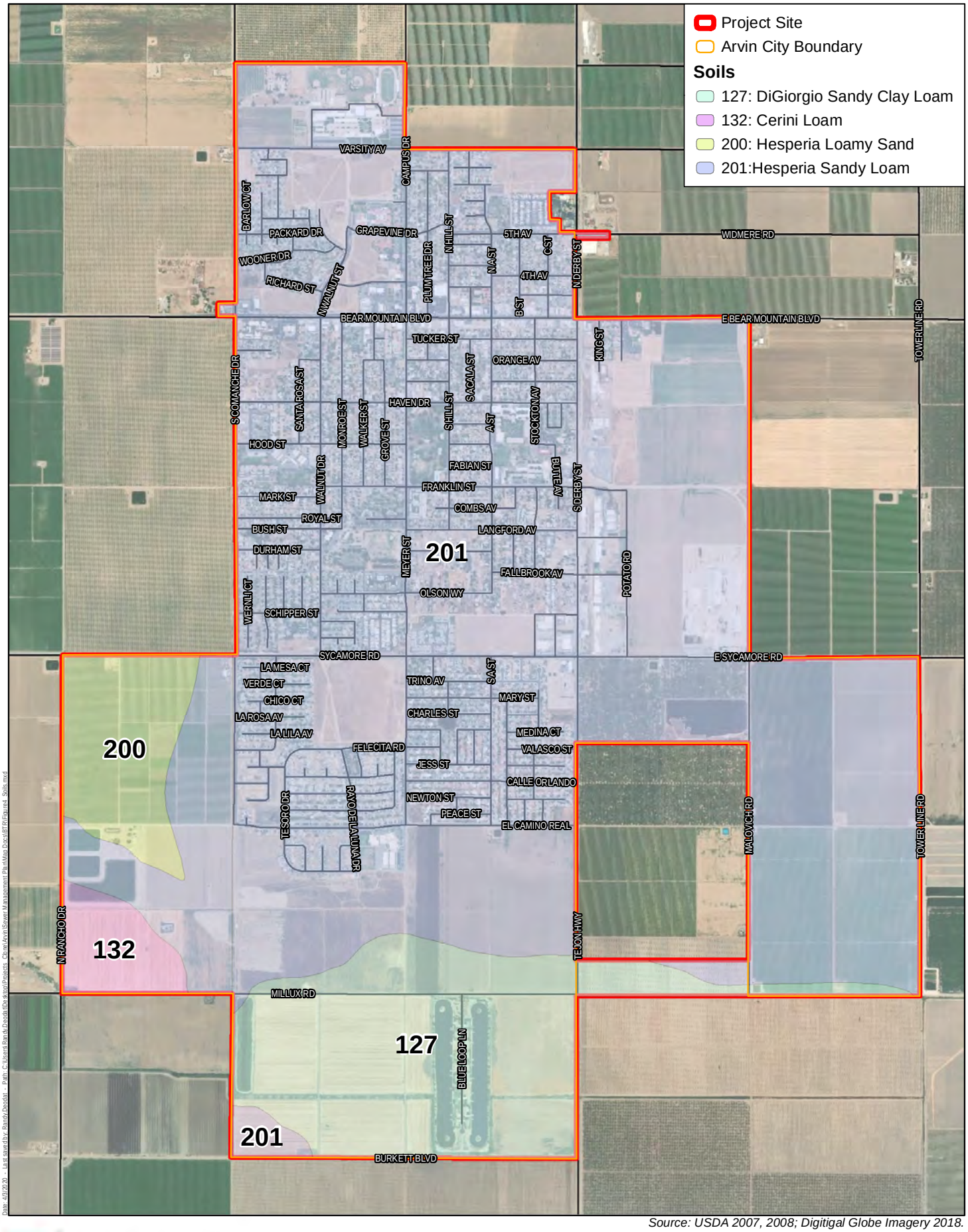
0 1,000 2,000

Feet

**Figure 3**

USGS Topographic Map




*Source: USDA 2007, 2008; Digitigal Globe Imagery 2018.*

Harris & Associates

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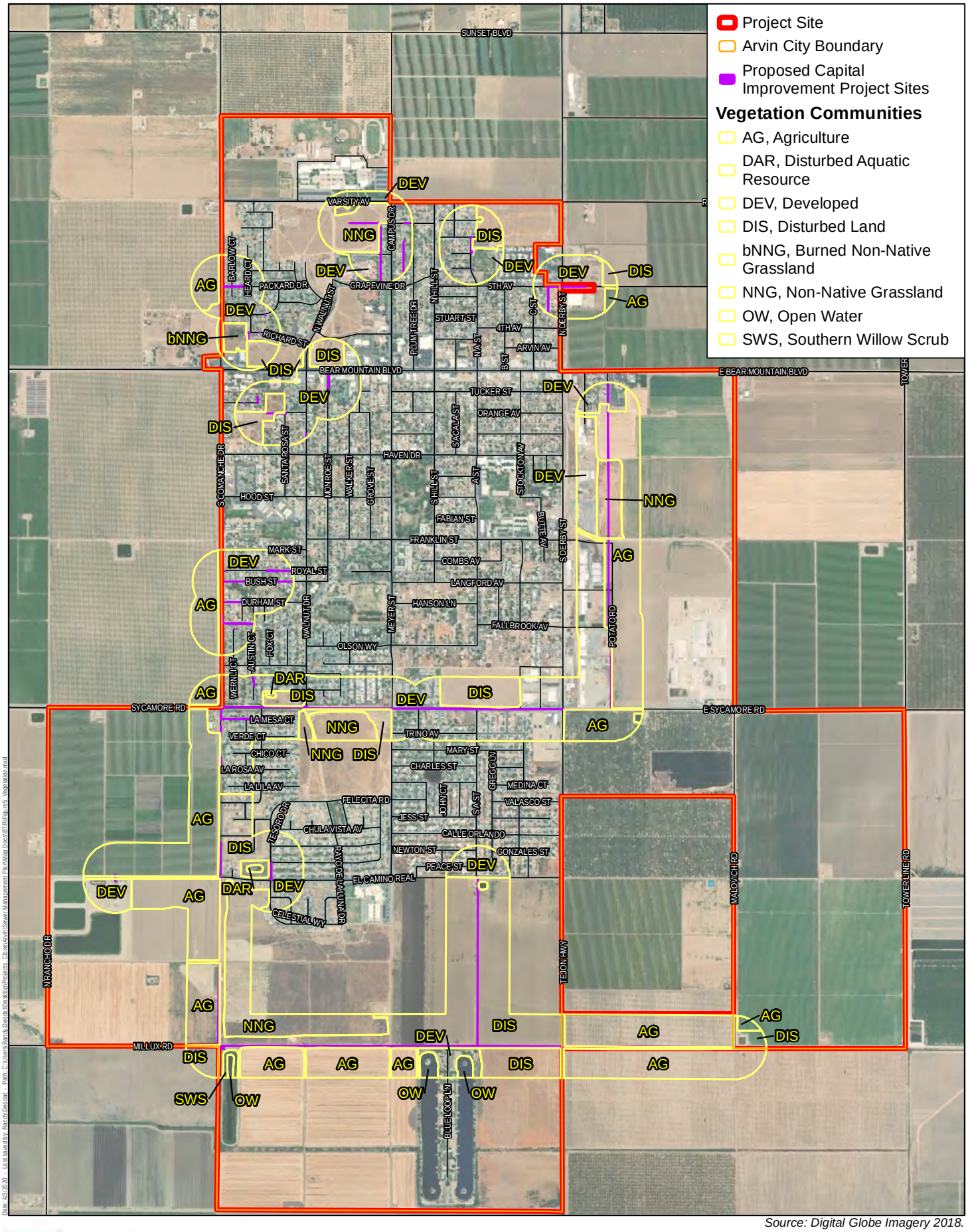
0 1,000 2,000

Feet

**Figure 4**

Soils




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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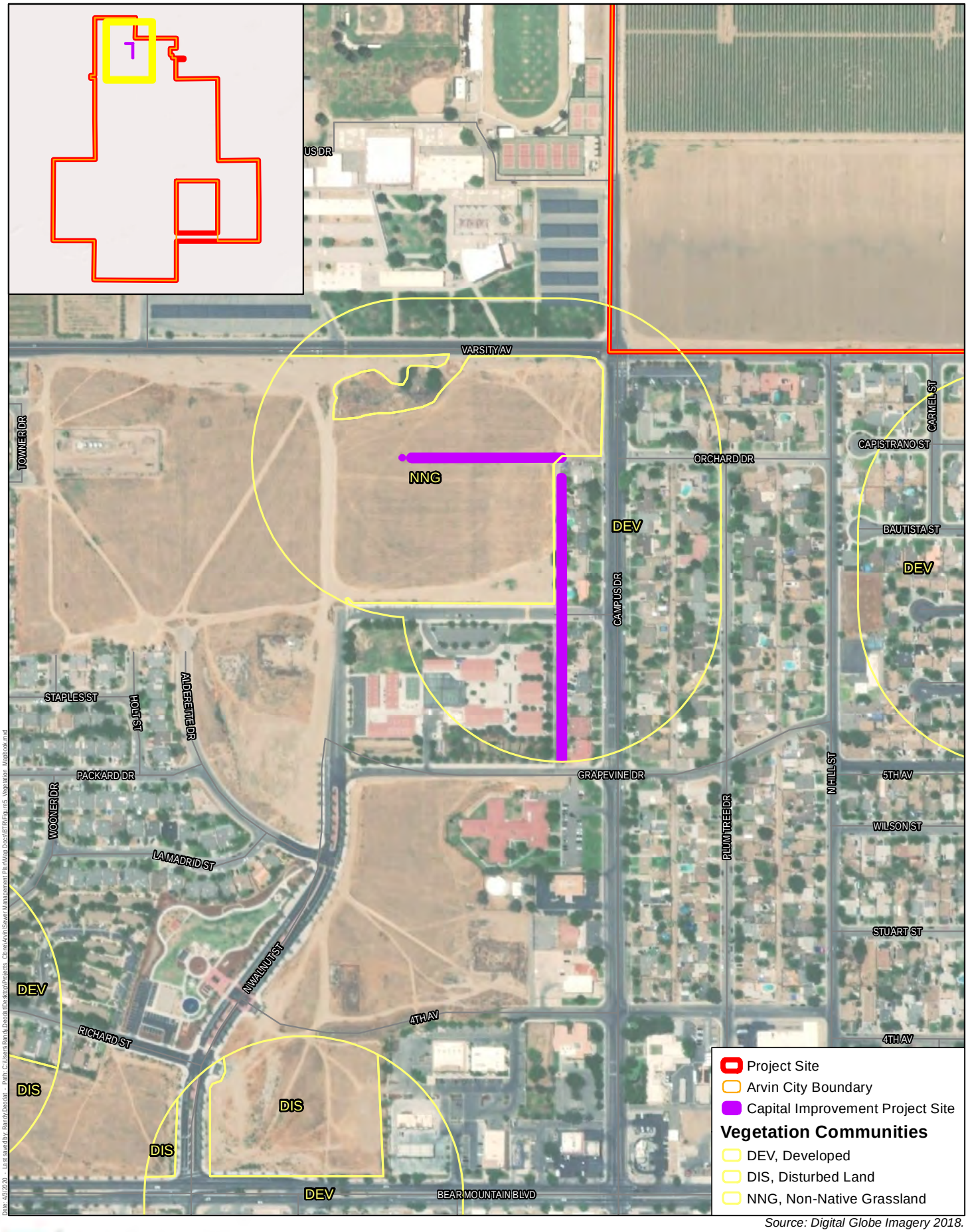
Feet

**Figure 5**

Vegetation Communities Overview




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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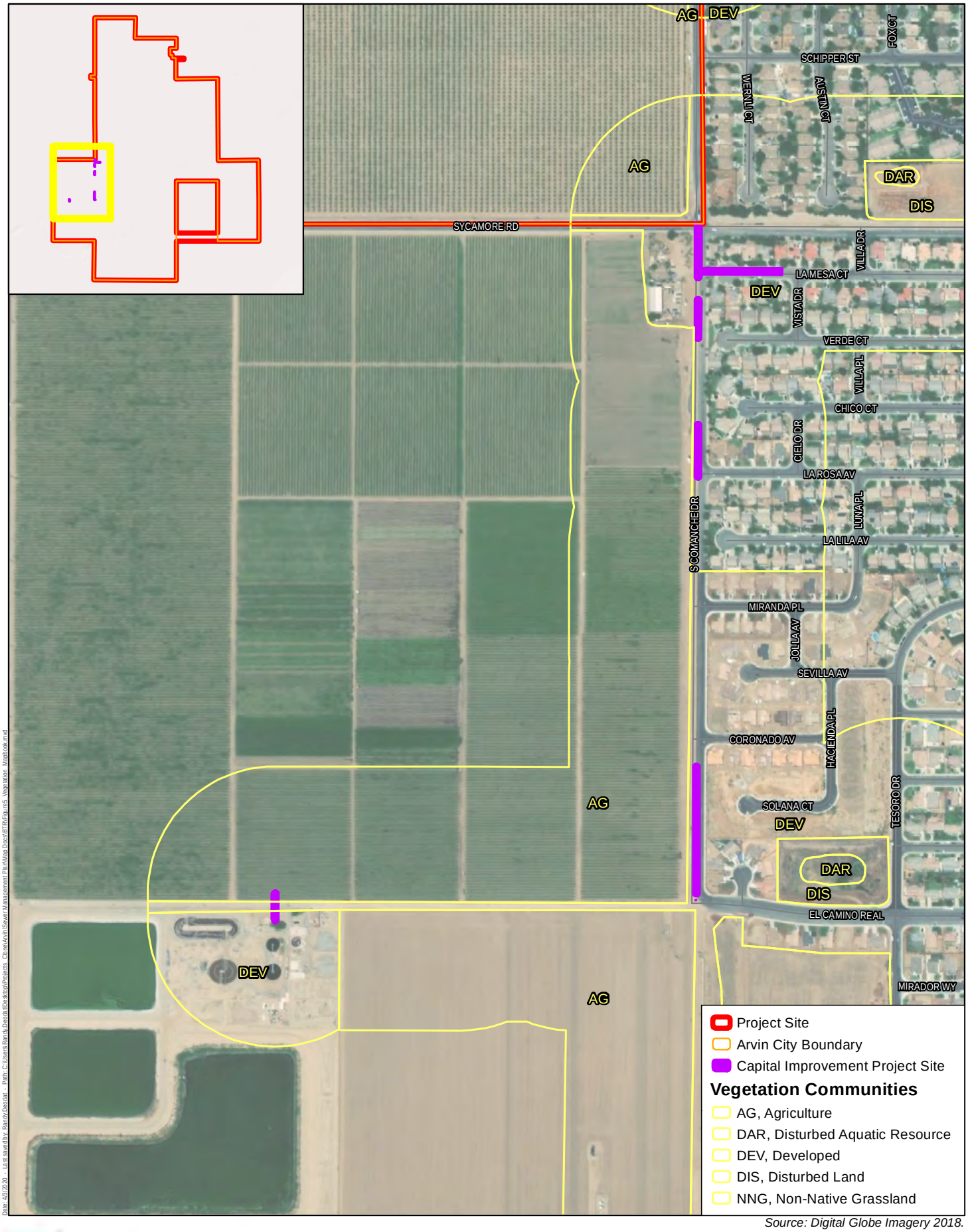
0 300 600

Feet

**Figure 5a**

Campus Drive Alley CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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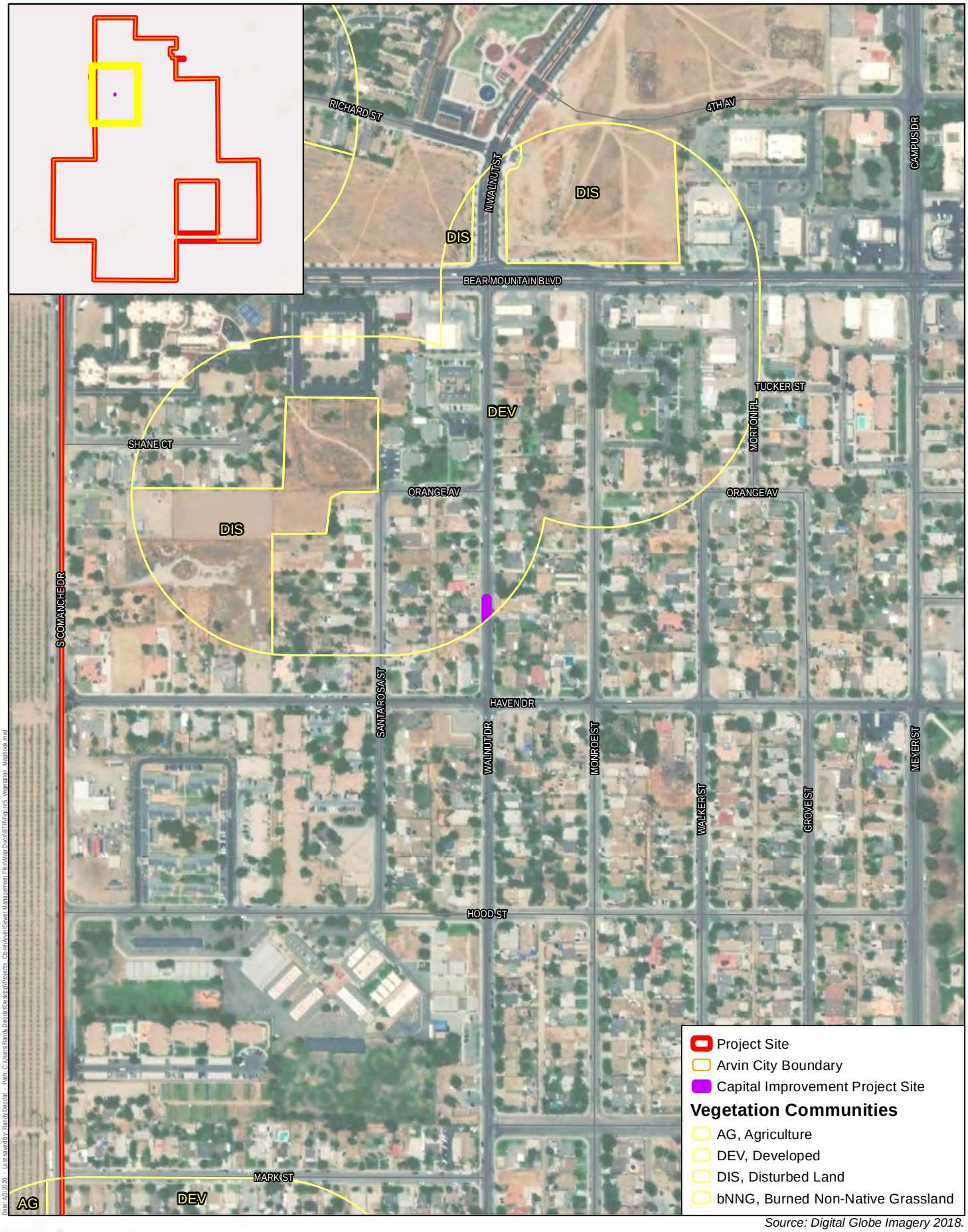
0 300 600

Feet

**Figure 5b**

Comanche Drive CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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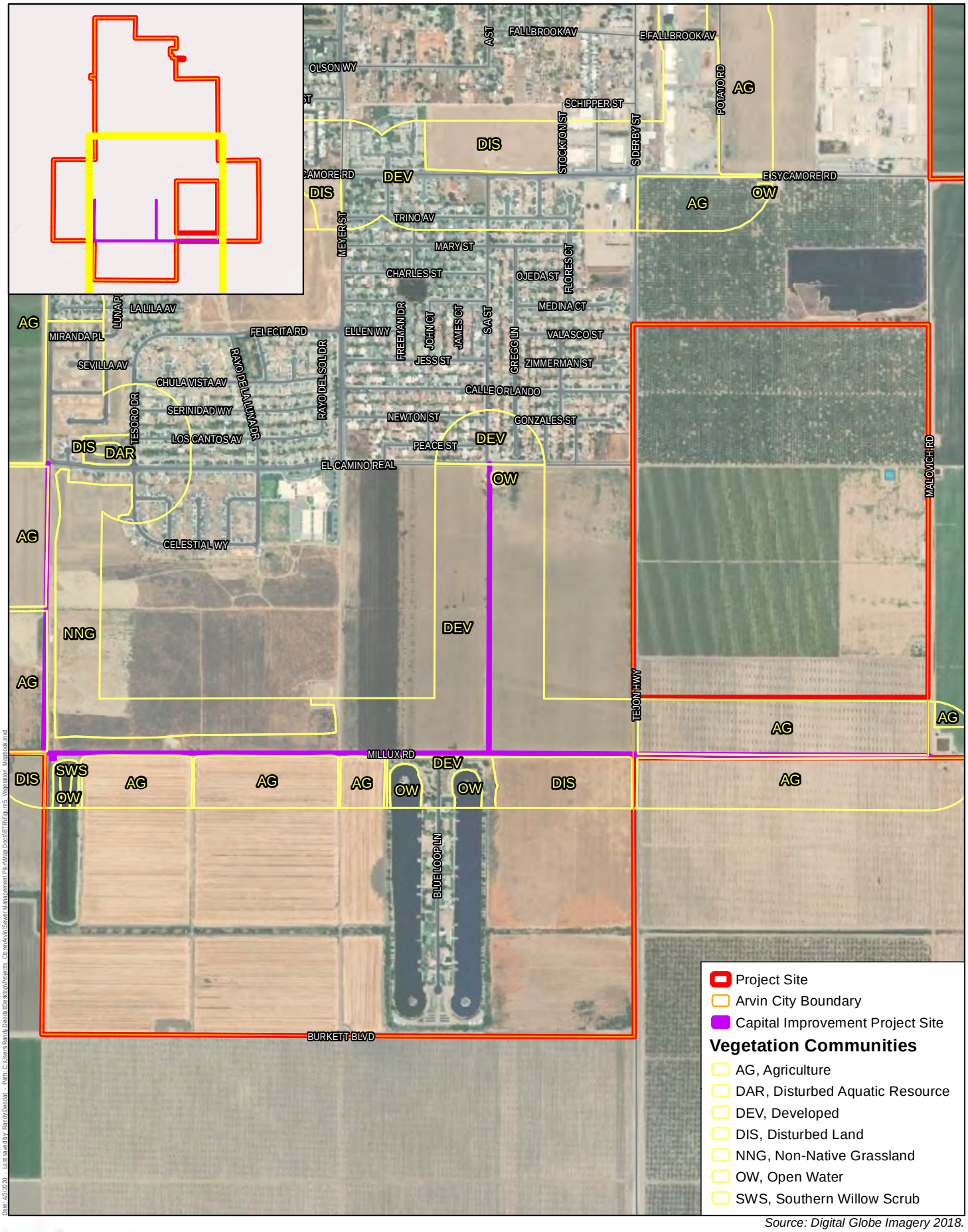
0 300 600

Feet

**Figure 5c**

Haven Drive CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

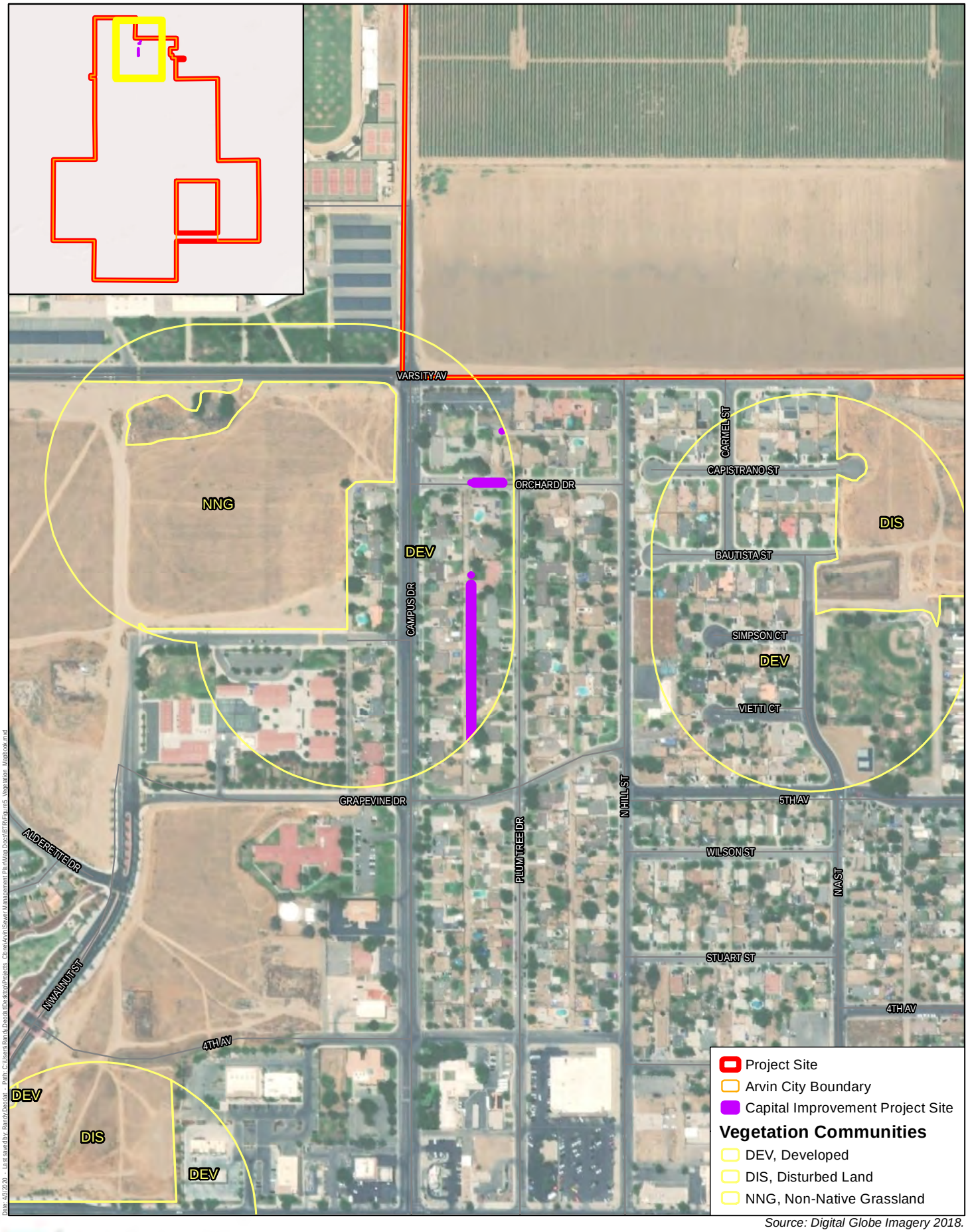
N

0 300 600

Feet

**Figure 5d**

Millux Road Pipeline and Pump Station CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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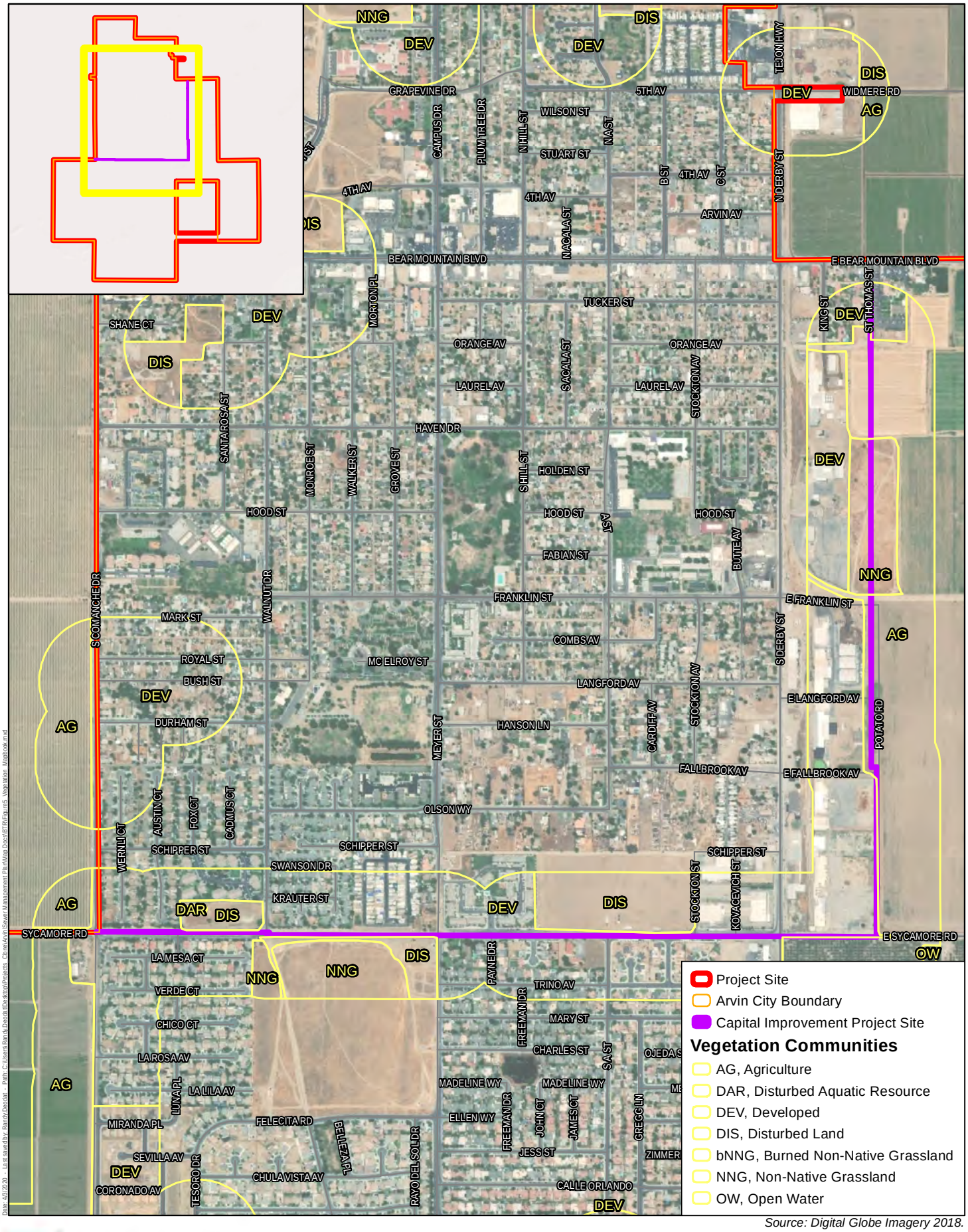
Feet

**Figure 5e**

Plumtree Drive Alleys CIP


Project Site
Arvin City Boundary
Capital Improvement Project Site
Vegetation Communities
AG, Agriculture
DAR, Disturbed Aquatic Resource
DEV, Developed
DIS, Disturbed Land
bNNG, Burned Non-Native Grassland
NNG, Non-Native Grassland
OW, Open Water
GRAPEVINE DR
WILSON ST
STUART ST
5TH AV
4TH AV
ARVIN AV
BEAR MOUNTAIN BLVD
E BEAR MOUNTAIN BLVD
TEJON HWY
WIDMERE RD
N DERBY ST
TUCKER ST
SHANE CT
ORANGE AV
LAUREL AV
HAVEN DR
HOLDEN ST
HOOD ST
FABIAN ST
FRANKLIN ST
E FRANKLIN ST
COMBS AV
MC ELROY ST
LANGFORD AV
E LANGFORD AV
HANSON LN
FALLBROOK AV
E FALLBROOK AV
OLSON WY
SCHIPPER ST
SWANSON DR
KRAUTER ST
SYCAMORE RD
E SYCAMORE RD
LA MESA CT
VERDE CT
CHICO CT
LA ROSA AV
LA LILA AV
MIRANDA PL
FELECITA RD
SEVILLA AV
CORONADO AV
CHULA VISTA AV
CALLE ORLANDO
TRINO AV
MARY ST
CHARLES ST
MADELINE WY
ELLEN WY
JESS ST
MARK ST
ROYAL ST
BUSH ST
DURHAM ST
SCOMANCHE DR
SANTA ROSA ST
MONROE ST
WALKER ST
GROVE ST
WALNUT DR
MORTON PL
KING ST
ST THOMAS ST
POTATO RD
STOCKTON AV
BUTTE AV
KOVACEVICH ST
PAYNE DR
FREEMAN DR
JOHN CT
JAMES CT
GREGG LN
RAYO DEL SOL DR
TESORO DR
BELLEZA PL
LUNA PL
AUSTIN CT
FOX CT
CADMUS CT
WERNLI CT
MEYER ST
CARDIFF AV
Source: Digital Globe Imagery 2018.
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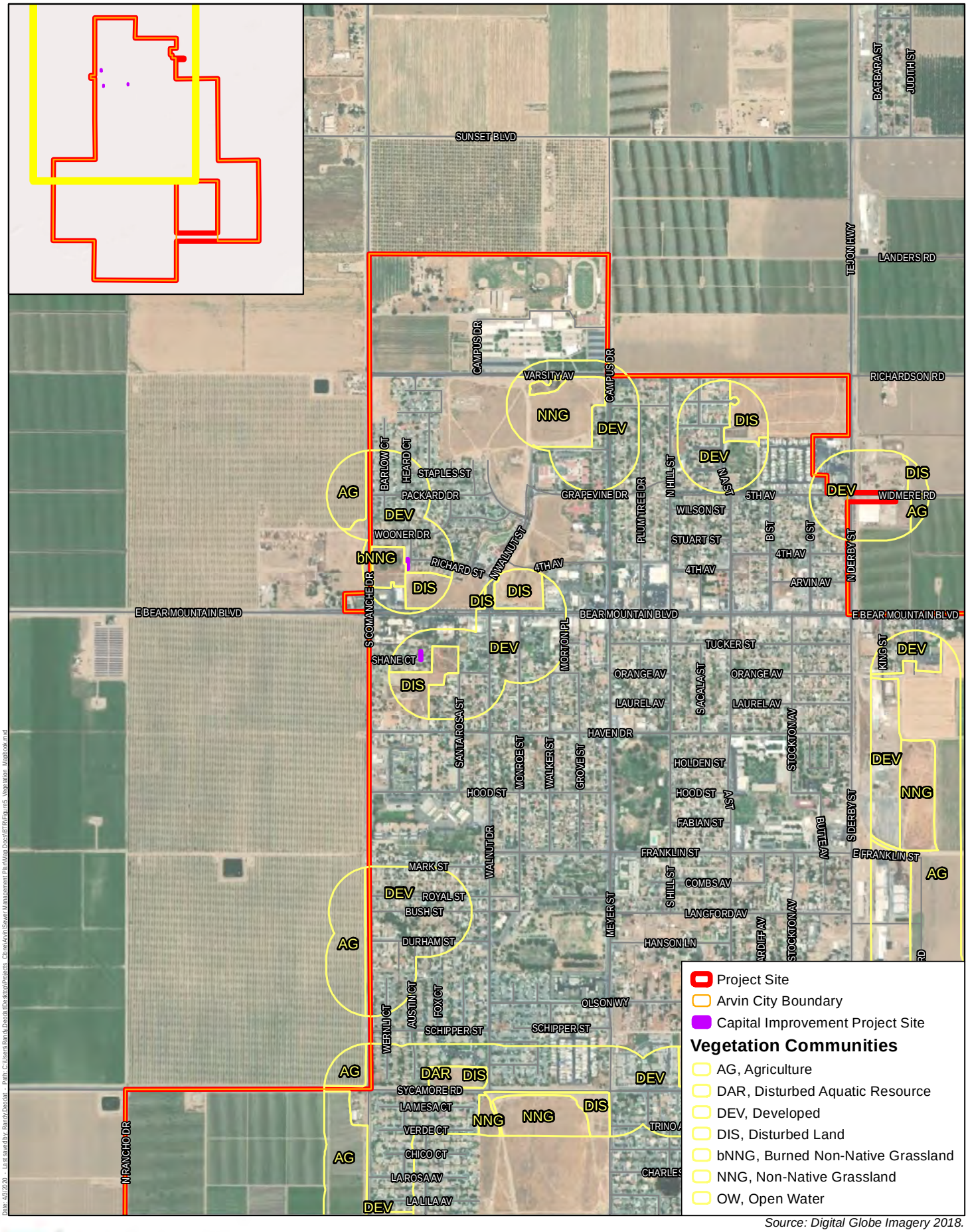
Feet
Harris & Associates
Figure 5f
Potato-Sycamore CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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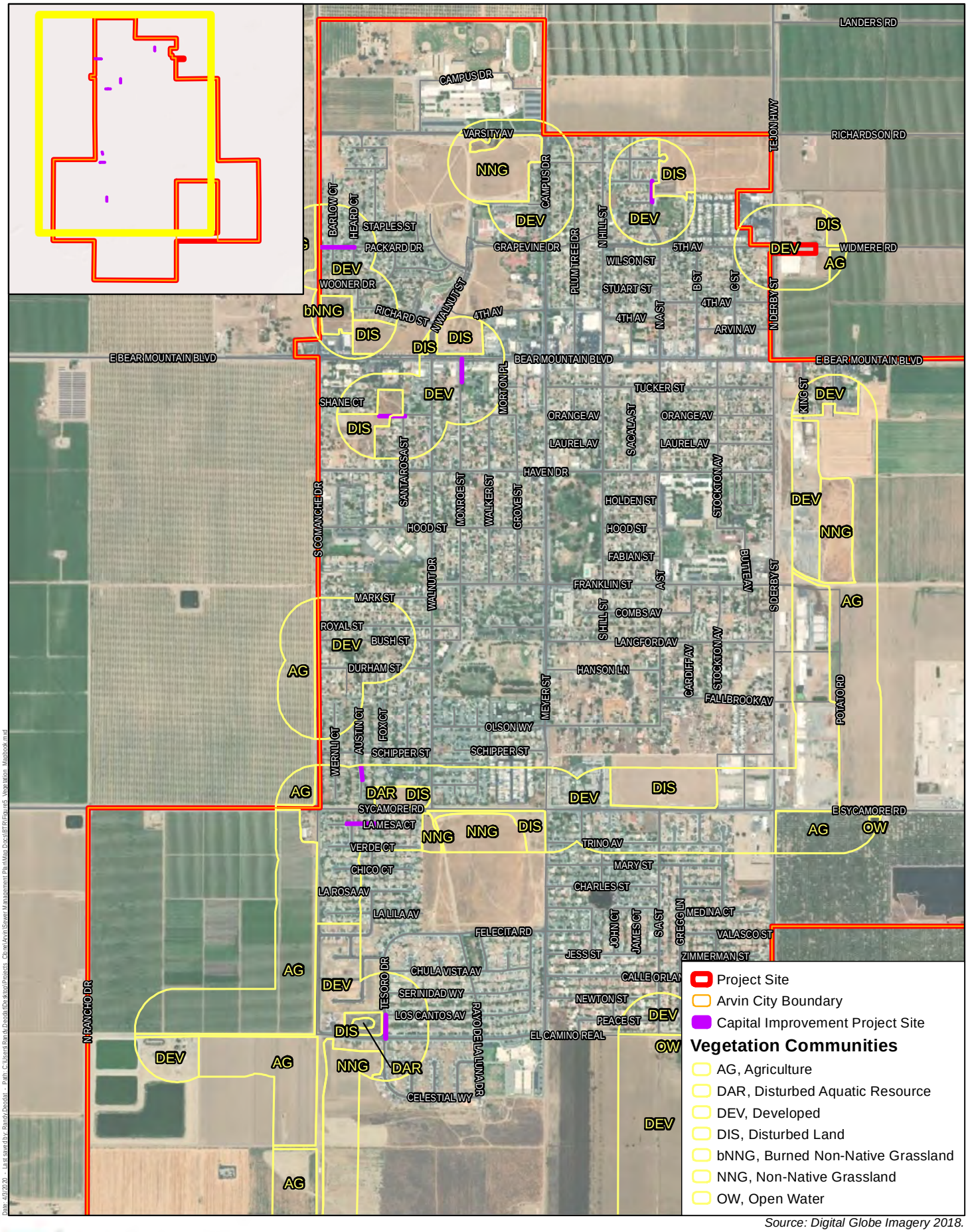
Feet

**Figure 5g**

Small Pipeline Replacement CIP




Source: Digital Globe Imagery 2018.

Harris & Associates

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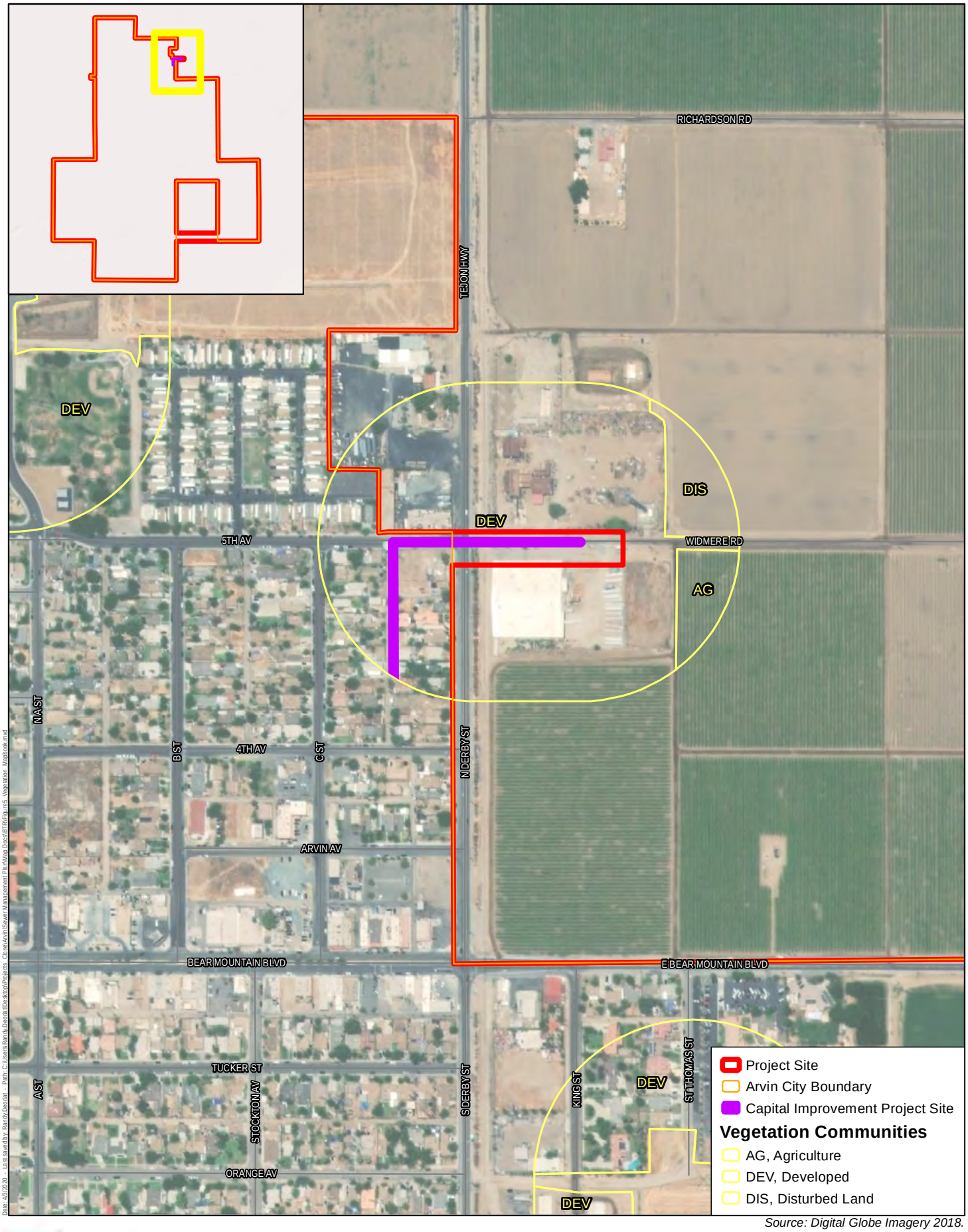
0 300 600

Feet

**Figure 5h**

Small Spot Repair CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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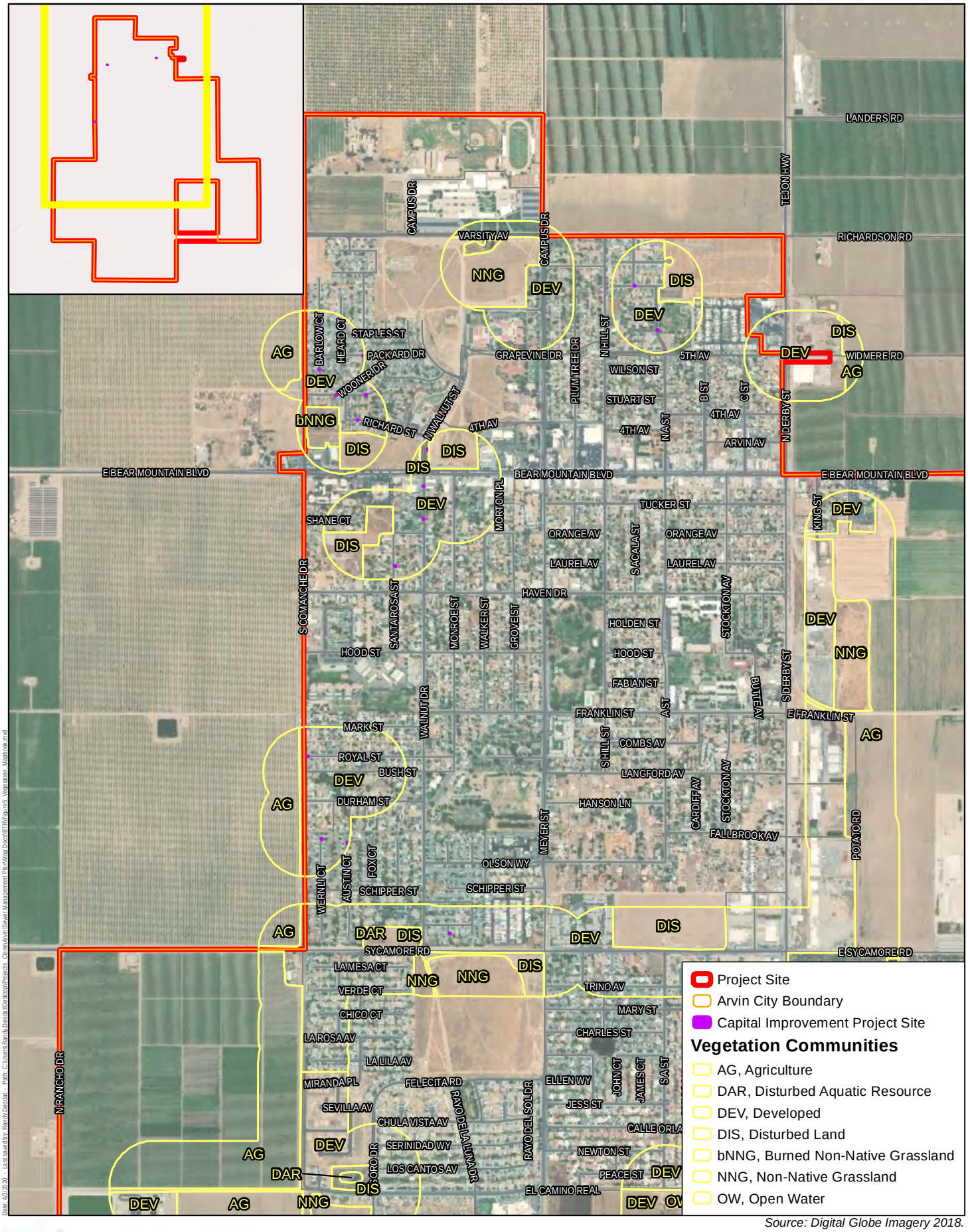
0 300 600

Feet

**Figure 5i**

Southeast Kovacevich Park CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

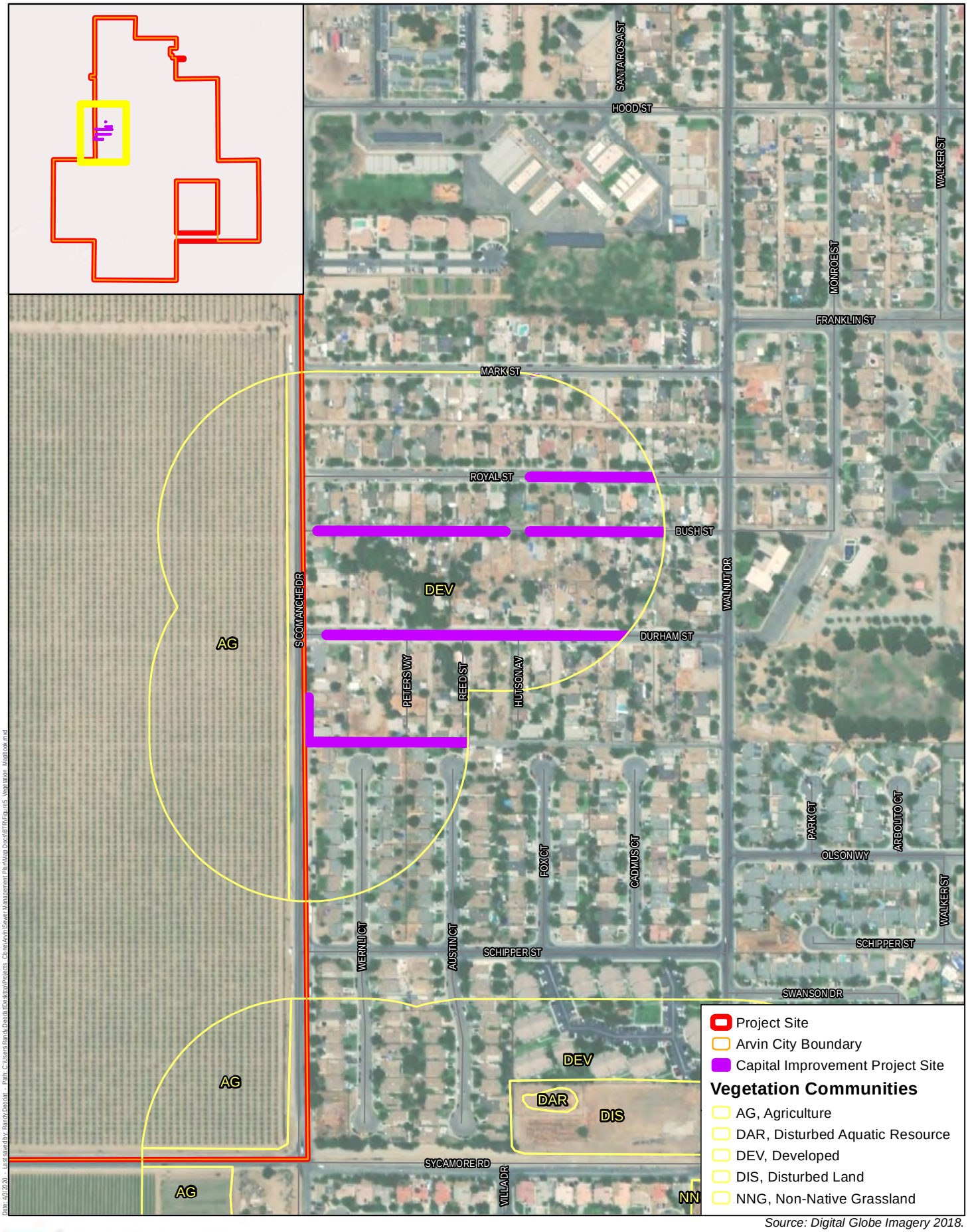
N

0 300 600

Feet

**Figure 5j**

Stand-Alone Manhole Repair and Replacement CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

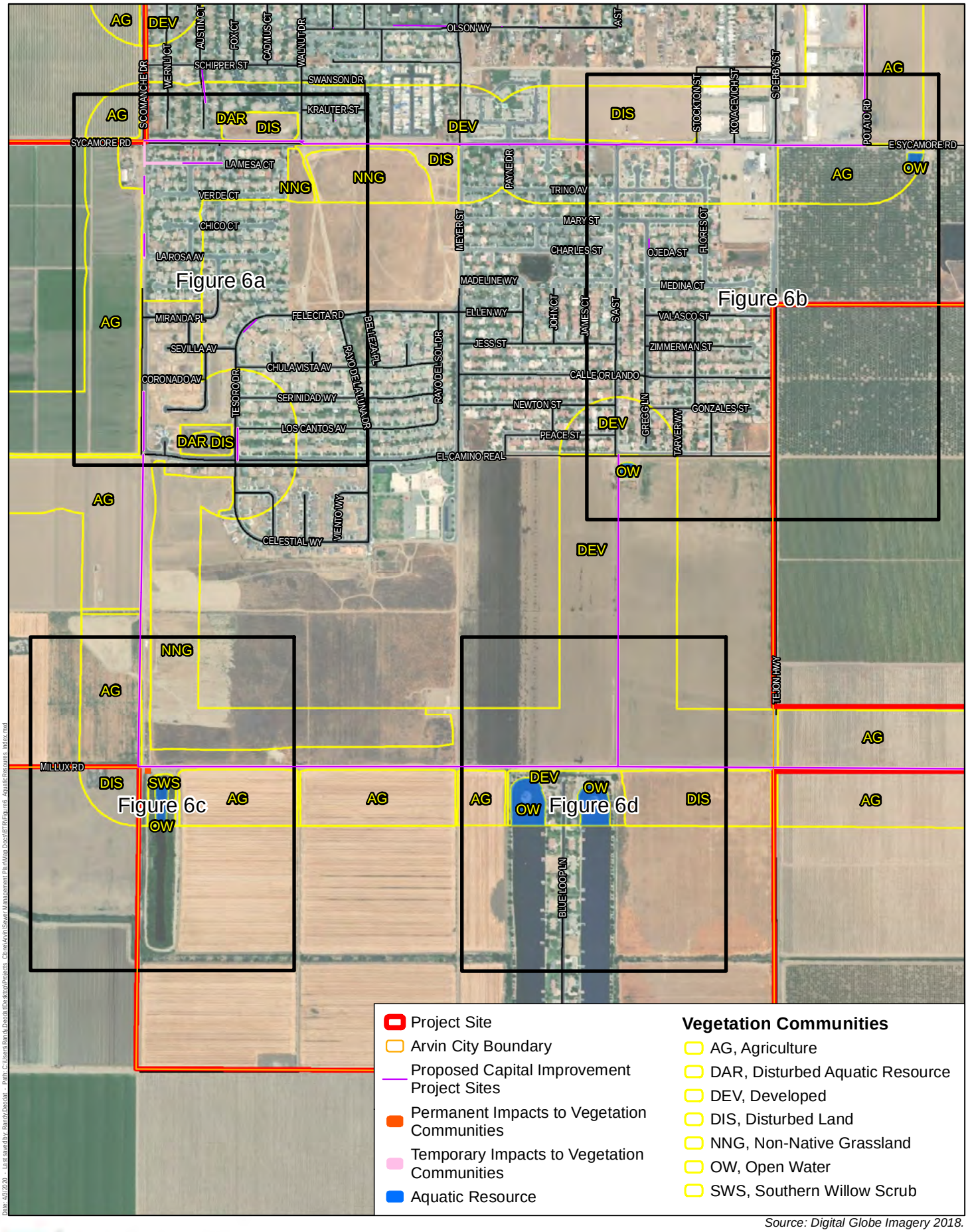
N

0 300 600

Feet

**Figure 5k**

West Smothermon Park CIP




*Source: Digital Globe Imagery 2018.*

Harris & Associates

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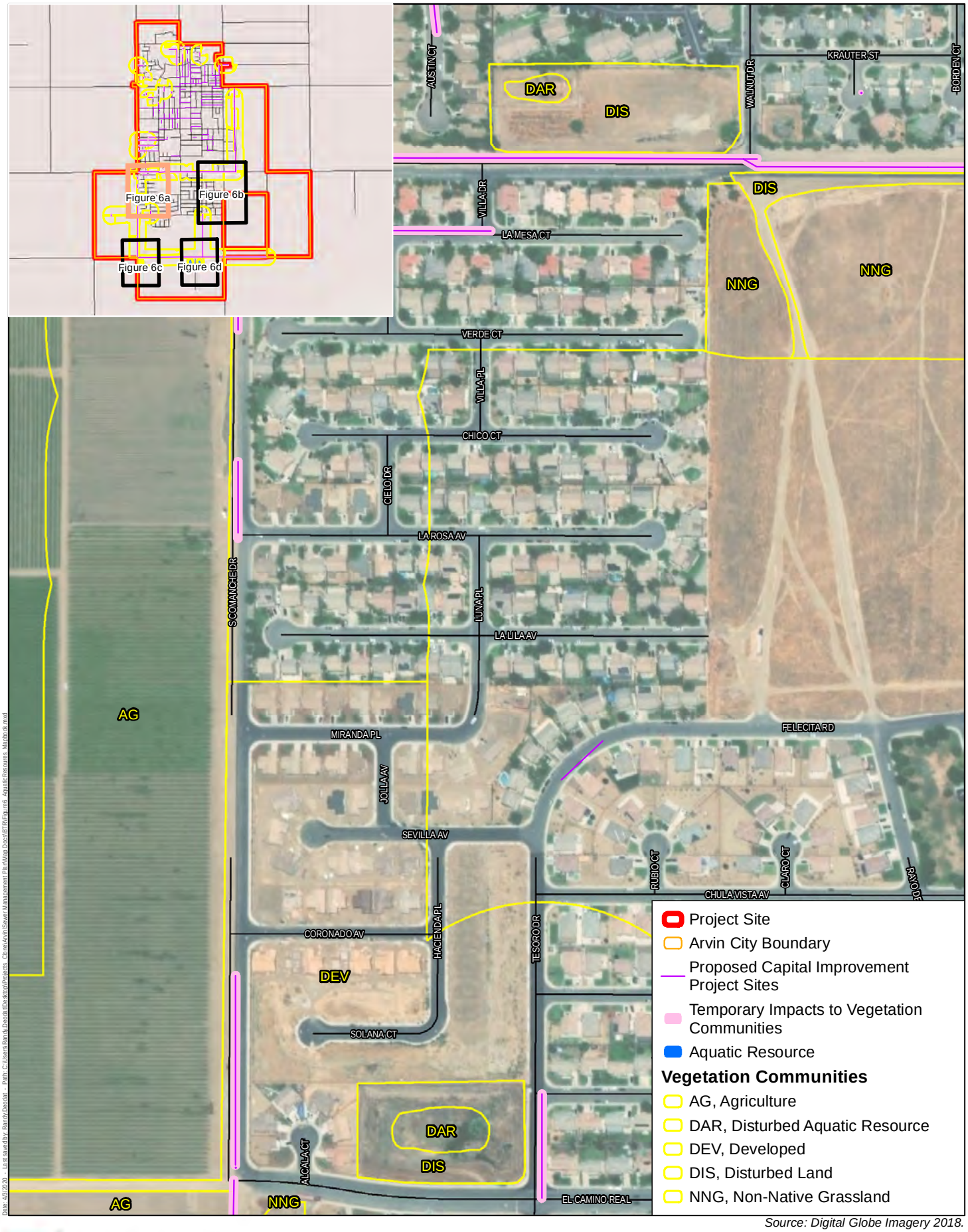
Feet

# Figure 6

Aquatic Resources - Index




*Source: Digital Globe Imagery 2018.*

Harris & Associates

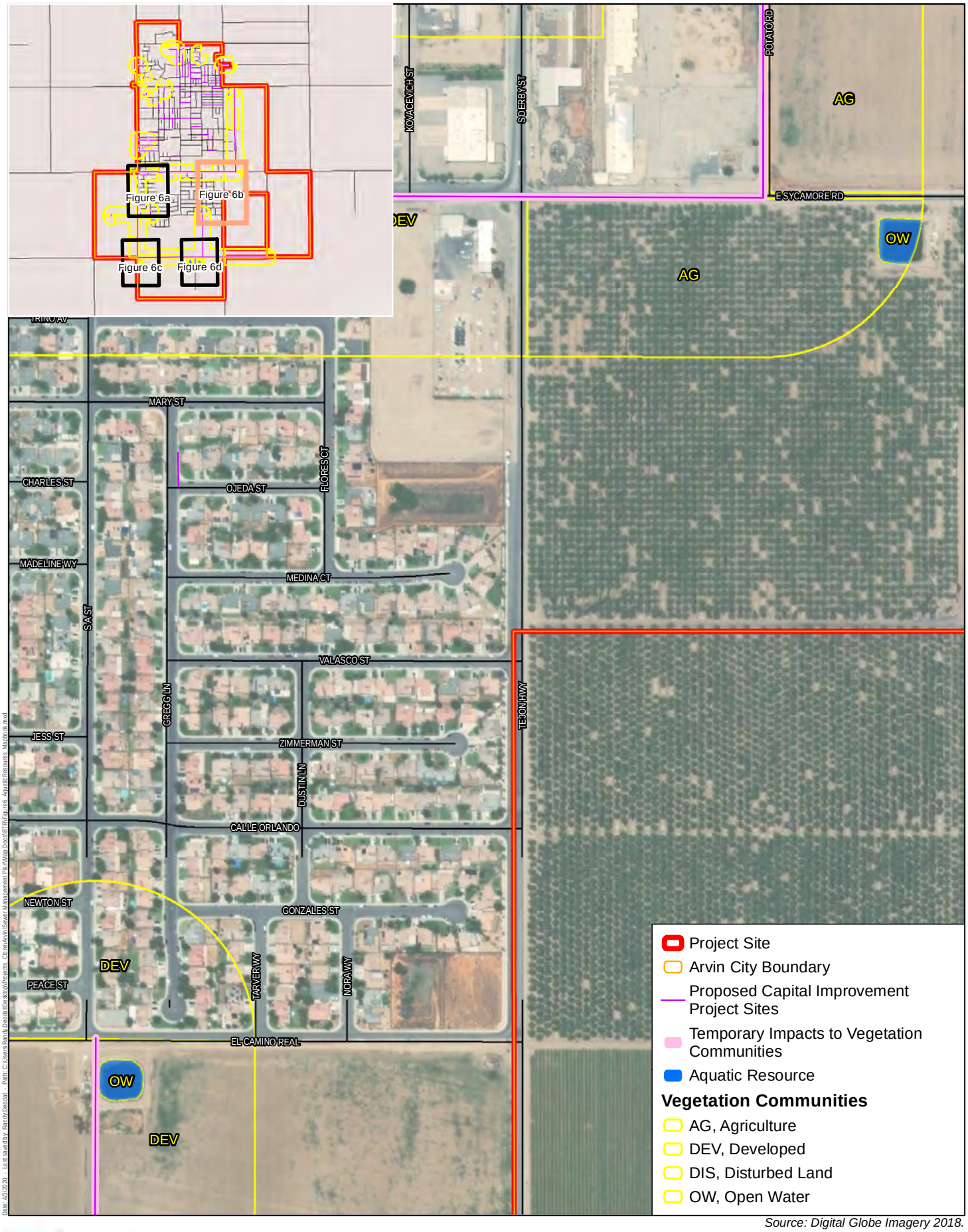
N

0 200 400

Feet

**Figure 6a**

Aquatic Resources




*Source: Digital Globe Imagery 2018.*

Harris & Associates

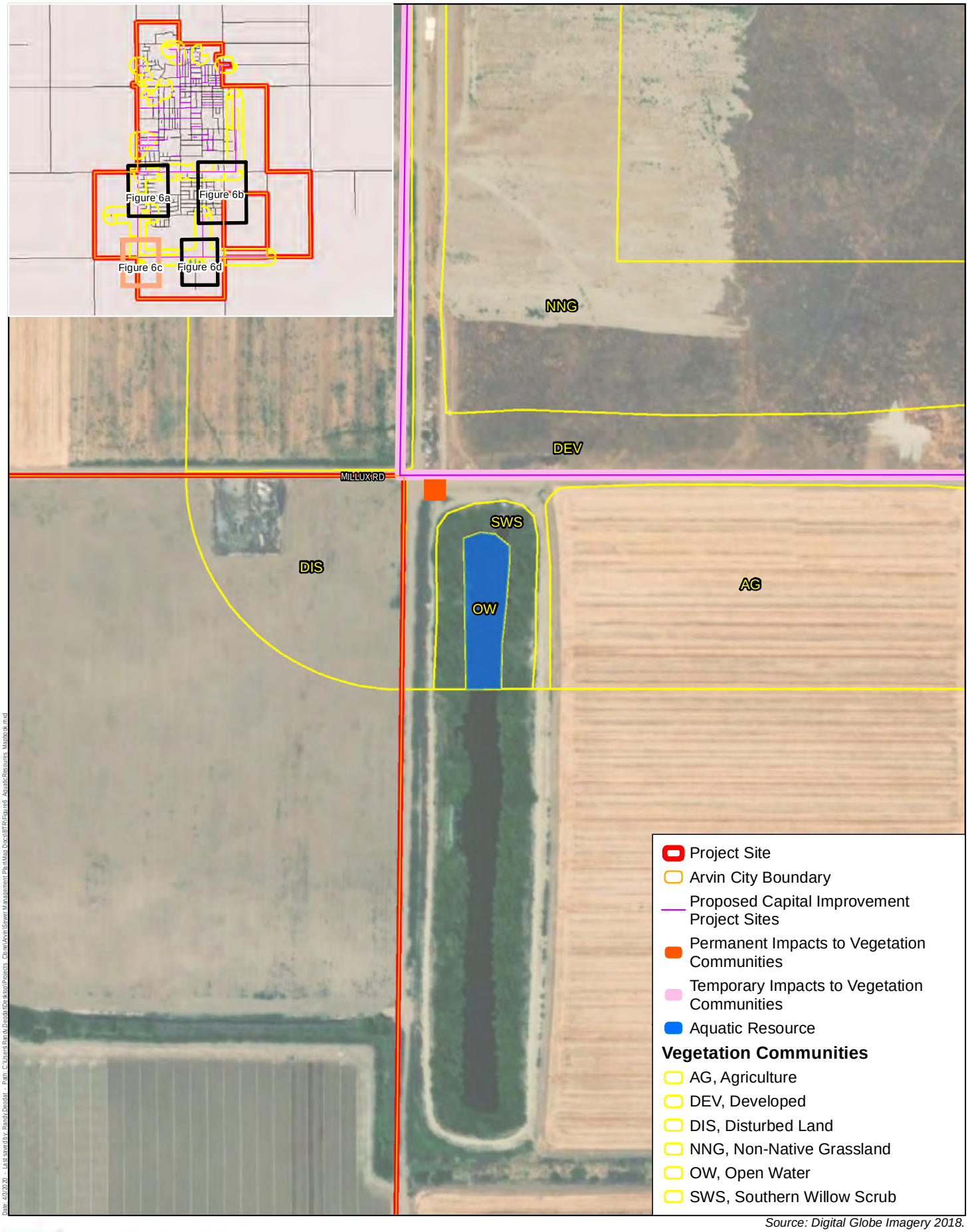
N

0 200 400

Feet

# Figure 6b

Aquatic Resources




*Source: Digital Globe Imagery 2018.*

Harris & Associates

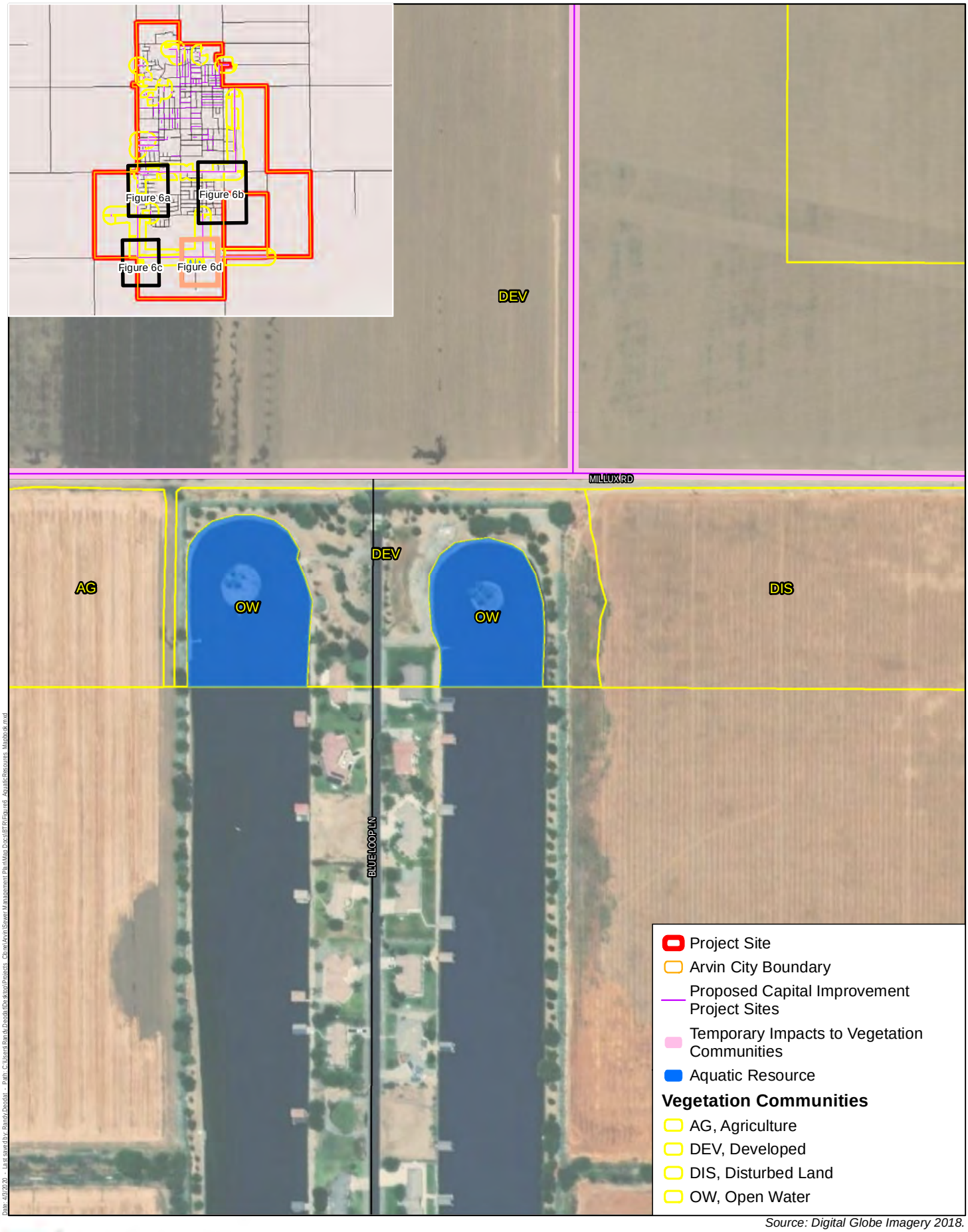
N

0 200 400

Feet

**Figure 6c**

Aquatic Resources




*Source: Digital Globe Imagery 2018.*

Harris & Associates

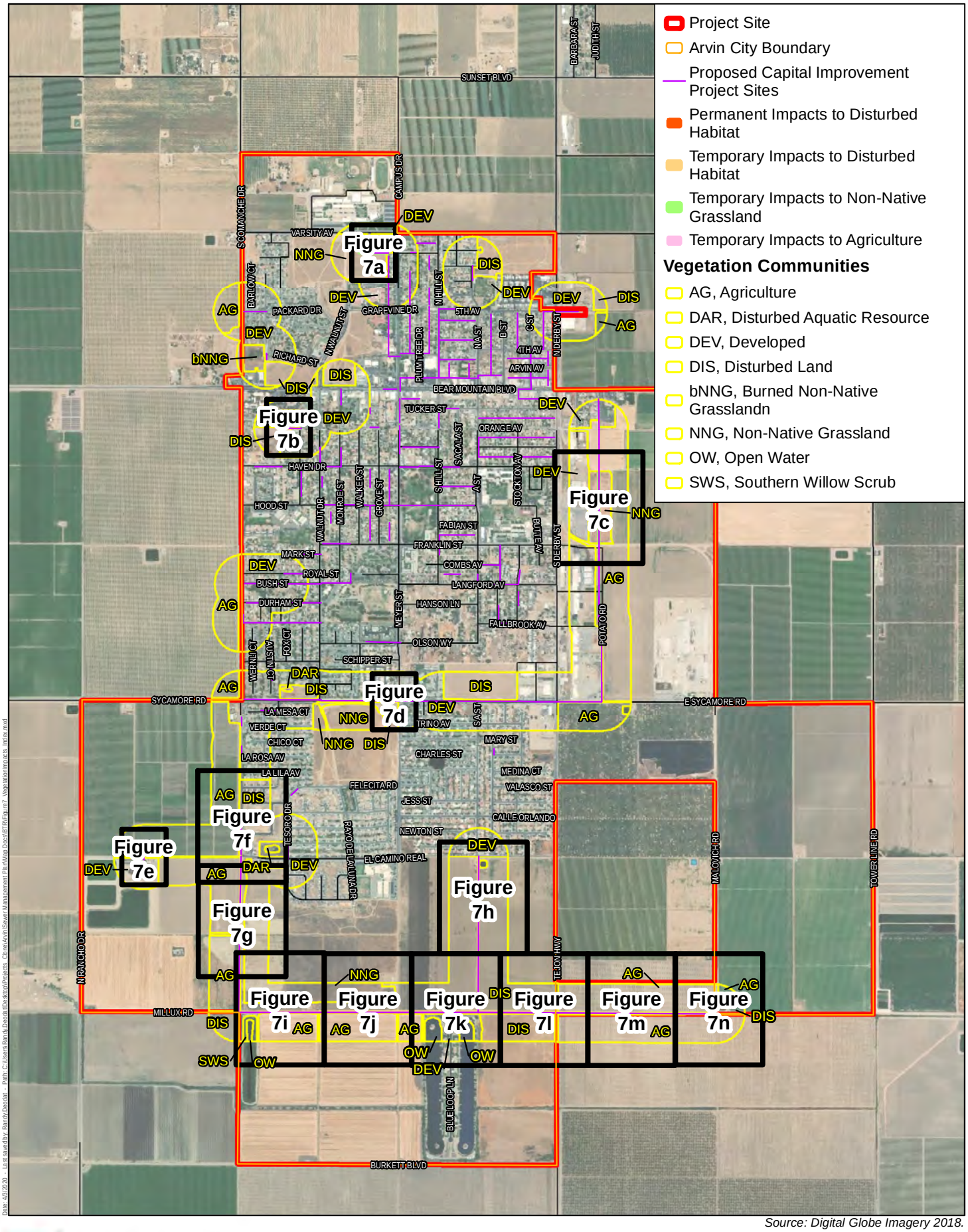
N

0 200 400

Feet

# Figure 6d

Aquatic Resources




Source: Digital Globe Imagery 2018.

Harris & Associates

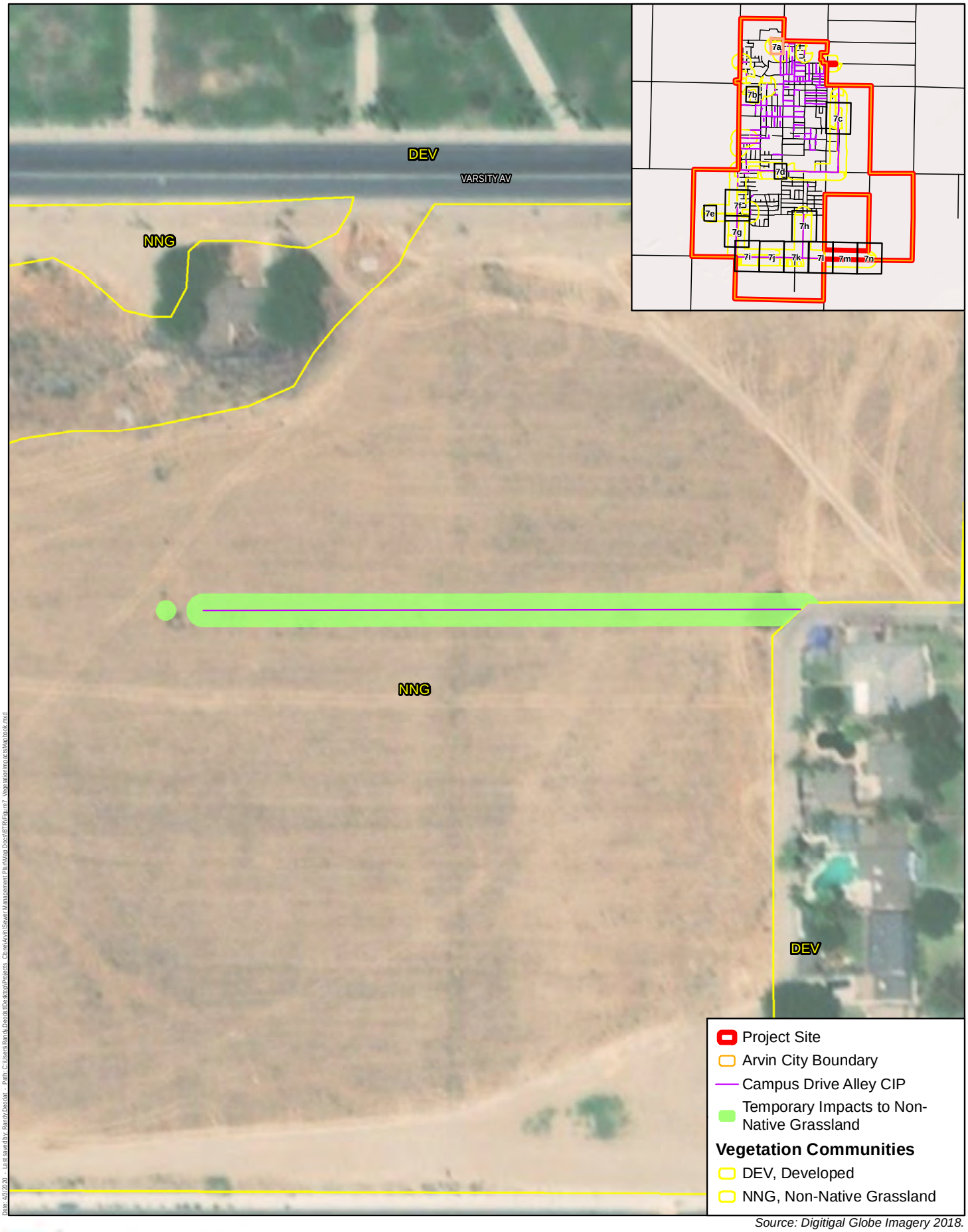
N

0 1,000 2,000

Feet

**Figure 7**

Impacts to Vegetation Communities - Index




*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

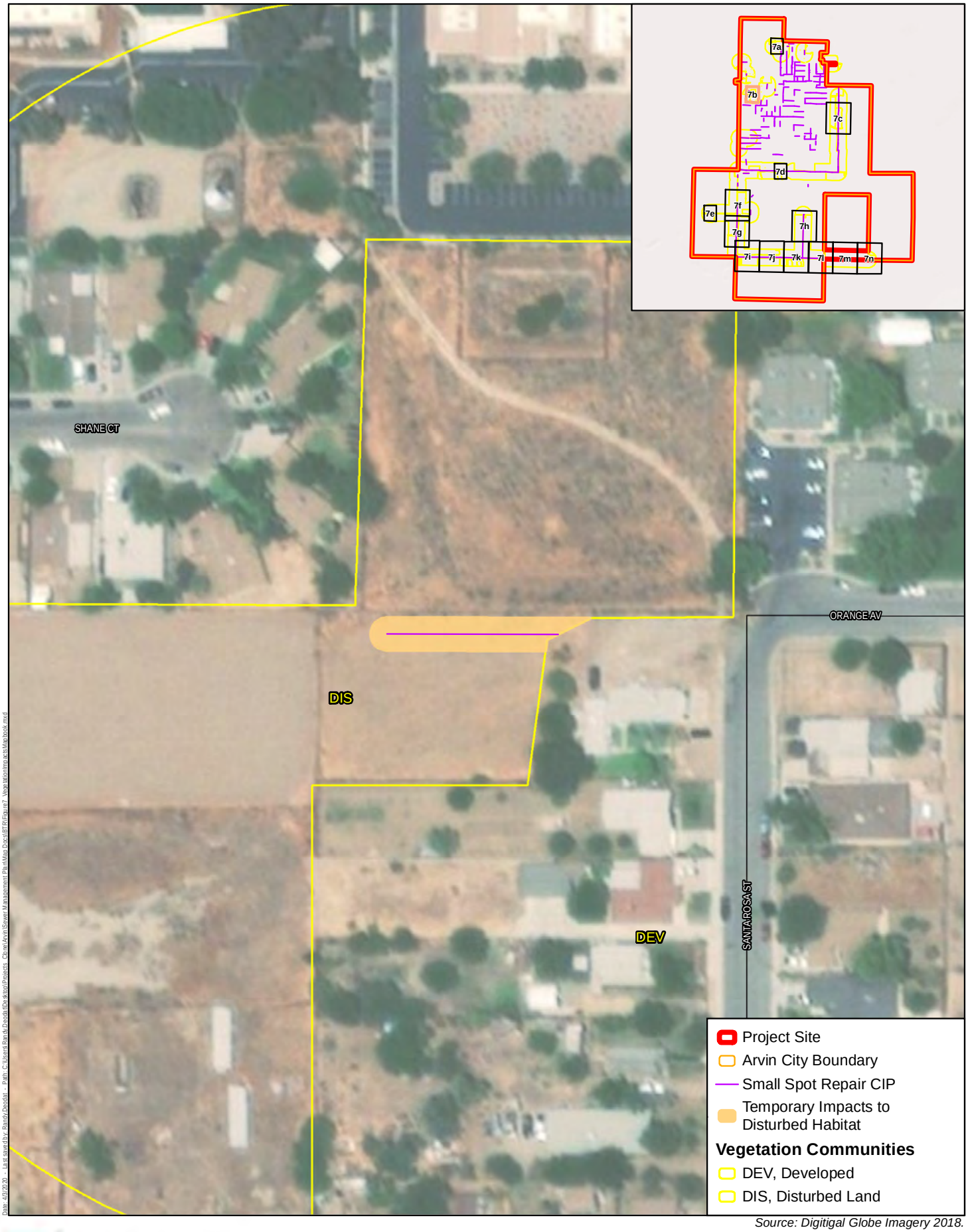
N

0 50 100

Feet

# Figure 7a

Impacts to Vegetation Communities
Campus Drive Alley




*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

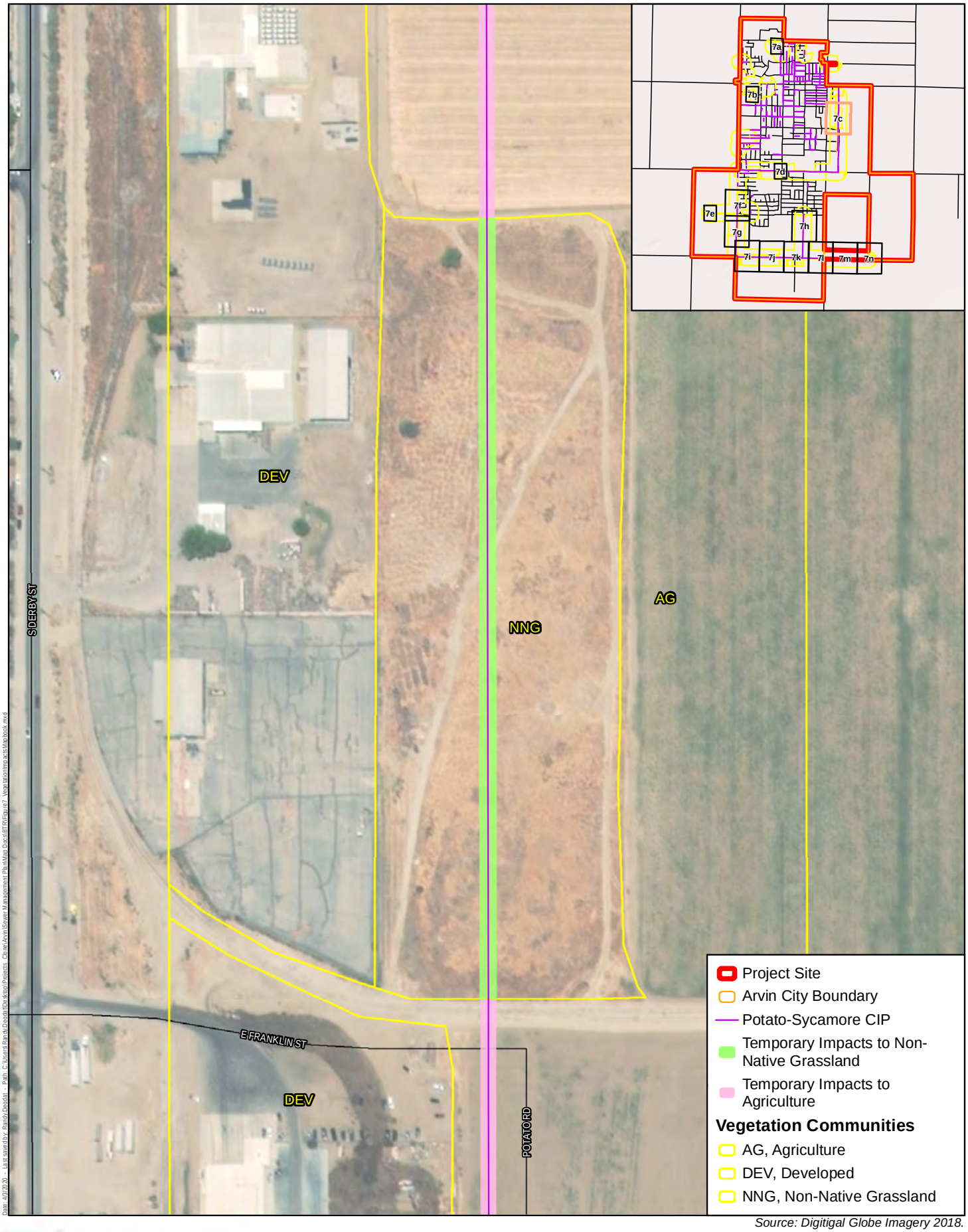
N

0 50 100

Feet

# Figure 7b

Impacts to Vegetation Communities
Small Spot Repair




*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

N

0 50 100

Feet

# Figure 7c

Impacts to Vegetation Communities
Potato-Sycamore


*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

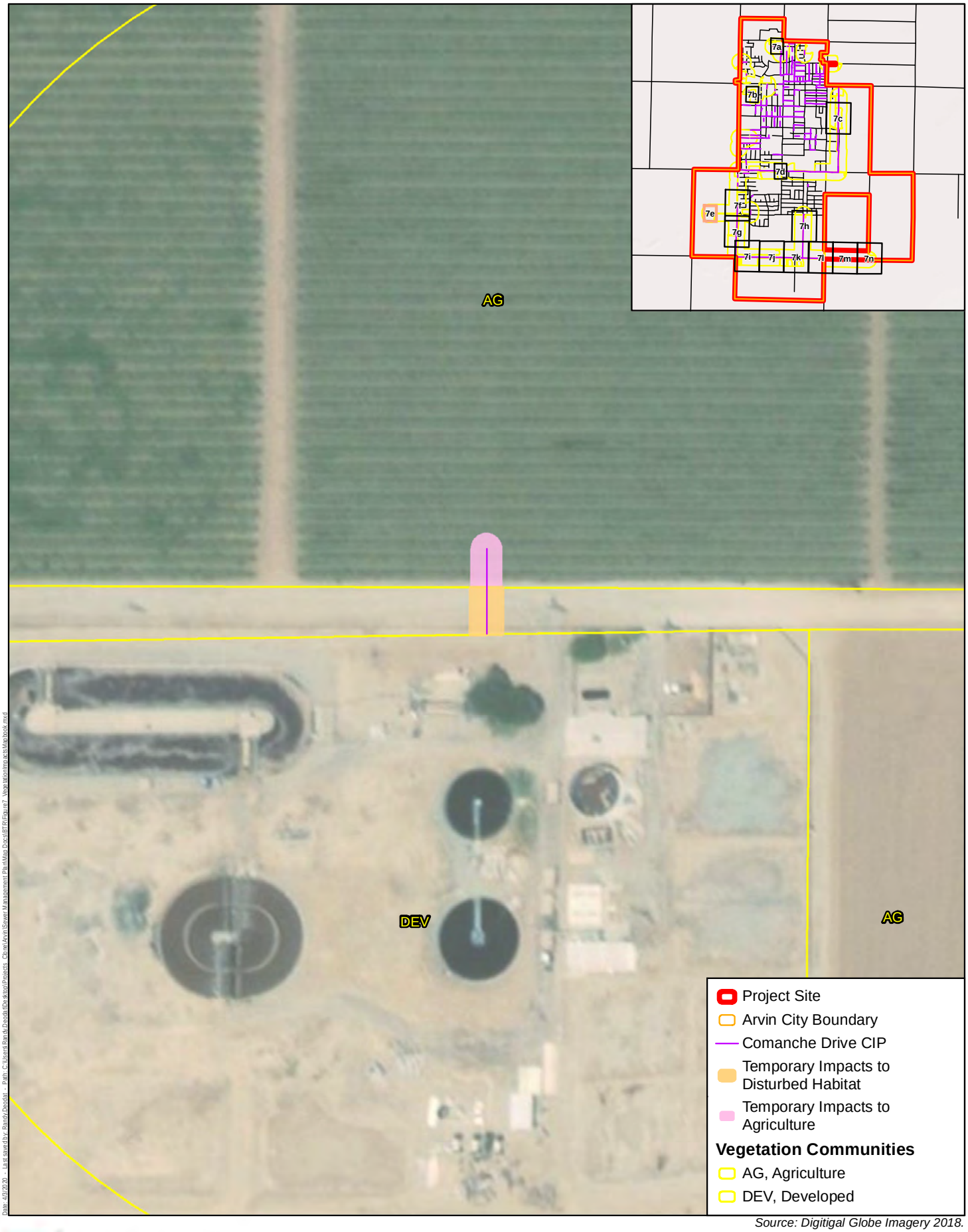
N

0 50 100

Feet

# Figure 7d

Impacts to Vegetation Communities
Potato-Sycamore




*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

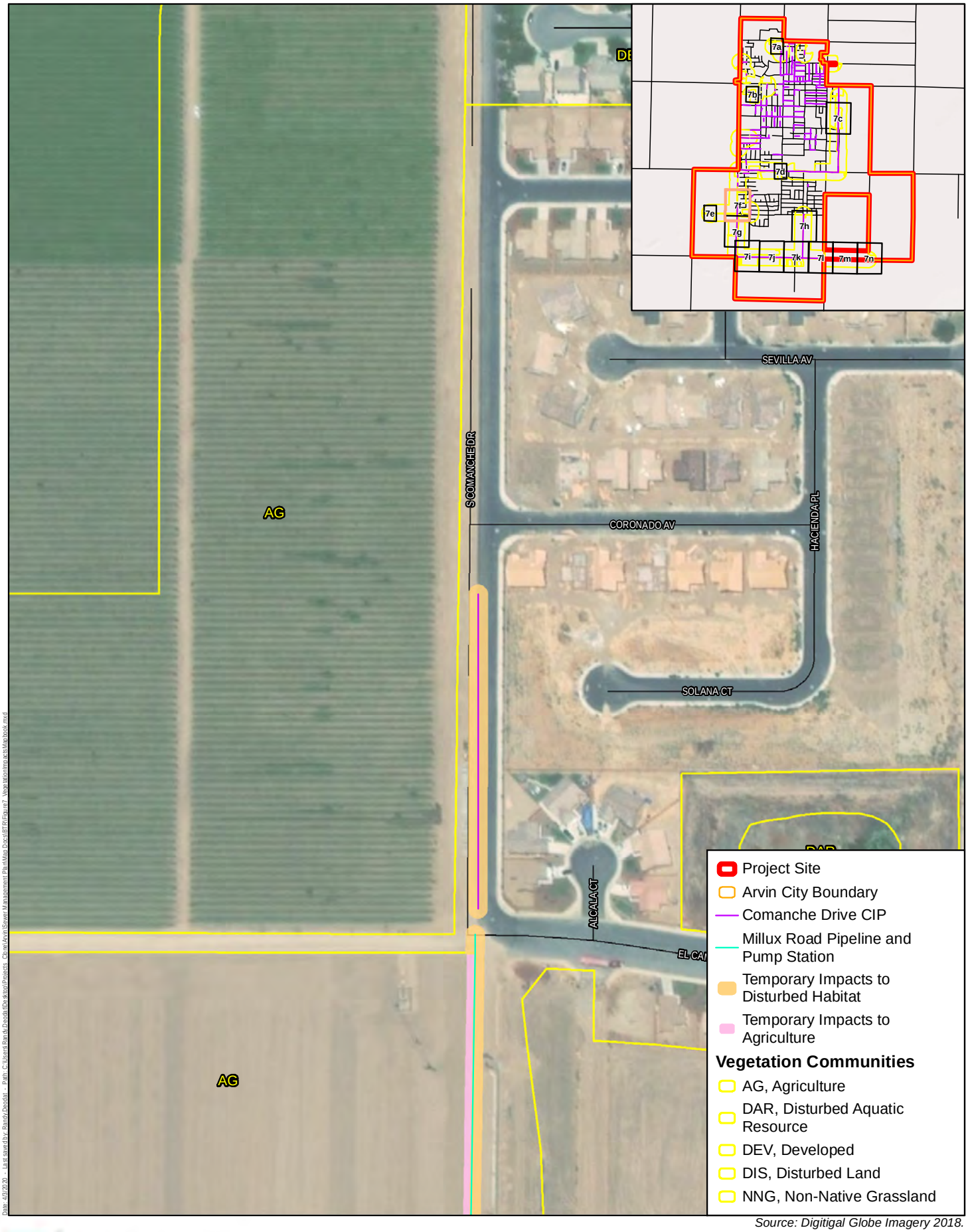
N

0 50 100

Feet

# Figure 7e

Impacts to Vegetation Communities
Comanche Drive




*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

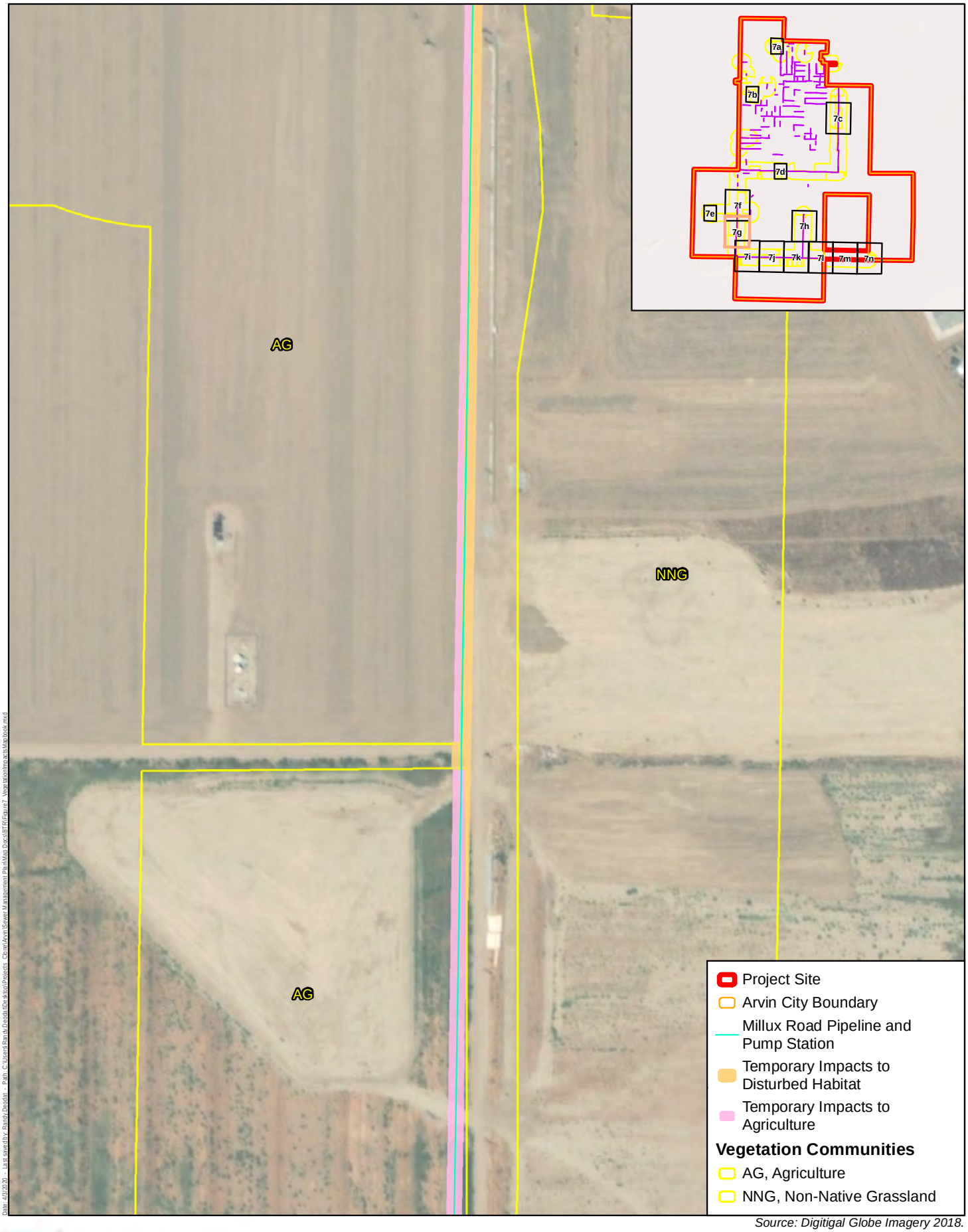
N

0 50 100

Feet

# Figure 7f

Impacts to Vegetation Communities
Comanche Drive and Millux Road Pipeline and Pump Station




Source: Digitigal Globe Imagery 2018.

Harris & Associates

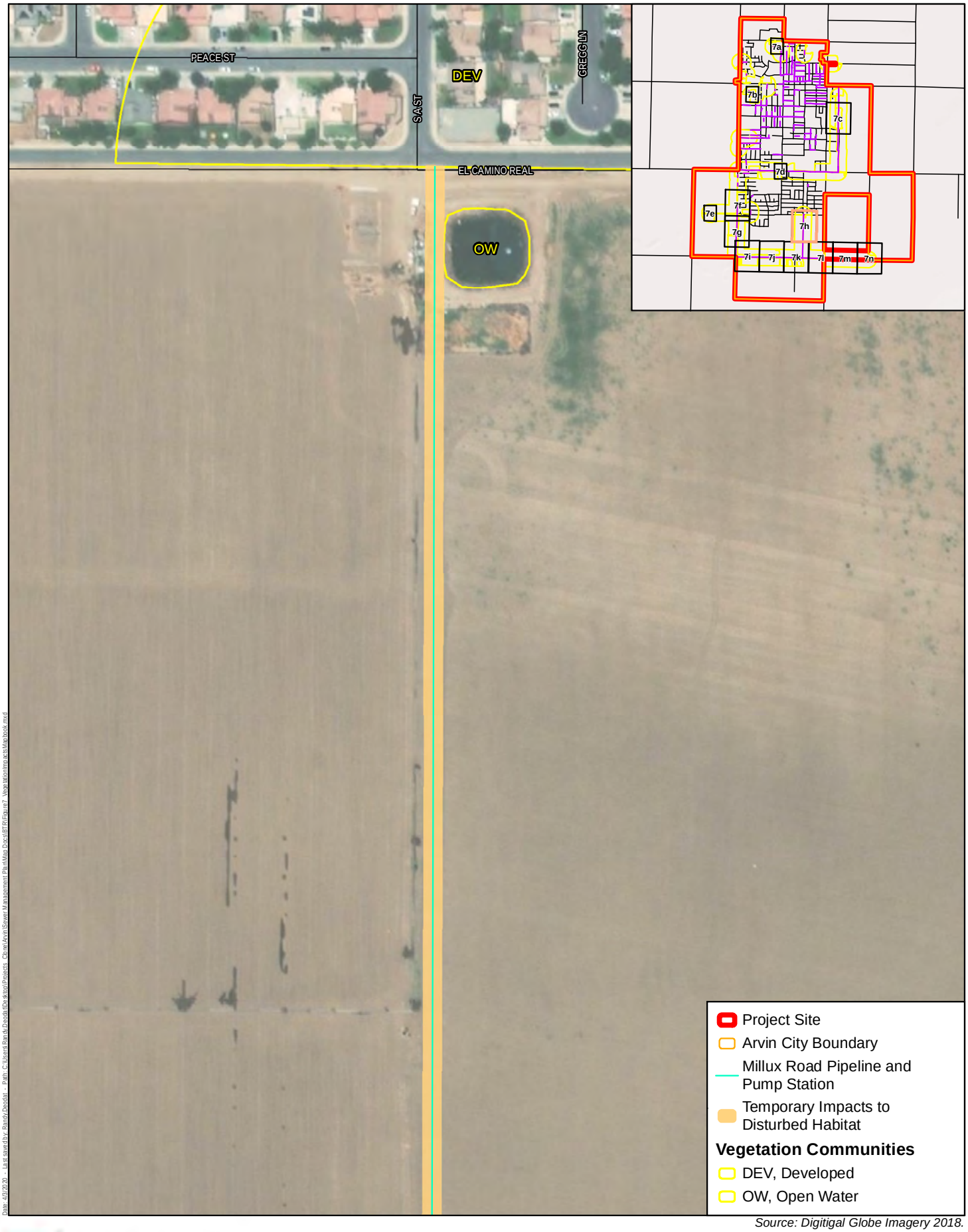
N

0 50 100

Feet

# Figure 7g

Impacts to Vegetation Communities
Millux Road Pipeline and Pump Station




*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

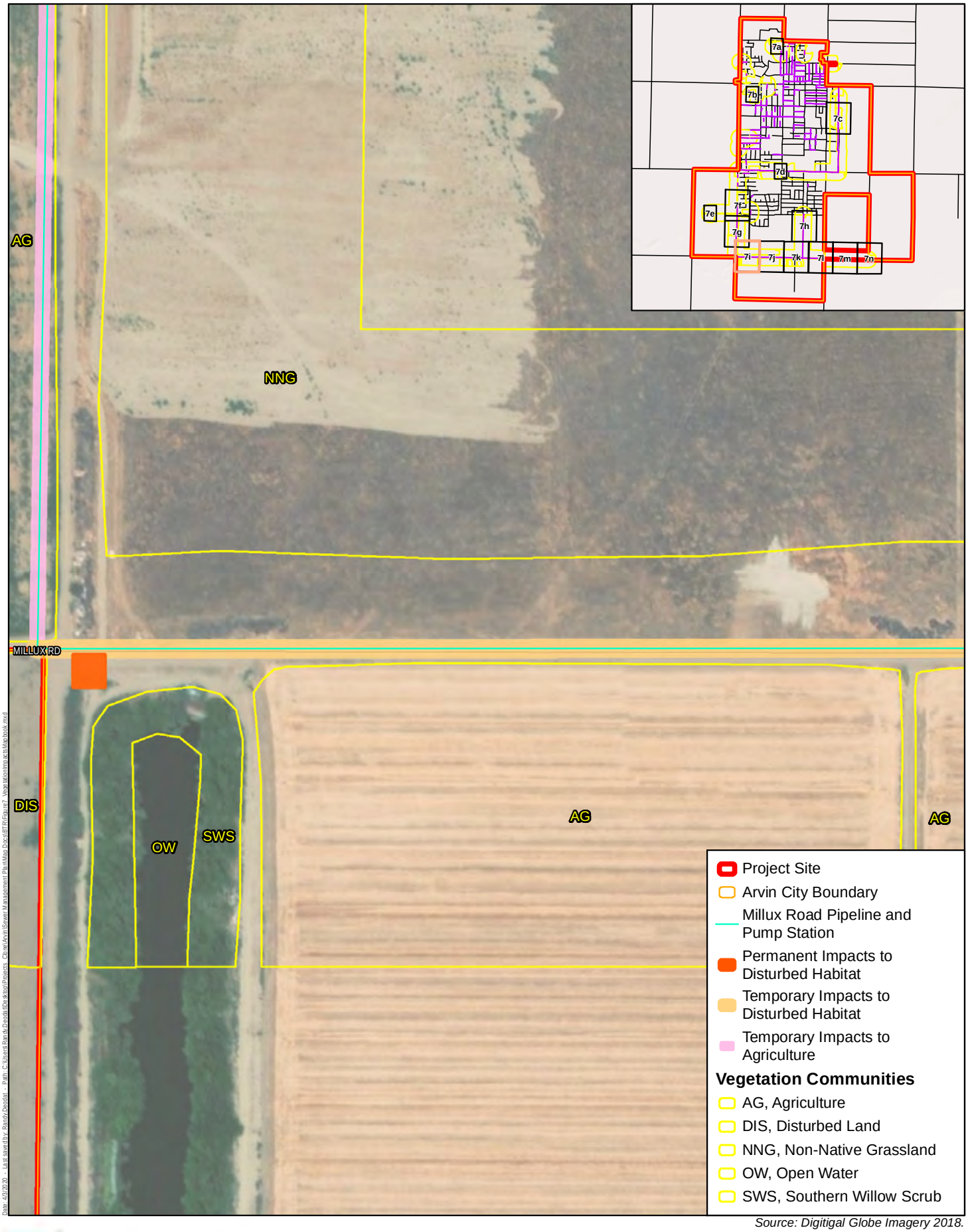
N

0 50 100

Feet

# Figure 7h

Impacts to Vegetation Communities
Millux Road Pipeline and Pump Station




*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

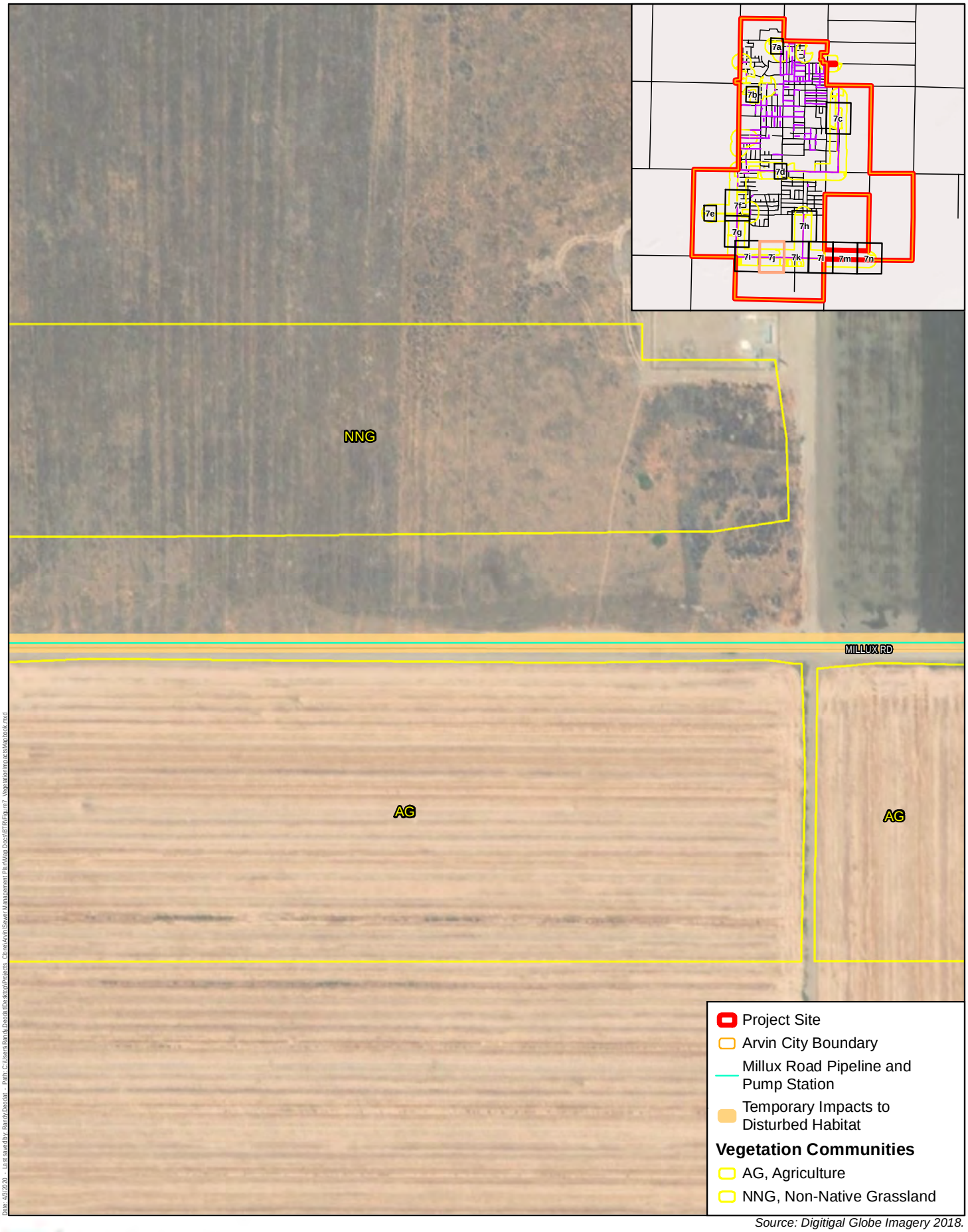
N

0 50 100

Feet

# Figure 7i

Impacts to Vegetation Communities
Millux Road Pipeline and Pump Station




Source: Digitigal Globe Imagery 2018.

Harris & Associates

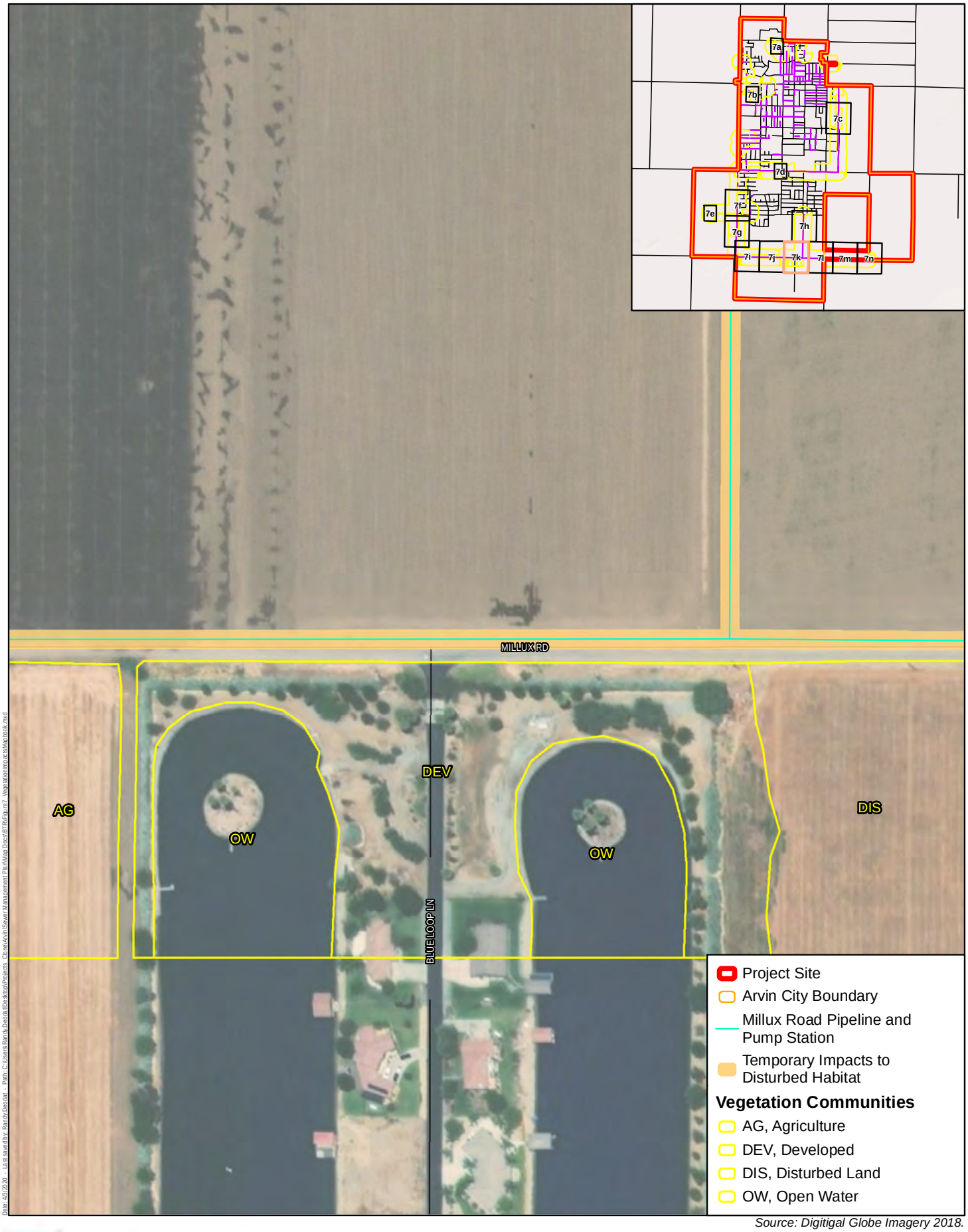
N

0 50 100

Feet

# Figure 7j

Impacts to Vegetation Communities
Millux Road Pipeline and Pump Station




*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

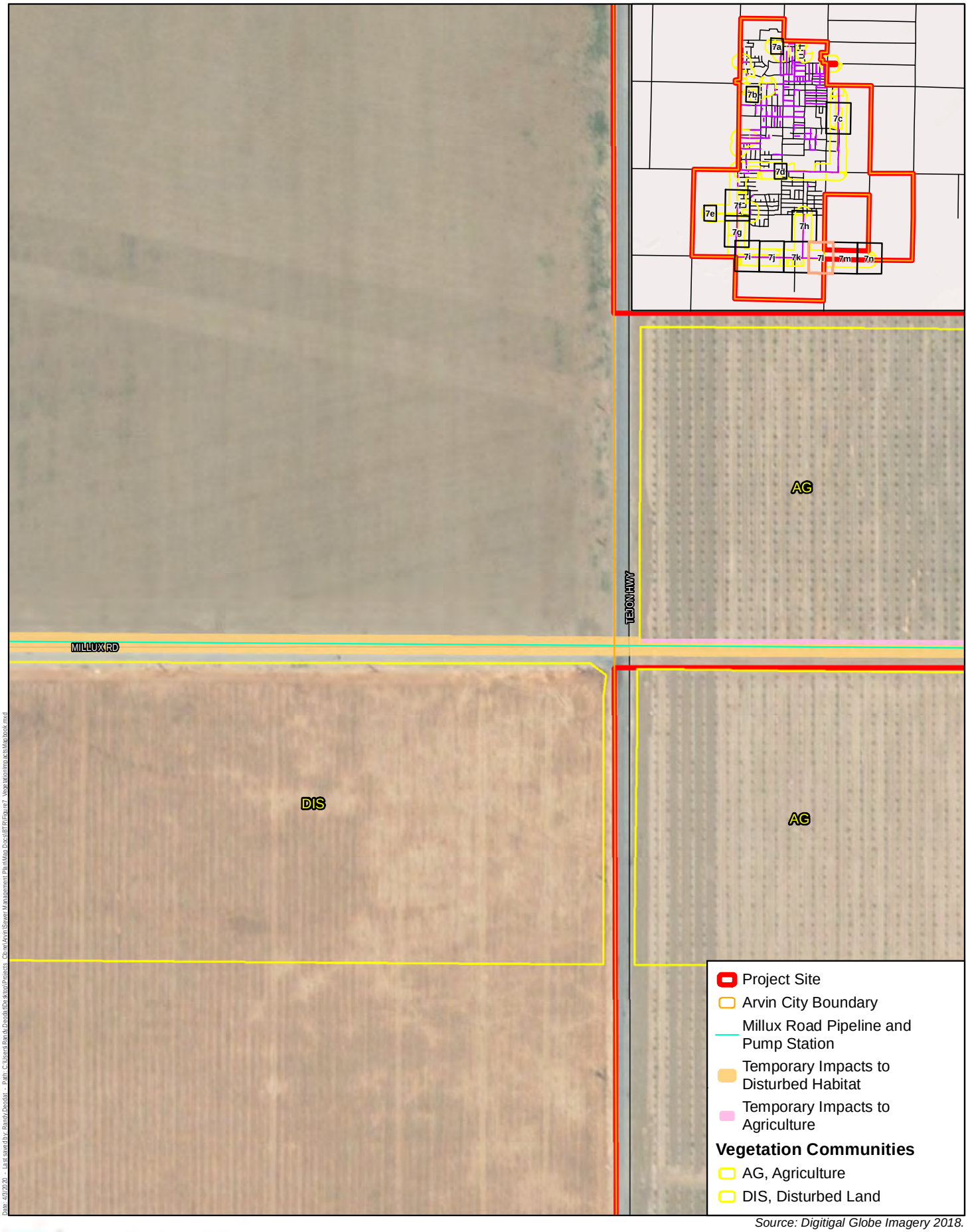
N

0 50 100

Feet

# Figure 7k

Impacts to Vegetation Communities
Millux Road Pipeline and Pump Station




*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

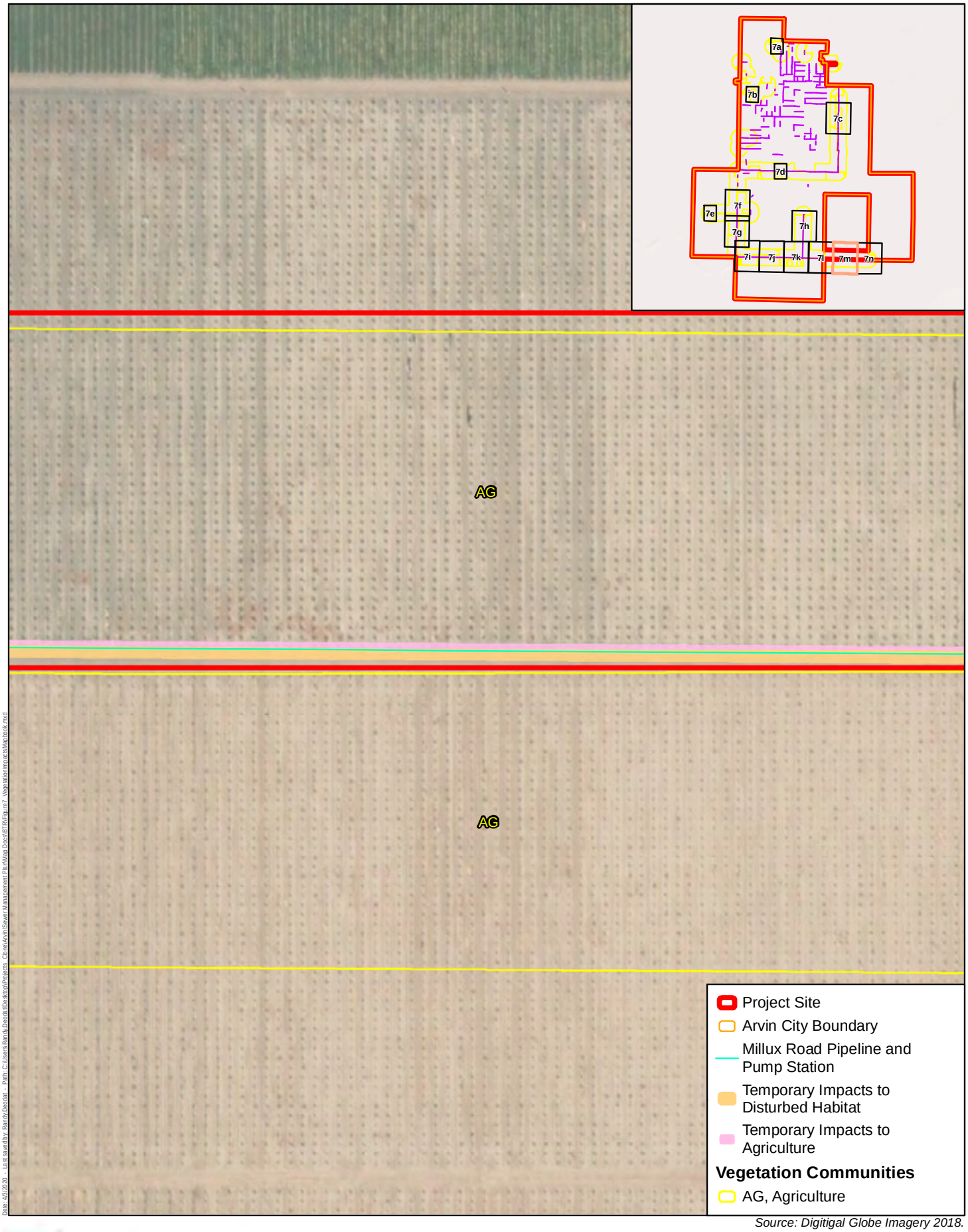
N

0 50 100

Feet

# Figure 7I

Impacts to Vegetation Communities
Millux Road Pipeline and Pump Station




*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

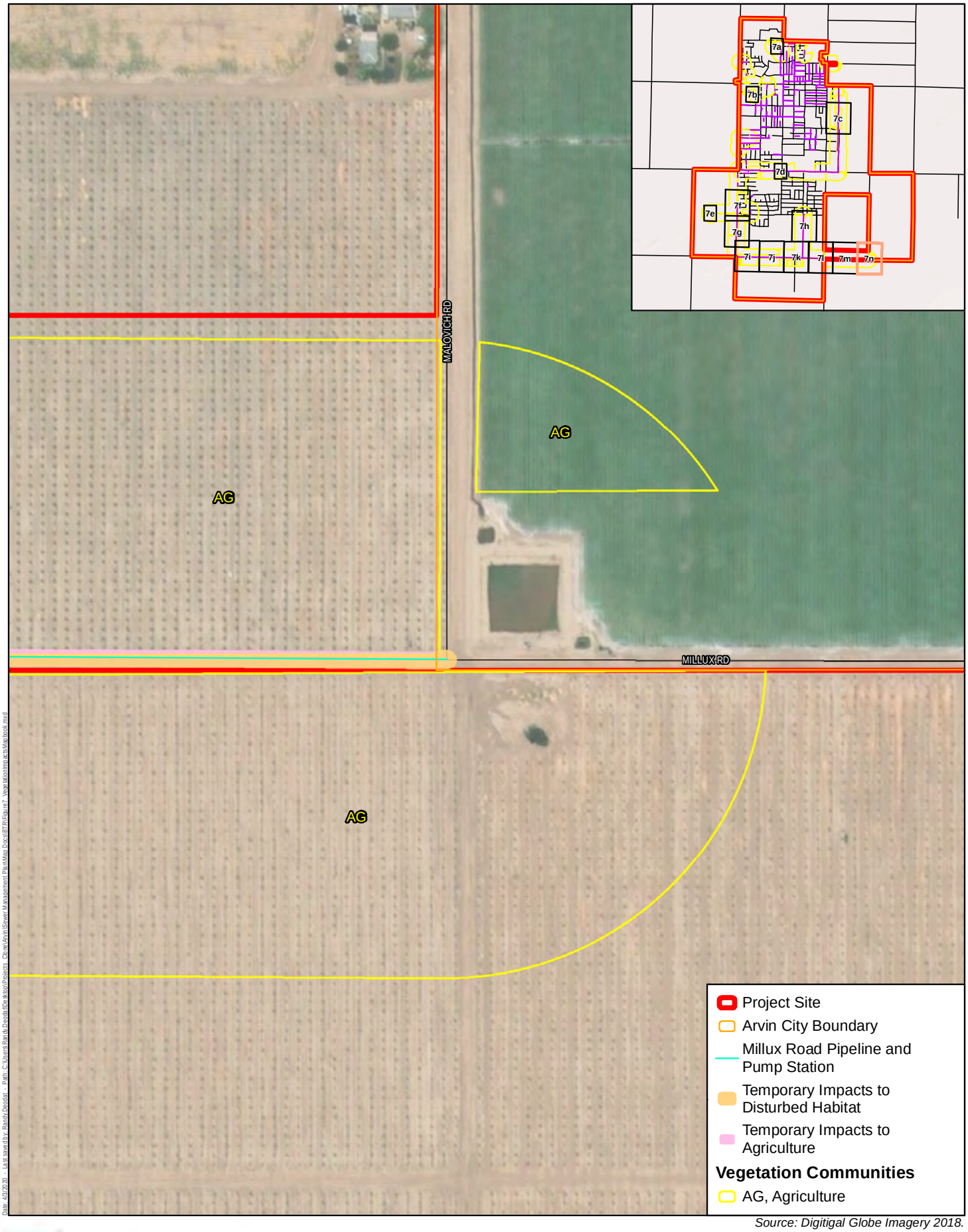
N

0 50 100

Feet

# Figure 7m

Impacts to Vegetation Communities
Millux Road Pipeline and Pump Station




*Source: Digitigal Globe Imagery 2018.*

Harris & Associates

N

0 50 100

Feet

# Figure 7n

Impacts to Vegetation Communities
Millux Road Pipeline and Pump Station

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# Attachment 2. Plant and Wildlife Species Observed

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## Plant Species Observed

| Scientific Name | Common Name |
|---|---|
| **Dicots** | |
| **Adoxaceae** | **Muskroot Family** |
| *Sambucus nigra* | Black elderberry |
| **Amaranthaceae** | **Amaranth Family** |
| *Amaranthus albus** | Tumbleweed |
| **Apocynaceae** | **Dogbane Family** |
| *Nerium oleander** | Oleander |
| **Asteraceae** | **Sunflower Family** |
| *Ambrosia psilostachya* | Western ragweed |
| *Artemisia douglasiana* | California mugwort |
| *Heterotheca grandiflora* | Telegraph weed |
| *Lactuca serriola** | Prickly lettuce |
| **Brassicaceae** | **Mustard Family** |
| *Brassica nigra** | Black mustard |
| **Chenopodiacaceae** | **Chenopod Family** |
| *Salsola tragus** | Russian thistle |
| **Salicaceae** | **Willow Family** |
| *Salix laevigata* | Red willow |
| *Salix lasiolepis* | Arroyo willow |
| **Strelitziaceae** | **Bird of Paradise Family** |
| *Strelitzia reginae** | Bird of paradise |
| **Tamaricaceae** | **Tamarisk Family** |
| *Tamarix ramosissima** | Salt cedar |
| **Monocots** | |
| **Arecaceae** | **Palm Family** |
| *Washingtonia robusta** | Mexican fan palm |
| **Cyperaceae** | **Sedge Family** |
| *Carex* sp. | Sedge |
| *Eleocharis* sp. | Spike rush |
| **Poaceae** | **Grass Family** |
| *Avena barbata** | Slender wild oat |
| *Avena fatua** | Wild oat |
| *Bromus diandrus** | Ripgut grass |
| *Bromus hordeaceus** | Soft chess |
| **Typhaceae** | **Cattail Family** |
| *Typha angustifolia** | Narrowleaf cattail |

**Notes:**

* = Non-native

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## Wildlife Species Observed

| Family | Common Name | Scientific Name |
|---|---|---|
| **Amphibians** | | |
| **Anura (Frogs)** | | |
| ***Ranidae*** True Frogs | American bullfrog[1] | *Lithobates catesbeianus* |
| **Birds** | | |
| **Accipitriformes (Hawks, Kites, Eagles, and Allies)** | | |
| ***Accipitridae*** Hawks, Eagles, Kites, and Allies | Northern harrier[2] | *Circus hudsonius* |
| | Red-tailed hawk | *Buteo jamaicensis* |
| ***Cathartidae*** New World Vultures | Turkey vulture | *Cathartes aura* |
| **Falconiformes (Caracaras and Falcons)** | | |
| ***Falconidae*** Caracaras and Falcons | American kestrel | *Falco sparverius* |
| **Anseriformes (Ducks, Geese, and Swans)** | | |
| ***Anatidae*** Ducks, Geese, and Swans | Mallard | *Anas platyrhynchos* |
| **Gruiformes (Coots, Cranes, Rails)** | | |
| ***Rallidae*** Rails, Gallinules, and Coots | American coot | *Fulica americana* |
| **Charadriiformes (Shore Birds, Gulls, Alcids, Plovers, and Oystercatchers)** | | |
| ***Charadriidae*** Plovers and Lapwings | Killdeer | *Charadrius vociferus* |
| **Passeriformes (Perching Birds)** | | |
| ***Columbiformidae*** Doves | Mourning dove | *Zenaida macroura* |
| | Rock pigeon[1] | *Columba livia* |
| ***Corvidae*** Jays, Magpies, and Crows | American crow | *Corvus brachyrhynchos* |
| | Common raven | *Corvus corax* |
| ***Fringillidae*** Finches | House finch | *Haemorhous mexicanus* |
| ***Mimidae*** Mockingbirds and Thrashers | Northern mockingbird | *Mimus polyglottos* |
| ***Passerellidae*** New World Sparrows | Song sparrow | *Melospiza melodia* |
| | White-crowned sparrow | *Zonotrichia leucophrys* |
| ***Tyrannidae*** Tyrant Flycatchers | Black phoebe | *Sayornis nigricans* |
| | Say's phoebe | *Sayornis saya* |
| | Western kingbird | *Tyrannus verticalis* |
| ***Icteridae*** American Blackbirds, Orioles, and New World Blackbirds | Brewer's blackbird | *Euphagus cyanocephalus* |
| | Western meadowlark | *Sturnella neglecta* |

## Wildlife Species Observed

| Family | Common Name | Scientific Name |
|---|---|---|
| ***Parulidae*** Wood Warblers | Yellow warbler[2] | *Setophaga petechia brewsteri* |
| ***Sturnidae*** Songbirds | European starling[1] | *Sturnus vulgaris* |
| **Mammals** | | |
| **Lagomorpha (Rabbits, Hares, and Pika)** | | |
| ***Leporidae*** Rabbits and Hares | Desert cottontail | *Sylvilagus audubonii* |
| **Rodentia (Rodents)** | | |
| ***Sciuridae*** Squirrels, Chipmunks, and Marmots | California ground squirrel | *Spermophilus beecheyi* |
| **Reptiles** | | |
| **Squamata (Lizards and Snakes)** | | |
| ***Iguanidae*** Iguanids | Western fence lizard | *Sceloporus occidentalis* |

**Notes:**

[1] Non-native

[2] California Department of Fish and Wildlife species of special concern

# Attachment 3. Special-Status Plant and Wildlife Species Potential to Occur Tables

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**Special-Status Plant Species Potential to Occur**

| Scientific Name | Common Name | Status[1] Federal/State/ CRPR | Habit, Ecology, and Life History[1] | Potential to Occur[1] |
|---|---|---|---|---|
| *Astragalus hornii* var. *hornii* | Horn's milk vetch | None/None/1B.1 | Small annual herb. Occurs on salty flats and lake shores. Flowering period is from May through September. Elevation range is from 200 to 980 feet. | **Low.** No suitable habitat occurs in the survey area. Horn's milk vetch has not been recently documented within 3 miles of the survey area. No Horn's milk vetch was observed in the survey area during the 2019 surveys. |
| *Calochortus palmeri* var. *palmeri* | Palmer's mariposa lily | None/None/1B.2 | Perennial herb. Occurs in meadows, vernally moist areas of yellow pine forest, and chaparral. Blooming period is from May through July. Elevation range is from 3,935 to 7,215 feet. | **Low.** No suitable habitat is present in the survey area. The survey area is not located within this species' typical elevation range. Palmer's mariposa lily has not been recently documented within 3 miles of the survey area. No Palmer's mariposa lily was observed in the survey area during the 2019 surveys. |
| *Calochortus striatus* | Alkali mariposa lily | None/None/1B.2 | Perennial herb. Occurs in alkaline meadows and moist creosote bush scrub. Blooming period is from April through June. Elevation range is from 2,645 to 4,590 feet. | **Low.** No suitable habitat is present in the survey area. The survey area is not located within this species' typical elevation range. However, alkali mariposa lily was recently documented approximately 5 miles south of the survey area at Amargo Springs in Tejon Ranch. No alkali mariposa lily was observed in the survey area during the 2019 surveys. |
| *Caulanthus californicus* | California jewelflower | FE/SE/1B.1 | Annual herb. Occurs on flats and slopes and is generally observed in non-alkaline grassland. Blooming period is from February through April. Elevation range is from 230 to 3,280 feet. | **Low**. One historical occurrence of California jewelflower has been documented within 0.25 mile of the survey area, although this occurrence is considered extirpated. Limited suitable habitat is present in the survey area. Remaining known populations of California jewelflower occur in the foothills on the western edge of the Central Valley and in the Counties of Santa Barbara and San Luis Obispo. No California jewelflower was observed in the survey area during the 2019 surveys. |
| *Eremalche kernensis* | Kern mallow | FE/None/1B.2 | Annual herb. Occurs in eroded hillsides and alkali flats. Blooming period is from March through May. Elevation range is from 330 to 3,280 feet. | **Low.** Limited suitable habitat is present in the survey area; however, Kern mallow's range is considered restricted to the foothills west of the Central Valley and to the foothills surrounding Comanche Point. Kern mallow has been recently documented approximately 5 miles south of the survey area in Tejon Ranch near Comanche Point. No Kern mallow was observed in the survey area during the 2019 surveys. |

**Special-Status Plant Species Potential to Occur**

| Scientific Name | Common Name | Status[1] Federal/State/ CRPR | Habit, Ecology, and Life History[1] | Potential to Occur[1] |
|---|---|---|---|---|
| *Eschscholzia lemmonii* ssp. *kernensis* | Tejon poppy | None/None/1B.1 | Annual herb. Occurs in open grassland. Blooming period is from March through April. Elevation range is from 655 to 2,280 feet. | **Low.** Suitable habitat is present in the survey area. However, this species is generally located at higher elevations than the survey area is (384 to 465 feet). Tejon poppy has been recently documented approximately 5 miles south of the survey area in Tejon Ranch. No Tejon poppy was observed in the survey area during the 2019 surveys. |
| *Layia leucopappa* | Comanche Point layia | None/None/1B.1 | Annual herb. Occurs in grassy areas or open areas with heavy soils. Blooming period is from March through April. Elevation range is from 325 to 1,150 feet. | **Low**. Suitable habitat is present in the survey area; however, Comanche Point layia is restricted to a limited range in the foothills southeast of the survey area. Comanche Point layia has been documented within 3 miles of the survey area. However, this record was made more than 20 years from the date of the 2019 surveys. No Comanche Point layia was observed in the survey area during the 2019 surveys. |
| *Layia munzii* | Munz's tidy-tips | None/None/1B.2 | Annual herb. Occurs in valley grasslands and wetland riparian areas with alkaline clay soils. Blooming period is from March through April. Elevation range is from 165 to 2,625 feet. | **Low.** Marginally suitable habitat is present in the survey area. Munz's tidy-tips has been documented within 3 miles of the survey area. However, this record was documented greater than 20 years from the date of the 2019 surveys. Munz's tidy-tips are now considered restricted to the foothills in western County of Kern. No Munz's tidy-tips was observed in the survey area during the 2019 surveys. |
| *Monolopia congdonii* | San Joaquin woolly-threads | FE/None/1B.2 | Annual herb. Occurs in valley grasslands with sandy soils. Blooming period is from February through May. Elevation range is from 295 to 2,295 feet. | **Moderate.** Non-native grassland in the survey area has been recently disked and contains an abundance of tumbleweed (*Amaranthus albus*) and Russian thistle (*Salsola damascena*), which may shade and suppress germination of San Joaquin woolly-threads. San Joaquin wooly-threads has been documented 3 miles south of the survey area. However, this record was made more than 20 years from the date of the 2019 surveys. More recent surveys (2010) by U.S. Fish and Wildlife Service document several occurrences of this species in the County of Kern but none within 3 miles of the survey area. No San Joaquin woolly-threads was observed in the survey area during the 2019 surveys. |

**Special-Status Plant Species Potential to Occur**

| Scientific Name | Common Name | Status[1] Federal/State/ CRPR | Habit, Ecology, and Life History[1] | Potential to Occur[1] |
|---|---|---|---|---|
| *Navarretia setiloba* | Piute Mountains navarretia | None/None/1B.1 | Annual herb. Occurs in valley grasslands, foothill woodlands, and pinyon-juniper woodlands and often found in depressions in clay or gravelly loam. Blooming period is from April through June. Elevation range is from 1,640 to 6,890 feet. | **Low.** While suitable habitat is present in the survey area, this species generally occurs at much higher elevations than the survey area is (384 to 465 feet). However, Piute Mountains navarretia has been recently documented approximately 5 miles south of the survey area in Tejon Ranch. No Puite Mountains navarretia was observed in the survey area during the 2019 surveys. |
| *Opuntia basilaris* var. *treleasei* | Bakersfield cactus | FE/SE/1B.1 | Stem succulent/shrub. Occurs in valley grasslands. Blooming period is from March through April. Elevation range is from 390 to 490 feet. | **Not Present.** No Bakersfield cactus was observed in the survey area. Bakersfield cactus is a perennial succulent shrub and would have been observed if present. |

**Notes:** FE = Federally listed as endangered; None = No status indicated for species; SE = State listed as endangered;
**CRPR = California Rare Plant Rank**
1B = rare, threatened, or endangered in California and elsewhere
Extension codes: .1 = seriously endangered; .2 = moderately endangered

[1] Calflora. 2019. The Calflora Database. Accessed November 2019. https://www.calflora.org/.
CDFW (California Department of Fish and Wildlife). 2019a. State and Federally Listed Endangered, Threatened, and Rare Plants of California. Biogeographic Data Branch, California Natural Diversity Database. Accessed November 2019. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109390&inline.
CNPS (California Native Plant Society). 2019. Inventory of Rare and Endangered Plants of California. Online edition, v8-03 0.39. Rare Plant Program. Accessed November 2019. http://www.rareplants.cnps.org.
USFWS (U.S. Fish and Wildlife Service). 2019. Critical Habitat Mapper.

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**Special-Status Wildlife Species Potential to Occur**

| Scientific Name | Common Name | Status[1,2] Federal/State | Habit, Ecology, and Life History[1] | Potential to Occur[1] |
|---|---|---|---|---|
| **Amphibians** | | | | |
| *Rana draytonii* | California red-legged frog | FT/ST | Occurs mainly near ponds in humid forests, woodlands, grasslands, coastal scrub, and stream sides with plant cover. Most common in lowlands or foothills and frequently found in woods adjacent to streams. Breeding habitat is in permanent or ephemeral water sources: lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Range is generally along the coast of California and northern Baja California, with some occurrences east into the Sacramento Valley, but thought unlikely to occur in County of Kern due to annual floods. | **Low**. No suitable habitat is present in the survey area. Although artificial ponds and disturbed wetlands are present in the survey area, predators, including the American bullfrog (*Lithobates catesbeianus*), were observed in these areas, making the presence of the California red-legged frog unlikely. No records were found documenting California red-legged frog within 3 miles of the survey area. No California red-legged frog was observed in the survey area during the 2019 surveys. |
| **Birds** | | | | |
| *Athene cunicularia* | Burrowing owl | None/SSC | Occurs in open, treeless areas with low, sparse vegetation, usually on gently sloping terrain. Can be found in grasslands, deserts, and steppe environments, as well as disturbed edges of urban areas. Often associated with high densities of burrowing mammals such as prairie dogs (*Cynomys* sp.), ground squirrels (*Otospermophilus* sp.), and tortoises (*Gopherus* sp.). | **High**. Suitable nesting and foraging habitat is present in the non-native grassland and disturbed habitat in the northeastern portion of the survey area. High numbers of active and inactive mammal burrows were observed in this portion of the survey area. Burrowing owl has been recently documented within 3 miles of the survey area. Two burrowing owls were observed near the intersection of South Comanche Drive and El Camino Real on January 4, 2016, adjacent to the survey area. No burrowing owl was observed in the survey area during the 2019 surveys. |
| *Agelaius tricolor* | Tricolored blackbird | None/ST | Occurs in freshwater wetlands, in agricultural fields, and at the edges of urban areas. Foraging habitats include cultivated fields, feedlots associated with dairy farms, and wetlands. Species is a colonial nester, typically requiring open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony. | **Moderate**. Suitable nesting and foraging habitat exists in the non-native grasslands, agricultural fields, and disturbed wetland and pond habitats at the edges of and surrounding the survey area. Several breeding colonies have been documented within the County of Kern. Six breeding colonies have been documented within 8 miles of the survey area. However, tricolored blackbird has not been observed within the last 5 years at these sites. No tricolored blackbird was observed in the survey area during the 2019 surveys. |
| *Asio otus* | Long-eared owl | None/SSC | Roosts in dense vegetation and forages in open grasslands or shrublands and open coniferous or deciduous woodlands. | **Low.** No suitable roosting habitat exists in or around the survey area. However, the survey area provides suitable foraging habitat for long-eared owl. This species was |

**Special-Status Wildlife Species Potential to Occur**

| Scientific Name | Common Name | Status[1,2] Federal/State | Habit, Ecology, and Life History[1] | Potential to Occur[1] |
|---|---|---|---|---|
| | | | | documented within 3 miles of the survey area; however, this record was made more than 20 years prior to the 2019 survey date. No long-eared owl was observed during the 2019 surveys. |
| *Buteo swainsoni* | Swainson's hawk | None/CT | Breeds in western North America in mature riparian trees, oak groves, and mature roadside trees in proximity to large, open spaces for foraging. Winters in South America. | **High.** Suitable nesting and foraging habitat exists in the large mature trees located near the non-native grassland, disturbed habitat, and agricultural lands in and surrounding the survey area. Swainson's hawk was documented near the intersection of State Route 223 and Tejon Highway on September 16, 2007. In addition, several active Swainson's hawk nests were documented in 2016 within 5 miles of the survey area, including at the Kern County Waste Management facility, approximately 5 miles west of the survey area, and near the intersection of Sycamore Road and South Edison Road, approximately 1.7 miles west of the survey area. No Swainson's hawk was observed during the 2019 surveys. |
| *Circus hudsonius* | Northern harrier | SSC | Inhabits grasslands, open rangelands, and salt and freshwater wetlands throughout California. Individuals may migrate to breeding grounds in northeastern and coastal California, although the species is widespread and common in suitable habitat throughout California during the winter. | **Present.** One northern harrier was observed foraging in the fallow agricultural fields west of Tejon Highway, near the intersection of Millux Road, during the 2019 surveys. The abundance of small mammal burrows and small lizards observed in the non-native grassland, disturbed habitat, and agricultural land in the southern portion of the survey area suggest ample prey availability for northern harrier. |
| *Gymnogyps californianus* | California Condor | FE/SE | Requires large areas of remote country for foraging, roosting, and nesting. Roosts on large trees or snags or isolated rocky outcrops and cliffs. Nests are located in shallow caves and rock crevices on cliffs where there is minimal disturbance. Foraging habitat includes open grasslands and oak savanna foothills that support populations of large mammals such as deer (*Cervidae* sp.) and cattle. Historical range has been restricted to the mountains of Southern California north of the County of Los Angeles, the central California coast, around the Grand Canyon in Arizona, and in the mountains of Baja California. | **Low.** No suitable nesting habitat exists in or around the survey area. However, the survey area provides marginally suitable foraging habitat. No records were found documenting this species within 3 miles of the survey area. No California condor was observed during the 2019 surveys. |

**Special-Status Wildlife Species Potential to Occur**

| Scientific Name | Common Name | Status[1,2] Federal/State | Habit, Ecology, and Life History[1] | Potential to Occur[1] |
|---|---|---|---|---|
| *Empidonax traillii extimus* | Southwestern willow flycatcher | FE/CE | Breeds in patchy to dense riparian habitats with water present. Usually found in riparian woodlands with a well-developed canopy and a thick understory but not uniformly dense. Restricted to few known breeding sites in Southern California. | **Low**. While riparian vegetation surrounds one of the artificial ponds located in the southern portion of the survey area, this riparian vegetation is isolated and low quality and is not suitable for this species. No records were found documenting southwestern willow flycatcher within 3 miles of the survey area. No southwestern willow flycatcher was observed during the 2019 surveys. |
| *Vireo belli pusillus* | Least Bell's vireo | FE/CE | Occurs in riparian scrub and riparian forest and is a summer resident in Southern California below 2,000 feet. Even when large trees such as cottonwoods and willows are present, tends to stay in the low vegetation. Avoids open desert scrub, grasslands, and cultivated areas. Known to feed primarily on insects and spiders. | **Low**. While riparian vegetation surrounds one of the artificial ponds located in the southern portion of the survey area, this riparian vegetation is isolated and low quality. In addition, the riparian vegetation is surrounded by open agricultural fields and non-native grassland and is not suitable habitat for this species. Least Bell's vireo was documented within 3 miles of the survey area. However, this record was documented more than 20 years prior to the 2019 survey date. No least Bell's vireo was observed during the 2019 surveys. |
| **Fishes** | | | | |
| *Hypomesus transpacificus* | Delta smelt | FT/ST | Found only in the Sacramento–San Joaquin River Delta in California. Historically, populations were found from Suisun Bay, east to the Delta area, and then upstream in the Sacramento River to approximately Isleton and upstream in the San Joaquin River to approximately Mossdale. As a result of increasing water diversions and drought, the center of species abundance has shifted east to the Sacramento River channel in the delta. | **No Potential**. No riverine habitat exists in the survey area. No records were found documenting delta smelt within 3 miles of the survey area. |
| **Invertebrates** | | | | |
| *Bombus crotchii* | Crotch's bumble bee | None/CE | Occurs on relatively warm and dry sites, including the inner Coast Ranges of California and the margins of the Mojave Desert. | **Moderate**. Suitable habitat exists in the survey area. Crotch's bumble bee has been documented within 3 miles of the survey area. However, this record was documented more than 20 years prior to the 2019 survey date. No Crotch's bumble bee was observed during the 2019 surveys. |
| *Branchinecta lynchi* | Vernal pool fairy shrimp | FT/ST | Occurs primarily in vernal pools, seasonal wetlands that fill with water during fall and winter rains and dry up in spring and summer. Typically, most pools in any vernal pool | **Low**. No suitable vernal pool habitat exists in the survey area. No records were found documenting vernal pool fairy shrimp |

**Special-Status Wildlife Species Potential to Occur**

| Scientific Name | Common Name | Status[1,2] Federal/State | Habit, Ecology, and Life History[1] | Potential to Occur[1] |
|---|---|---|---|---|
| | | | complex are not inhabited by the species at one time. Different pools in or between complexes may provide habitat for the species in alternative years because climatic conditions vary. | in the survey area. No vernal pool fairy shrimp was observed during the 2019 surveys. |
| **Mammals** | | | | |
| *Dipodomys nitratoides nitratoides* | Tipton kangaroo rat | FE/SE | Occurs in valley saltbush scrub, valley sink scrub, and grassland habitats with friable soils suitable for digging burrows. Range is the San Joaquin Valley floor to 300 feet in elevation. Eats a variety of annual and perennial grass and forb seeds, including wild oat (*Avena fatua*), brome grasses (*Bromus* sp.), alkali sacaton (*Sporobolus airoides*), coastal heron's bill (*Erodium cicutarium*), and others. | **Moderate**. Suitable foraging habitat exists in the survey area, and high numbers of active and inactive mammal burrows were observed in the survey area. However, the survey area is located above the typical elevation range for Tipton kangaroo rat. This species occurs east and south of the City of Bakersfield, approximately 25 miles from the survey area. No Tipton kangaroo rat was observed during the 2019 surveys. |
| *Taxidea taxus* | American badger | None/SSC | Occurs in open areas including plains and prairies, farmland, and the edges of woods throughout the western United States, ranging southward through mountainous parts of Mexico and northward through Canada's central western provinces. Primarily nocturnal and uses multiple burrows within its home area. | **Moderate.** Marginally suitable habitat exists in the survey area. High numbers of active and inactive mammal burrows were observed in the survey area. American badger was documented in 2012 3 miles east of the survey area. No American badger was observed during the 2019 surveys. |
| *Vulpes macrotis mutica* | San Joaquin kit fox | FE/ST | Occurs in San Joaquin scrub and grasslands with loose and textured soils, but modification of the burrows of other animals facilitates denning in other soil types. The entrances of San Joaquin kit fox burrows are typically 5 to 8 inches wide, and vacant kit fox burrows are often utilized by other ground-dwelling wildlife. This species can use small remnants of native habitat interspersed with development as long as there are minimal disturbances, dispersal corridors, and a sufficient prey base. However, San Joaquin kit foxes have suffered from habitat conversion to urban and agricultural uses. | **High.** Suitable habitat exists in the non-native grassland and disturbed areas at the edges of the survey area. High numbers of active and inactive mammal burrows were observed in the survey area. Suitable burrowing and foraging habitat is present within the tracts of non-native grassland and disturbed habitat located in the north and eastern portions of the survey area. San Joaquin kit fox was documented in 2012 in the undeveloped foothills of the Tehachapi Mountains, which are known to support San Joaquin kit fox, located approximately 3.4 miles southeast of the survey area. No San Joaquin kit fox was observed during the 2019 surveys. |
| **Reptiles** | | | | |
| *Gambelia sila* | Blunt-nosed leopard lizard | FE/SE | Occurs in semi-arid grasslands, alkali flats, and washes with flat, open space for running. Inhabits the San Joaquin Valley and nearby valleys and foothills at an elevation range | **Moderate.** Suitable habitat exists in the non-native grassland and disturbed areas at the edges of the survey area. High numbers of active and inactive mammal burrows were |

**Special-Status Wildlife Species Potential to Occur**

| Scientific Name | Common Name | Status[1,2] Federal/State | Habit, Ecology, and Life History[1] | Potential to Occur[1] |
|---|---|---|---|---|
| | | | of 100 to 2,400 feet. Avoids densely vegetated areas while using large shrubs with dense canopy cover for refuge and thermoregulation. Uses both active and inactive mammal dens and burrows for cover and shelter. | observed in the survey area that may provide suitable shelter for this species. Blunt-nosed leopard lizard was documented in 2016 3 miles south of the survey area. No blunt-nosed leopard lizard was observed during the 2019 surveys. |
| *Thamnophis gigas* | Giant garter snake | FT/ST | Occurs primarily in marshes, sloughs, drainage canals, and irrigation ditches, especially around rice fields and occasionally in slow-moving creeks.<br>Often found in locations with vegetation close to the water to use for basking. Historically, ranges from the County of Kern north along the Central Valley to the County of Butte, with a gap in the central part of the valley. Generally found at elevations up to 400 feet. | **Low.** Marginally suitable habitat exists in the agricultural lands at the edges and within the southern portion of the survey area. No records were found documenting giant garter snake in the survey area. No giant garter snake was observed during the 2019 surveys. |

**Notes:** CE = Candidate Endangered; CT = Candidate Threatened; FE = Federally Endangered; FT = Federally Threatened; None = No status indicated for species; SE = State Endangered; SSC = Species of Special Concern; ST = State Threatened

[1] Calherps.com 2019. "California Herps: A Guide to the Amphibians and Reptiles of California." Accessed November 2019. http://www.californiaherps.com/.

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