

**PHASE I CULTURAL RESOURCES ASSESSMENT
OF THE PROPOSED IRONWOOD RESIDENTIAL PROJECT;
CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, CALIFORNIA**

Prepared For:

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Sunnymead, CA United States Geological Survey 7.5' Quadrangle Map, Sections 33 and 34 of
Township 2 South, Range 3 West

Project Acreage: 79

Resources Identified: P-33-024882/CA-RIV-12,333 and P-33-024883

June 2016

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EXECUTIVE SUMMARY

Global Investment & Development, LLC. (the “Applicant”) is proposing to develop the Ironwood Residential Project on an approximately 79-acre parcel in the City of Moreno, California. The proposed project would include the construction of single-family residences, streets, other infrastructure, underground utilities, parks, open spaces, and off-site water and sewer lines (the “proposed project”). For purpose of this report, all project components will collectively be referred to as the “Study Area”, unless otherwise noted. The proposed project would include excavations across the majority of the Study Area.

ESA PCR conducted a phase I cultural resources assessment of the Study Area to determine the potential impacts to cultural resources (including archaeological, historical, and paleontological resources) for the purpose of complying with the California Environmental Quality Act (CEQA) and the local cultural resource regulations. The scope of work for this assessment included a cultural resources records search through the California Historical Resources Information System-Eastern Information Center (CHRIS-EIC), a Sacred Lands File (SLF) search through the California Native American Heritage Commission (NAHC) and follow-up Native American consultation, land use history research, a paleontological resources records search through the San Bernardino County Museum (SBCM), a pedestrian survey, eligibility evaluations for resources identified within the Study Area, impact analyses, and the recommendation of additional work and mitigation measures.

ARCHAEOLOGICAL RESOURCES

The results of ESA PCR’s assessment revealed that two prehistoric cultural resources (P-33-024882/CA-RIV-12,333 and P-33-024883) are located within the Study Area. Resource 33-024882/CA-RIV-12333 is a prehistoric archaeological resource that was previously recorded in the northwestern portion of the Study Area and was revisited by ESA PCR during the pedestrian survey. It consists of one boulder with one milling slick and one boulder with three milling slicks and measures 25 meters (north/south) x 6 meters (east-west). The Applicant has designed the project to avoid this resource and it is located in an area that is planned for open space; therefore no additional work or mitigation would be warranted. Resource P-33-024883, an isolated quartzite hammerstone, is not eligible for the California Register of Historical Resources therefore impacts to it from the proposed project are not considered a significant impact on the environment. Therefore, no further work or mitigation is warranted at this resource as well.

It is possible to encounter buried archaeological resources given the proven prehistoric occupation of the region, the identification of multiple surface archaeological resources within the vicinity of the Study Area (including two archaeological resources within the Study Area and numerous resources recorded in the Reche Hills Complex – see Section 4.1.5 of this report), and the favorable natural conditions (e.g., ephemeral drainages, natural spring, and vegetation communities) that would have attracted prehistoric inhabitants to the area. Therefore, despite the heavy disturbances of the Study Area that may have displaced archaeological resources on the surface, it is possible that intact archaeological resources exist at depth. As a result, recommended mitigation measures are provided in Chapter 9 to reduce potentially significant impacts to previously undiscovered archaeological resources that may be accidentally encountered during project implementation to a less than significant level.

BUILT ENVIRONMENT RESOURCES

The cultural resources records search results from the CHRIS-EIC indicated that there were no built environment resources located within the Study Area and none were identified during the pedestrian survey. Therefore, the proposed project would result in no substantial adverse change in the significance of a historical resource as defined in §15064.5.

PALEONTOLOGICAL RESOURCES

Results of the paleontological resources records search through SBCM indicate that no vertebrate fossil localities from the SBCM records have been previously recorded within the Study Area or within a one-mile radius. Moreover, no paleontological resources were identified by ESA PCR during the pedestrian survey. These findings; however, do not preclude the existence of undiscovered paleontological resources located below the ground surface and lacking surface manifestation, which may be encountered during construction excavations associated with the proposed project. The Study Area has been previously mapped geologically as containing surface exposures of early Pleistocene-aged (i.e., 1.9 million to 12,000 years ago) fan deposits, overlain across much of the Study Area by a thin sedimentary veneer of recent Holocene-aged (i.e., 12,000 years ago to present day) alluvium. The northwestern portion of the Study Area is mapped as Cretaceous-aged (i.e., 145 million to 65 million years ago) tonalite. The tonalite and the surficial Holocene-aged alluvium have very limited to no potential to be conducive to retaining paleontological resources; however, the Pleistocene-aged fan (or alluvial) deposits may have high a paleontological sensitivity, depending upon their lithology, as these sediments have yielded significant fossils of extinct animals from the Ice Age throughout the Inland Empire (Scott 2014). As a result, recommended mitigation measures are provided in Chapter 9 to reduce potentially significant impacts to previously undiscovered paleontological resources and/or unique geological features that may be accidentally encountered during project implementation to a less than significant level

1.0 INTRODUCTION

1.1 PROPOSED PROJECT AND LOCATION

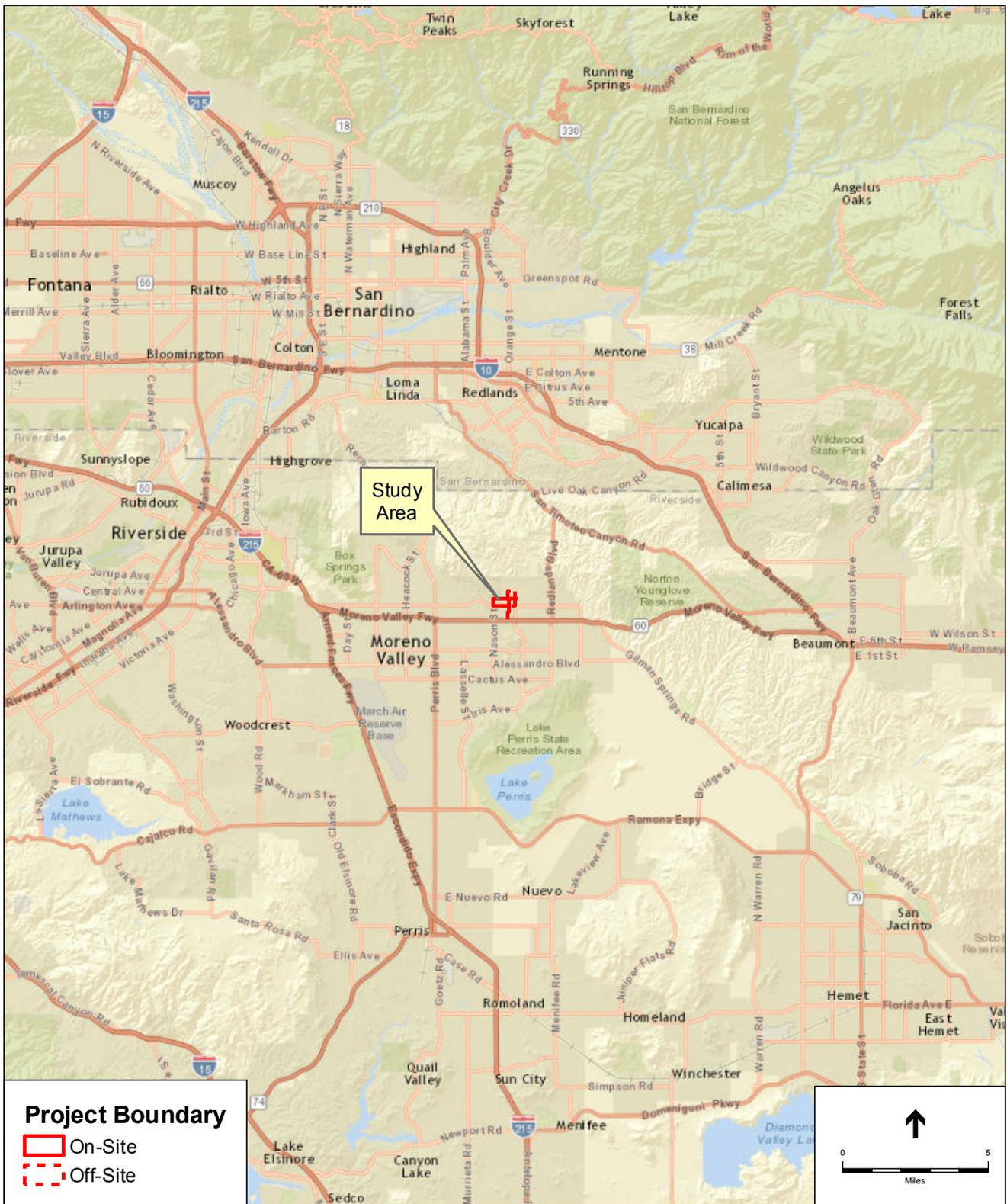
Global Investment & Development, LLC. (the “Applicant”) is proposing to develop the Ironwood Residential Project on an approximately 79-acre parcel in the City of Moreno, California. The proposed project would include the construction of single-family residences, streets, other infrastructure, underground utilities, parks, open spaces, and off-site water and sewer lines (the “proposed project”). For purpose of this report, all project components will collectively be referred to as the “Study Area”, unless otherwise noted. The proposed project would include excavations across the majority of the Study Area.

The Study Area is located in a semi-rural area of the City of Moreno Valley, in western Riverside County, California (**Figure 1, Regional Map**). It is located approximately one-half mile north of State Route 60 (SR-60). The Study Area is depicted in Section 33 of Township 2 South, Range 3 West of the Sunnymead CA United States Geological Survey (USGS) 7.5’ topographic quadrangle map (**Figure 2, Vicinity Map**). It is surrounded by open space to the north, Ironwood Avenue on the south, Oliver Street on the east, Nason Street on the west, and semi-rural development (**Figure 3, Aerial Photograph**).

1.2 SCOPE OF STUDY AND PERSONNEL

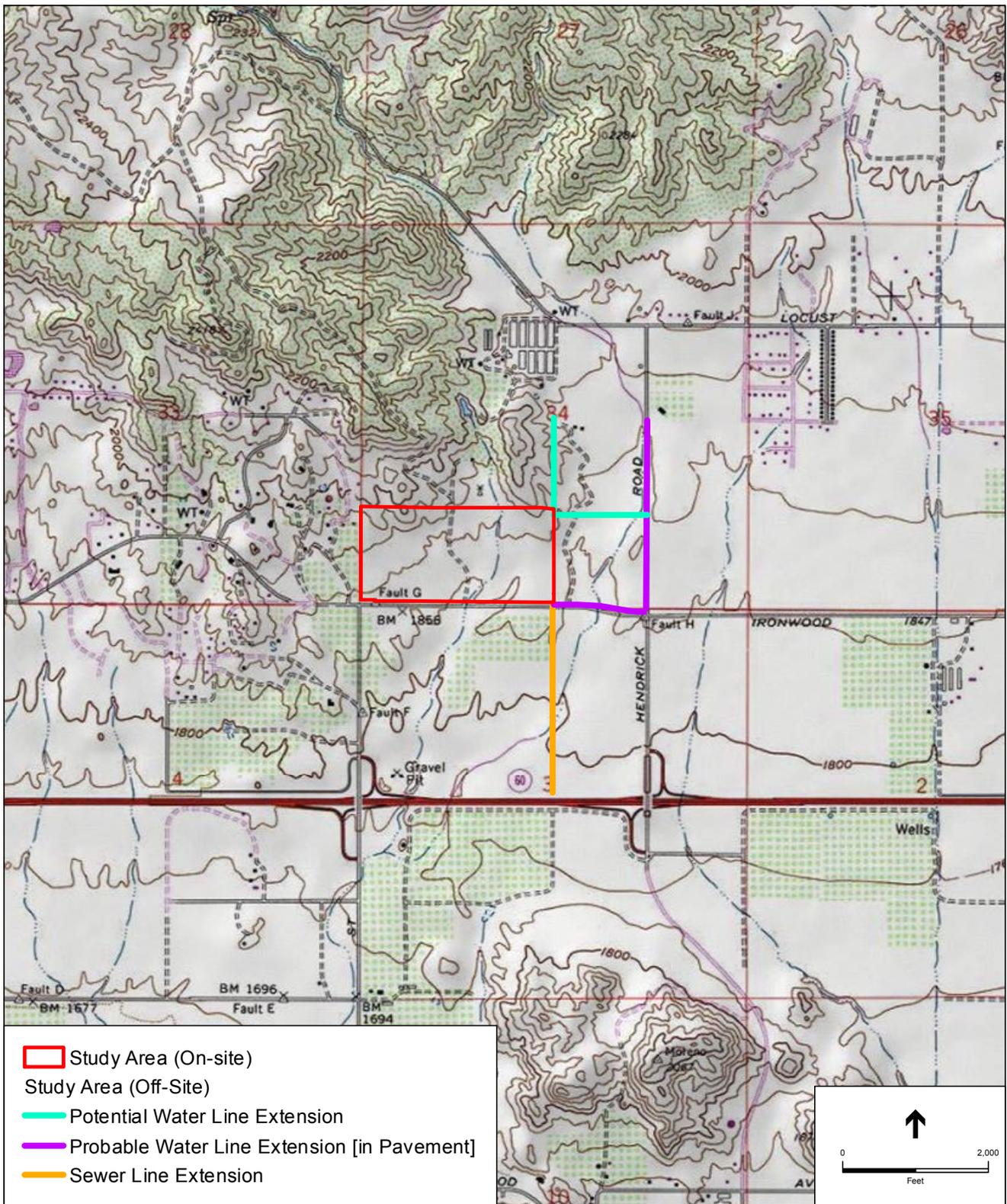
ESA PCR conducted a phase I cultural resources assessment of the Study Area from November 2014 through January 2015 (with an update in June 2016) to identify potential impacts to cultural resources (including archaeological, historical, and paleontological resources) and to develop mitigation measures to avoid, reduce, or mitigate potential impacts to resources for the purpose of complying with CEQA and local cultural resource guidelines. The scope of work for this assessment included a cultural resources records search through the CHRIS-EIC, a SLF search through the NAHC and follow-up Native American consultation, land use history research, a paleontological resources records search through the SBCM, a pedestrian survey, eligibility evaluations for the resources identified within the Study Area, impact analyses, and the recommendation of additional work and mitigation measures. In June 2016, ESA PCR conducted an additional pedestrian survey of proposed water pipeline alignment that was not previously included in the original assessment.

The assessment was co-managed and this report compiled by Mr. Kyle Garcia and Mr. Chris Purtell, M.A., RPA. The pedestrian field survey was performed by Mr. Purtell, Mr. Garcia, and Ms. Lauren Willey. The record searches were conducted by Mr. Purtell. The June 2016 pedestrian survey was conducted by Mrs. Fatima Clark. Qualifications of key personnel are provided in Appendix A.



SOURCE: ESRI Street Map, 2009.

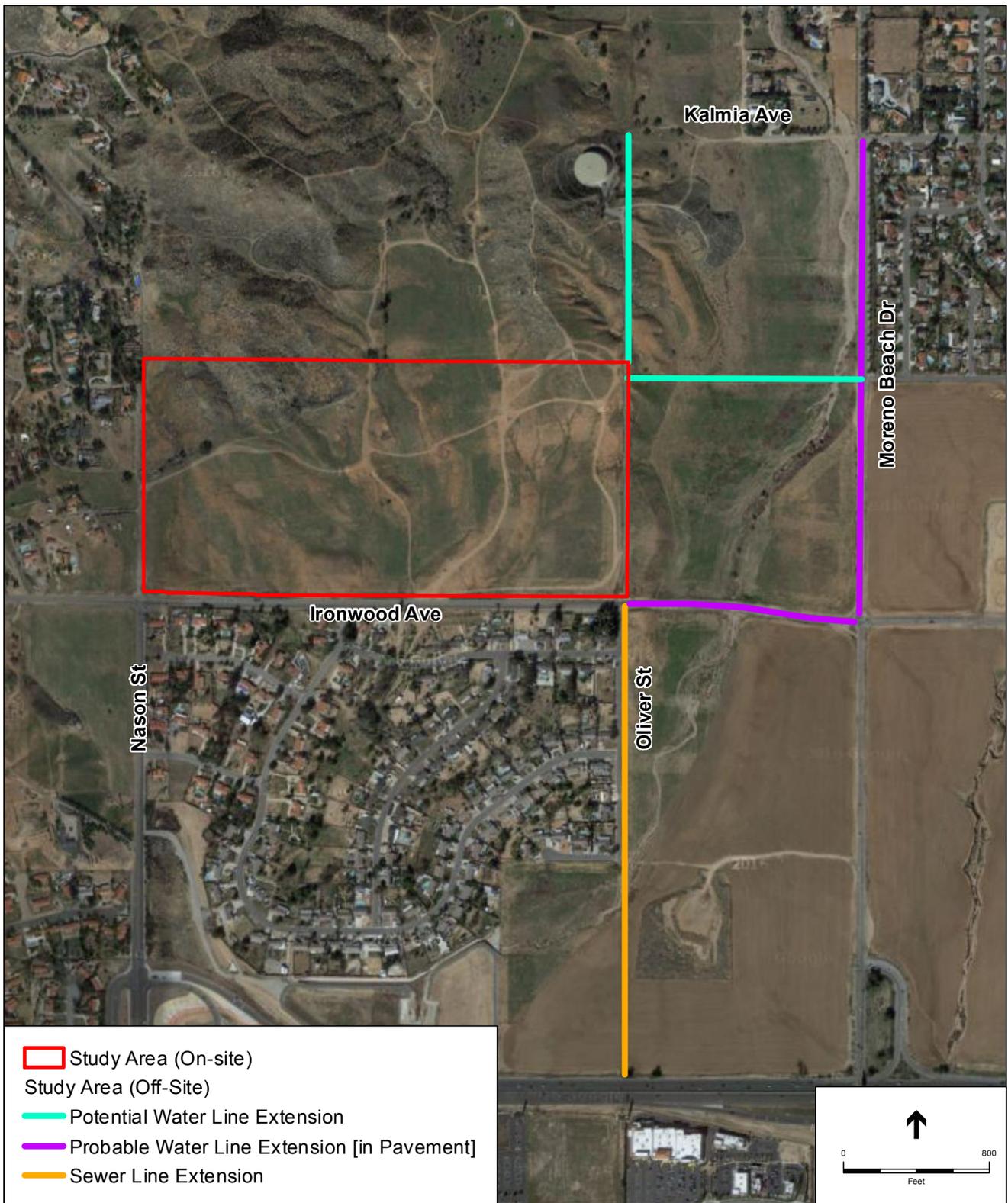
Ironwood Village Project
Figure 1
 Regional Map



SOURCE: USGS Topographic Series (Sunnymead, CA).

Ironwood Village Project

Figure 2
Vicinity Map



SOURCE: Google Maps, 2015 (Aerial).

Ironwood Village Project
Figure 3
 Aerial Photograph

2.0 REGULATORY SETTING

Numerous laws and regulations require federal, state, and local agencies to consider the effects of a proposed project on cultural resources. These laws and regulations establish a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Historic Preservation Act (NHPA) of 1966, as amended, CEQA, and Public Resources Code (PRC) 5024, are the primary federal and state laws governing and affecting preservation of cultural resources of national, state, regional, and local significance. Other relevant regulations and guidelines at the local level include the City's General Plan and Municipal Code. A description of the applicable laws, regulations, and guidelines are provided in the following paragraphs.

2.1 STATE LEVEL

2.1.1 California Register of Historical Resources

The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the State's jurisdictions.

Created by Assembly Bill 2881, which was signed into law on September 27, 1992, the California Register is "an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."¹ The criteria for eligibility for the California Register are based upon National Register criteria.² Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register of Historic Places.³

To be eligible for the California Register, a prehistoric or historic property must be significant at the local, state, and/or federal level under one or more of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

¹ *California Public Resources Code § 5024.1(a).*

² *California Public Resources Code § 5024.1(b).*

³ *California Public Resources Code § 5024.1(d).*

A resource eligible for the California Register must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. The resource must also be judged with reference to the particular criteria under which it is proposed for eligibility.⁴

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register.
- California Registered Historical Landmarks from No. 770 onward.
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5.⁵
- Individual historical resources.
- Historical resources contributing to historic districts.
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

2.1.2 California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a proposed project would have a significant effect on archaeological resources (PRC Sections 21000 *et seq.*). As defined in Section 21083.2 of the PRC, a “unique” archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.

⁴ *Ibid.*

⁵ *Those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register.*

- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In addition, CEQA Guidelines Section 15064.5 broadens the approach to CEQA by using the term “historical resource” instead of “unique archaeological resource.” The CEQA Guidelines recognize that certain historical resources may also have significance. The CEQA Guidelines recognize that a historical resource includes: (1) a resource in the California Register of Historical Resources; (2) a resource included in a local register of historical resources, as defined in PRC section 5020.1 (k) or identified as significant in a historical resource survey meeting the requirements of PRC section 5024.1 (g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency’s determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of section 21084.1 of the PRC and section 15064.5 of the CEQA Guidelines apply. If an archaeological site does not meet the criteria for a historical resource contained in the CEQA Guidelines, but does meet the definition of a unique archaeological resource in Section 20183.2 of the PRC, then the site is to be treated in accordance with the provisions of PRC section 21083. The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. (CEQA Guidelines §15064.5(c)(4)).

2.2 LOCAL LEVEL

2.2.1 City of Moreno Valley General Plan

The City of Moreno Valley has put forth numerous policies within the Goals and Objectives section of the General Plan. These policies were created to identify and preserve Moreno Valley’s unique historical and archaeological resources for future generations (City of Moreno Valley 2006). These policies are listed below:

- **Policy 7.6.1:** Historical, cultural and archaeological resources shall be located and preserved, or mitigated consistent with their intrinsic value.
- **Policy 7.6.2:** Implement appropriate mitigation measures to conserve cultural resources that are uncovered during excavation and construction activities
- **Policy 7.6.3:** Minimize damage to the integrity of historic structures when they are altered.
- **Policy 7.6.4:** Encourage restoration and adaptive reuse of historical buildings worthy of preservation.
- **Policy 7.6.5:** Encourage documentation of historic buildings when such buildings must be demolished (City of Moreno Valley 2006).

2.2.2 City of Moreno Valley Landmark Criteria

The City of Moreno Valley's Municipal Code Title Chapter 7: Cultural Preservation, Subsection 7.05 Landmarks and Structures of Merit. Subchapter 7.05.010 states: a Landmark is any site, including significant trees or other significant permanent landscaping located thereof, place, building, structure, street, improvement, natural feature or other object having a special historical, archaeological, paleontological, cultural, architectural or community value in the city and which has been designated a landmark pursuant to this title. (Ord. 126 § 1, 1987). The City has established 11 Subsection Chapters in determining landmark eligibility and procedural processes.

The Subsection Chapters are as follows:

7.05.020 Initiation. The designation, repeal or modification of a landmark may be initiated by the city council, the environmental and historical preservation board, the planning commission or the record property owner. Application for such designation, repeal or modification shall be made to the community development director upon such forms and accompanied by such data and information as may be required for that purpose by the environmental and historical preservation board so as to assure the fullest practical presentation of the facts for proper consideration of the request. (Ord. 723 §2.3, 2006: Ord. 126 § 1, 1987)

7.05.030 Hearing date. Upon the acceptance by the director of developmental services of an application, the matter shall be set for public hearing thereon before the committee. The date of such hearing shall be not more than fifty (50) days from the date of acceptance of the application. (Ord. 126 § 1, 1987)

7.05.040 Hearing notice. Notice of the date, time, place and purpose of the hearing before the committee shall be given by at least one publication of a notice, in a newspaper having general circulation in the city, not less than ten days prior to the date of such hearing and by depositing in the United States mail, postage prepaid, at least ten days prior to the date of the hearing, a notice addressed to the owner of the property being considered. When the property being considered is not real property, notice shall be given to both the owner and the person in possession of the real property where the object is situated. The last known name and address of each owner as shown on the records of the county assessor may be used for this notice. Failure to send any notice by mail to any property owner where the address of such owner is not a matter of public record or the failure to receive any mailed notice shall not invalidate any proceedings in connection with the proposed designation. (Ord. 126 § 1, 1987)

7.05.050 Hearing. At the time and place so fixed and noticed, a public hearing shall be conducted before the committee. The committee may continue such hearing to a time and place certain when such action is deemed necessary or desirable. The committee may establish rules for the conducting of such public hearings. (Ord. 126 § 1, 1987)

7.05.060 Investigation. The director of developmental services shall cause to be made such investigation of facts bearing upon the application set for hearing as in the opinion of the director will provide sufficient information to permit the committee to take action consistent with the intent and purpose of this title. (Ord. 126 § 1, 1987)

7.05.070 Designation. The committee may designate a landmark in whole or in part if from the facts presented in the application, at the public hearing or by investigation, the committee finds that the site, landscaping, place, buildings, structure, street, improvement, natural feature or other object has special historical, archaeological, paleontological, cultural, architectural or community value in the city and that purposes of this title are furthered by such designation. (Ord. 126 § 1, 1987)

7.05.080 Resolution. A landmark shall be designated by resolution of the committee. Rescission or modification of such designation shall be accomplished in the same manner. (Ord. 126 § 1, 1987)

7.05.090 Notice of designation. Promptly after the adoption thereof, notice of the designation, rescission or modification of landmark status shall be transmitted by the planning director to the city clerk, the city manager, the community redevelopment agency of the city, the assessor and the recorder of Riverside County, and to any other interested departments and governmental and civic agencies. Upon receipt of such notice, the city clerk shall place it upon the agenda of the first regular meeting of the city council occurring at least five days after receipt of the notice. Each city department and division shall incorporate the notice of designation, rescission or modification into its records, so that future decisions or permissions regarding or affecting any landmark made by the city will have been made with the knowledge thereof, and in accordance with the procedures set forth in this title. Whenever any project to be carried out on behalf of the city may have an impact on a designated landmark, written notice shall be given to the committee and to the city council prior to taking any irreversible action to carry out such project. (Ord. 260 § 1.2, 1990: Ord. 126 § 1, 1987)

7.05.100 Appeal and city council review. Any person aggrieved or affected by a decision of the committee in designating, repealing or modifying landmark status may appeal to the city council from such decision at any time within ten days after the date upon which the committee announced its decision. An appeal to the city council shall be taken by filing a letter of appeal, in duplicate, with the city clerk. Such letter of appeal shall set forth the grounds upon which the appeal is based. Within five days after the letter of appeal has been filed, the city clerk shall notify the committee and the planning director of such filing. Within five working days after such notice is given, the planning director shall lodge with the city clerk copies of the application and all other papers constituting the record upon which the action of the committee was taken. The city clerk shall give notice of hearing upon the appeal in the same manner and for the same time as is required by Section 7.05.040 for hearing in connection with an application before the committee. The date of such hearing upon the appeal shall be not more than thirty (30) days from the date of filing of the appeal. Upon the hearing of such appeal, the city council may by resolution affirm, reverse or modify the determination of the committee. Except for provisions which properly can relate only to appeals, review of committee decisions by the city council without any appeal having been filed, shall follow the procedures set forth above for appeals. (Ord. 260 1.3, 1990: Ord. 126 § 1, 1987)

7.05.120 Duty to maintain. Every owner of a landmark and any appurtenant premises shall maintain and keep in good repair the exterior of such landmark and premises. "Good repair" is defined as that level of maintenance and repair which clearly insures the continued availability of such structure and premises for lawful reasonable uses and prevents deterioration, dilapidation and decay of such structures and premises. (Ord. 126 § 1, 1987)

7.05.130 Structures of merit. The committee may encourage the protection, enhancement, appreciation and use of structures of historical, archaeological, paleontological, cultural, architectural, community or aesthetic value which have not been designated as landmarks but are deserving of recognition, by designating them as structures of merit so as to emphasize their importance in the past, present and future of the city (Ord. 126 § 1, 1987).

3.0 ENVIRONMENTAL SETTING

The Study Area is located in western Riverside County, California within the City of Moreno Valley in a semi-rural area that is situated between open spaces on the north and east and adjacent to residential housing on the west and south. The elevation within the Study Area ranges from approximately 1,858 feet above mean sea level (MSL) in the south to 2,000 feet above MSL in the north. The Study Area is characterized as undeveloped; however, evidence of past disking/plowing activities is depicted in historic aerial photographs. The Study Area may have been used for cultivation in the past although it is currently fallow. The topography of a majority of the Study Area is relatively flat, except in the northern area which exhibits an elevated topography and numerous granitic bedrock outcroppings. Review of aerial photographs indicates that the Study Area has been highly disturbed by dirt access roads and regular disking/plowing for fire breaks.

Two ephemeral streams are located within and adjacent to the Study Area. The first stream was formerly located in the central portion of the Study Area and ran in a northwest-southeast direction as shown USGS maps (see **Figure 2**). This stream has since been diverted and filled in and is no longer visible within the Study Area. The second ephemeral stream is located approximately 600-feet east of the Study Area's eastern boundary and runs in a north-south direction and shows minimal change or modification over time based on historic topographic map review. Vegetation within the Study Area can be characterized as sparse plant communities consisting of coyote bush, white bur sage, native and non-native wild grasses.

Geologically, the Study Area is located in the northwestern portion of the Peninsular Ranges geomorphic province. The Peninsular Ranges province is distinguished by northwest trending mountain ranges and valleys following faults branching from the San Andreas Fault. The Peninsular Ranges are bound to the east by the Colorado Desert and extend north to the San Bernardino – Riverside county line (Norris and Webb 1976), west into the submarine continental shelf, and south to the California state line.

Previous mapping of the Study Area (Rogers 1965) suggests that the majority of the area is situated upon surface exposures of early Pleistocene fan deposits (Qvofa), overlain by a thin sedimentary veneer of recent alluvium (Qyaa). The northwestern portion of the Study Area is mapped as Cretaceous-aged tonalite (Kt) (Scott 2014).

4.0 CULTURAL SETTING

4.1 PREHISTORIC CONTEXT

Prehistory is most easily discussed chronologically, in terms of environmental change and recognized cultural developments. Several chronologies have been proposed for inland Southern California, the most widely accepted of which is Wallace's four-part Horizon format (1955), which was later updated and revised by Claude Warren (1968). The advantages and weaknesses of Southern California chronological sequences are reviewed by Warren (in Moratto 1984), Chartkoff and Chartkoff (1984), and Heizer (1978). The following discussion is based on Warren's (1968) sequence, but the time frames have been adjusted to reflect more recent archaeological findings, interpretations, and advances in radiocarbon dating.

4.1.1 Paleo-Indian Period (ca. 13,000-11,000 years before present [YBP])

Little is known of Paleo-Indian peoples in inland southern California, and the cultural history of this period follows that of North America in general. Recent discoveries in the Americas have challenged the theory that the first Americans migrated from Siberia, following a route from the Bering Strait into Canada and the Northwest Coast sometime after the Wisconsin Ice Sheet receded (ca. 14,000 YBP), and before the Bering Land Bridge was submerged (ca. 12,000 YBP). Based on new research from the Pacific Rim, it has been proposed that modern humans settled islands of the eastern Pacific between 40,000 and 15,000 years ago. Evidence of coastal migration has also come from sites on islands off Alta and Baja California. As a result, these sites are contemporary with Clovis and Folsom points found in North America's interior regions. All of these new findings have made the coastal migration theory gain credibility in recent times (Erlandson et al. 2007).

The timing, manner, and location of the Bering Strait crossing are a matter of debate among archaeologists, but the initial migration probably occurred as the Laurentide Ice Sheet melted along the Alaskan Coast and interior Yukon. The earliest radiocarbon dates from the Paleo-Indian Period in North America come from the Arlington Springs Woman site on Santa Rosa Island located approximately 150 miles west-northwest of the Study Area. These human remains date to approximately 13,000 YBP (Johnson, et al. 2002). Other early Paleo-Indian sites include the Monte Verde Creek site in Chile (Meltzer, et al. 1997) and the controversial Meadowcroft Rockshelter in Pennsylvania. Both sites have early levels dated roughly at 12,000 YBP. Lifeways during the Paleo-Indian Period were characterized by highly mobile hunting and gathering. Prey included megafauna such as mammoth and technology included a distinctive flaked stone toolkit that has been identified across much of North America and into Central America. They likely used some plant foods, but the Paleo-Indian toolkit recovered archaeologically does not include many tools that can be identified as designed specifically for plant processing.

The megafauna that appear to have been the focus of Paleo-Indian life went extinct during a warming trend that began approximately 10,000 years ago, and both the extinction and climatic change (which included warmer temperatures in desert valleys and reduced precipitation in mountain areas) were factors in widespread cultural change. Subsistence and social practices continued to be organized around hunting and gathering, but the resource base was expanded to include a wider range of plant and game resources. Technological traditions also became more localized and included tools specifically for the processing of plants and other materials. This constellation of characteristics has been given the name "Archaic" and it was the most enduring of cultural adaptations to the North American environment.

4.1.2 Archaic Period (ca. 11,000-3,500 YBP)

The earliest Archaic Period life in inland southern California has been given the name San Dieguito tradition, after the San Diego area where it was first identified and studied (Warren 1968). Characteristic artifacts include stemmed projectile points, crescents and leaf-shaped knives, which suggest a continued subsistence, focus on large game, although not megafauna of the earlier Paleo-Indian period. Milling equipment appears in the archaeological record at approximately 7,500 years ago (Moratto 1984:158). Artifact assemblages with this equipment include basin milling stones and unshaped manos, projectile points, flexed burials under cairns, and cogged stones, and have been given the name La Jolla Complex (7,500–3,000 YBP). The transition from San Dieguito life to La Jolla life appears to have been an adaptation to drying of the climate after 8,000 YBP, which may have stimulated movements of desert peoples to the coastal regions, bringing milling stone technology with them. Groups in the coastal regions focused on mollusks, while inland groups relied on wild-seed gathering and acorn collecting.

4.1.3 Late Prehistoric Period (ca. 3,500 YBP-A.D. 1769)

Cultural responses to environmental changes around 4,000–3,000 YBP included a shift to more land-based gathering practices. This period was characterized by the increasing importance of acorn processing, which supplemented the resources from hunting and gathering. Meighan (1954) identified the period after A.D. 1400 as the San Luis Rey complex. San Luis Rey I (A.D. 1400–1750) is associated with bedrock mortars and milling stones, cremations, small triangular projectile points with concave bases and Olivella beads. The San Luis Rey II (A.D. 1750–1850) period is marked by the addition of pottery, red and black pictographs, cremation urns, steatite arrow straighteners and non-aboriginal materials (Meighan 1954:223, Keller and McCarthy 1989:6). Work at Cole Canyon and other sites in southern California suggests that this complex, and the ethnographically described life of the native people of the region, were well established by at least 1,000 YBP (Keller and McCarthy 1989:80).

4.1.4 Ethnographic Context

Information presented in the California volume of the Handbook of North American Indians (Heizer 1978:575) shows the Study Area is located near the traditional territory of the Luiseño and Cahuilla. Both of these ethnographic groups are described below.

Luiseño

The Luiseño are a Takic speaking people that are usually associated with coastal and inland areas of present-day Orange and southern Riverside counties, with cultural and social behavioral characteristics similar to those of the Cahuilla, a tribal group generally linked with areas northeast of the San Jacinto Mountains. In fact, exchanges between the Luiseno and Cahuilla have been well documented. In context, the Study Area is considered a Luiseño area, though evidence of a Cahuilla presence may be identified (Robinson and Risher 1996:102-103).

The term Luiseño derives from the mission named San Luis Rey and has been used in the region to refer to those Takic-speaking people associated with Mission San Luis Rey (Bean and Shippek 1978:550). The Luiseño shared boundaries with the Cahuilla, Cupeño, Gabrielino, and Kummeyaay groups on the east, north, and south, respectively. These different bands shared cultural and language traditions with the Luiseño. The Luiseño territory comprised from the coast to Agua Hedionda Creek on the south to near Aliso Creek on the

northwest. The boundary extended inland to Santiago Peak, then across to the eastern side of Elsinore Fault Valley, then southward to the east of Palomar Mountain, then around the southern slope above the valley of San Jose (*ibid.*:550). Their habitat covered every ecological zone from the ocean, sandy beaches, shallow inlets, coastal chaparral, grassy valleys oak groves, among various other niches. The primary food source consisted of game animals such as deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, antelope, and various species of birds. Next to game animals, acorns were the most single important staple, and six different species were utilized (*ibid.*:552). The Luiseño social structure is unclear; however, each village was a clan-triblet-a group of people patrilineally related who owned an area in common and who were politically and economically autonomous from neighboring groups. The Luiseño were not organized into exogamous moieties such as were their neighbors, Cahuilla, Cupeño, and Serrano (Strong 1929:291). The hereditary village chief held an administrative position that combined and controlled religious, economic, and warfare powers (Boscana 1933:43). Marriage was arranged by the parents of children and important lineages were allied through marriage. Reciprocally useful alliances were arranged between groups in different ecological niches, and became springboards of territorial expansion, especially following warfare and truces (White 1963:130).

The Luiseño material culture included an array of tools that were made from stone, wood, bone, and shell, and which served to procure and process the region's resources. Needs for shelter and clothing were minimal in the region's forgiving climate, but considerable attention was devoted to personal decoration in ornaments, painting, and tattooing. The local pottery was well made, although it was not elaborately decorated (Laylander and Pham 2012).

Cahuilla

The Cahuilla occupied a large area in the geographic center of southern California that was bisected by the Cocopa-Maricopa Trail in addition to Santa Fe and Yuman Trails. They occupied an area from the summit of the San Bernardino Mountains in the north to Borrego Springs and the Chocolate Mountains in the south, portions of the Colorado Desert west of Orocopia Mountain to the east, and the San Jacinto Plain near Riverside and the eastern slopes of Palomar Mountain to the west (Bean 1978). The Cahuilla hunted with throwing sticks, clubs, nets, traps, dead falls with seed triggers, spring-poled snares, arrows (often poison-tipped) and self-backed and sinew-backed bows. They sometimes fired bush clumps to drive game out in the open, and flares to attract birds at night. Baskets of various kinds were used for winnowing, leaching, grinding, transporting, parching, storing, and cooking. Pottery vessels were used for carrying water, for storage, cooking, serving food and drink. Cahuilla tools included mortars and pestles, manos and metates, fire drills, awls, arrow-straighteners, flint knives, wood, horn, and bone spoons and stirrers, scrapers, and hammerstones. Woven rabbitskin blankets served to keep people warm in cold weather. Feathered costumes were worn for ceremonial events, and at these events the Cahuilla made music using rattles derived from insect cocoon, turtle and tortoise shell, and deer-hoofs, along with wood rasps, bone whistles, bull-roarers, and flutes, to make music. They wove bags, storage pouches, cords, and nets from the fibers of yucca, agave, and other plants (Bean and Vane 2002).

4.1.5 Reche Hills Complex

The Study Area is located within an area that has been designated as the Reche Hills Complex (City of Moreno Valley 2006). The Reche Hills Complex is comprised of a series of hills that stretch south into Moreno Valley from the mountains on the west side of Reche Canyon. There appears to be two major habitation areas within the complex and include an area at the mouth of Reche Canyon (approximately one-

half mile northwest of the Study Area) and another area to the southeast of the canyon. These areas are characterized as prehistoric habitation areas that consist of more than 23 bedrock millings stations, cupule rocks, petroglyphs, and pictographs (*Ibid.*). The identification of this complex, whose boundaries encompass the Study Area, confirms the prehistoric occupation of the Study Area and surrounding vicinity.

4.1.6 European Contact

European contact with the Native American groups that likely inhabited the Study Area and surrounding region began in 1542 when Spanish explorer, Juan Rodriguez Cabrillo, arrived by sea during his navigation of the California coast. Sebastian Vizcaino arrived in 1602 during his expedition to explore and map the western coast that Cabrillo visited 60 years earlier. In 1769, another Spanish explorer, Gaspar de Portola, passed through Luiseño/Kumeyaay territory and interacted with the local indigenous groups. In 1798, Mission San Luis Rey was established by the Spanish and it likely integrated the Native Americans from the surrounding region. Multiple epidemics took a great toll on Native American populations between approximately 1800 and the early 1860s (Porretta 1983), along with the cultural and political upheavals that came with European, Mexican, and American settlement (Goldberg 2001:50-52). In the beginning of the nineteenth century, some Spaniards who had worked at the missions began to set up what would later be known as the “Ranchos.” The Rancho era in California history was a period when the entire state was divided into large parcels of land equaling thousands of acres apiece. These large estates were ruled over in a semi-feudal manner by men who had been deeded the land by first the Spanish crown, and later the Mexican government. In 1821 Mexico won independence from Spain and began to dismantle the mission system in California. As the missions began to secularize, they were transformed into small towns and most Native Americans would later be marginalized into reservations or into American society. It was during this time that “Americans” began to enter California. Many of the American Californians married into the Rancho families, a development that would transform land ownership in Mexican California. By the time the United States annexed California after the Mexican-American War in 1850, much of the Rancho lands were already in the hands of Americans.

4.2 HISTORIC CONTEXT

4.2.1 City of Moreno Valley

By the mid-19th century, the area that comprises present-day Moreno Valley remained essentially uninhabited, despite its location on a grassy upland surrounded by several large Mexican Ranchos. When the U.S. government initiated its first official land survey in southern California in 1853-1855, the only man-made features in the Moreno Valley were a few roads including a wagon road from San Bernardino to Temecula, a second one leading to San Jacinto, and several unidentified roads and/or trails.

The area surrounding Moreno Valley remained unclaimed public land until 1870, when a large tract of 13,471 acres were purchased from the U.S. Government and with the expansion of the railroad in 1880's a land boom soon brought settlers into the area, only to see the boom turn to bust for lack of a reliable water supply. In 1891, private developers brought water into new Haven, which was subsequently changed to Moreno and Midland also, known as Armada from the newly constructed Bear Valley reservoir, which got the economy moving again until a drought the following year stopped the water flow from the Bear Valley reservoir. As a result, the town of Moreno died again and many of its budding were either abandoned or were sold and moved to Riverside (Gunther 1984).

Moreno Valley's economic fortunes were severely hampered by the lack of water. Finally, in 1973, after the completion of the California Aqueduct and the construction of Lake Perris, Moreno Valley's economic fortunes began to change. A reliable water supply, coupled with the Interstate Freeway System and the construction of affordable housing brought an influx of commuters to the Moreno Valley area, setting off a period of rapid expansion and urbanization. By 1984, when residents in the communities of Moreno, Sunnymead, and Edgemont voted to incorporate as the City of Moreno Valley, the new city had already become the second most populous in Riverside County (*Ibid.*).

5.0 METHODS

5.1 CULTURAL RESOURCES RECORDS SEARCH

On November 17, 2014, Mr. Purtell conducted a records search of the Study Area at the CHRIS-EIC. The records searches included a review of all recorded archaeological and historical resources within a one-half-mile radius of the Study Area and within a one-mile radius of the Off-Site Areas as well as a review of cultural resource reports and historic topographic maps on file. In addition, ESA PCR reviewed the California Points of Historical Interest (CPHI), the California Historical Landmarks (CHL), the California Register, the National Register, and the California State Historic Resources Inventory (HRI) listings. The purpose of the record search is to determine whether or not there are previously recorded archaeological or historical resources within the Study Area that require evaluation and treatment. The results also provide a basis for assessing the sensitivity of the Study Area for additional and buried cultural resources.

5.2 SACRED LANDS FILE SEARCH AND NATIVE AMERICAN CONSULTATION

On November 12, 2014, Mr. Purtell commissioned a SLF records search of the Study Area through the NAHC and conducted follow-up consultation with the ten (10) Native American groups and/or individuals (inclusive of Luiseño and Cahuilla groups) identified by the NAHC as having affiliation with the Study Area vicinity. Each Native American group and/or individual listed was sent a project notification letter and map and was asked to convey any knowledge regarding prehistoric or Native American resources (archaeological sites, sacred lands, or artifacts) located within the Study Area or surrounding vicinity. The letter included information such as Study Area location and a brief description of the proposed project. Results of the search and follow-up consultation provided information as to the nature and location of additional prehistoric or Native American resources to be incorporated in the assessment whose records may not be available at the CHRIS-EIC.

5.3 PALEONTOLOGICAL RESOURCES RECORDS SEARCH

On November 12, 2014, Mr. Purtell commissioned a paleontological resources records search through the Division of Geological Sciences at the SBCM in Redlands, California. This institution maintains files of regional paleontological site records as well as supporting maps and documents. This record search entailed an examination of current geologic maps and known fossil localities inside and within the general vicinity of the Study Area. The objective of the record search was to determine the geological formations underlying the Study Area, whether any paleontological localities have previously been identified within the Study Area or in the same or similar formations near the Study Area, and the potential for excavations associated with the Study Area to encounter paleontological resources. The results also provide a basis for assessing the sensitivity of the Study Area for additional and buried paleontological resources.

5.4 PEDESTRIAN SURVEY

On December 23, 2014, ESA PCR (Mr. Garcia, Mr. Purtell, and Ms. Willey) conducted a pedestrian survey of the Study Area to identify the presence of archaeological, historical, or paleontological resources. The field crew surveyed the Study Area using parallel pedestrian transects spaced not more than 10 to 15 meters (m) between each surveyor. A Trimble® GeoXT™ sub-meter Global Positioning System (GPS) unit was used for navigation and documenting distribution of Study Area conditions. ESA PCR surveyed 100% of the Study Area. Detailed notes and digital photographs were also taken of the Study Area and surrounding vicinity.

Resources were documented on State of California Department of Parks and Recreation (DPR) 523 series Site Forms with preliminary sketch maps and photographs providing supplemental documentation.

On June 14, 2016, Mrs. Clark conducted an additional pedestrian survey of a proposed water pipeline alignment west of the intersection of Moreno Beach Drive and Juniper Avenue which was not previously included as part of the original 2014 ESA PCR assessment. Mrs. Clark surveyed the additional pipeline alignment using parallel transects spaced at no more than five meters apart.

6.0 RESULTS

6.1 CULTURAL RESOURCES RECORDS SEARCH

Results of the records research conducted at the CHRIS-EIC revealed that there have been two cultural resource studies conducted within the Study Area (RI-08242 and RI-08368). These studies are described in detail, below. Twelve cultural resource studies have been conducted within a one-half mile radius and 17 studies have been conducted within a one-mile radius of the Study Area. All of these studies were conducted from 1978 to 2012 and encompass approximately 75 percent of the record search area.

Report RI-08242 is described as phase I assessment of the current Study Area (not inclusive of the off-site areas) for a proposed high school that was conducted in 2008. Results of this assessment identified one prehistoric cultural resource within the Study Area (P-33-001064/CA-RIV-1064). This resource is described as one bedrock milling slick on a granitic boulder in the northwestern portion of the Study Area with no associated surface artifacts.

Report RI-8368 is described as a phase I assessment (in 2009) of the two alternative sewer pipelines that appear to overlap in certain area of the current Study Area. No cultural resources were identified as part of this assessment.

As discussed above, the records search also revealed that one prehistoric archaeological resource, CA-RIV-1064 (P-33-001064) was recorded within the Study Area. This resource is described in more detail in Section 6.4 of this report. Seven prehistoric archaeological sites and one prehistoric isolate have been recorded within a one-eighth mile of the Study Area. These resources are summarized in **Table 1, *Previously Recorded Cultural Resources Within a One-eighth Mile of the Study Area***. Twenty-four prehistoric archaeological sites and one historical archaeological site have been recorded within one-half mile of the Study Area. The majority of the prehistoric archaeological resources recorded in the vicinity of the Study Area include bedrock milling stations.

Table 1

Previously Recorded Cultural Resources Within a One-Eighth Mile Radius of the Study Area

Resource Designation	Description	Status Code
CA-RIV-2277	Six milling slicks on two boulders, chert flake, metavolcanic scraper	7
CA-RIV-2587	Three milling slicks on one granite boulder	7
CA-RIV-3305	One milling slick on one granite boulder	7
CA-RIV-3306	10 cupules on a granite boulder	7
CA-RIV-1604	Rockshelter with more than 100 cupules and several pit-and-groove petroglyphs	7
CA-RIV-4924	One milling slick on one granite boulder	7
CA-RIV-4925	One milling slick on one granite boulder	7
P-33-017851	Isolated granite mano	7

7 – Not Evaluated

Source: CHRIS-EIC, November 2014

6.2 SACRED LANDS FILE SEARCH AND NATIVE AMERICAN CONSULTATION

The NAHC SLF records search results (received November 24, 2014) revealed that there are no known “Native American cultural resources” in the SLF database within the Study Area. As per NAHC suggested procedure, follow-up letters were sent via certified mail on December 15, 2014 to the ten (10) Native American individuals and organizations identified by the NAHC as being affiliated with the vicinity of the Study Area to request any additional information they may have about Native American cultural resources that may be affected by the proposed project.

As of June 23, 2016, ESA PCR has received one response from the Morongo Band of Mission Indians (Morongo) who requested the following: 1) If human remains are discovered, that they be treated in accordance with State Health and Safety Code Section 7050.5, 2) If significant prehistoric Native American resources are discovered, that a qualified archaeologist be consulted to assess the find, 3) If a treatment plan is prepared for the resource that the Morongo be contacted, and 4) If requested by the Morongo, the Applicant shall consult with the Morongo “on the discovery and its disposition (e.g., avoidance, preservation, return of artifacts, etc.)” ESA PCR has received no other responses from the Native American community concerning the proposed project. ESA PCR will keep the Applicant apprised with the progress of this ongoing Native American consultation. The NAHC SLF records search results, the Native American contact list, request letters, and response letters are provided in Appendix B of this report.

6.3 PALEONTOLOGICAL RESOURCES RECORDS SEARCH

Results of the paleontological resources records search through the SBCM indicate that no known vertebrate fossil localities from the SBCM database have been previously identified within the Study Area or within a one-mile radius. The Study Area has been previously mapped geologically and is situated upon surface exposures of early Pleistocene-aged fan deposits (Qvofa), overlain across much of the property by a thin sedimentary veneer of recent Holocene-aged alluvium (Qyaa). Similar older Pleistocene-aged alluvial sediments throughout the Inland Empire have yielded extinct taxa including mammoths, mastodons, ground sloths, dire wolves, sabre-toothed cats, large and small horses, large and small camels, and bison, as well as plant macro- and microfossils. The northwestern portion of the Study Area is mapped as Cretaceous-aged tonalite (Kt) (Scott 2014).

The paleontological resources records search results letter from the SBCM is provided in Appendix C of this report.

6.4 PEDESTRIAN SURVEY

ESA PCR identified two prehistoric archaeological resources (P-33-024882/CA-RIV-12,333 and P-33-024883) within the Study Area during the pedestrian survey. Moreover, one previously recorded archaeological resource (P-33-017851) that was recorded immediately outside of the off-site sewer area was revisited by ESA PCR. These resources are described in more detail below. No built environment or paleontological resources were identified during the pedestrian survey.

6.4.1 33-024882/CA-RIV-12333

This resource consists of a previously recorded bedrock milling station that was recorded in 2008 by McKenna in the northwestern portion of Study Area (**Figure D1**, *Resources Map*, in Appendix D of this report). It is described by McKenna as one milling slick on a single granite boulder and given its proximity to other nearby prehistoric resources, McKenna designated it as a component of the previously recorded resource CA-RIV-1604 (McKenna 2008a, 2008b). CA-RIV-1604 is located approximately 300 m to the west of 33-024882 and was originally recorded in 1976 as a rockshelter with more than 100 cupules and several pit-and-groove petroglyphs (Parr and Arkush 1987). Although ESA PCR agrees with McKenna in that 33-024882 is likely associated with CA-RIV-1064, ESA PCR has decided to give the resource a separate designation since other nearby bedrock milling stations were also designated separately and since this resource will be evaluated separately from CA-RIV-1064.

ESA PCR identified P-33-024882 in the exact location within the Study Area that McKenna did in 2008; however, ESA PCR identified three milling slicks on the boulder as opposed to a single milling slick. Furthermore, ESA PCR identified an additional milling slick on another low-lying granite boulder approximately 17 m to the north. As a result, P-33-024882 consists of one boulder with one milling slick and one boulder with three milling slicks and measures 25 m (north/south) x 6 m (east-west) (see **Figure D1**). No surface artifacts were identified by ESA PCR (or McKenna in 2008) near the boulders. The area within and around P-33-024882 has been disturbed by recent and recurring disking/plowing activities and many nearby boulders appear to have been displaced from their former location as result of the construction of the adjacent road (Nason St.).

6.4.2 P-33-024883

This resource consists of a newly identified isolated artifact—a quartzite hammerstone—that is polished on one end and therefore appears to have been utilized as a ground stone as well. The resource was found within the southwestern portion of the Study Area in a disturbed context (recently disked field) and has likely been displaced from its original location (see **Figure D1**).

6.4.3 P-33-017851

This resource was originally recorded in 2009 as an isolated granite mano artifact (Ballester 2009). ESA PCR revisited the resource during the pedestrian survey and confirmed its location outside the Study Area. Specifically it is located 20 m west of the edge of the pavement of a road (Oliver St.) where an off-site sewer line is proposed.

The new and/or updated DPR Site Forms for the aforementioned resources are provided in Appendix D of this report.

No other resources were identified within the Study Area during the pedestrian survey. This may have been a direct result of heavy ground-surface disturbances from recent and recurring disking/plowing and numerous off-road vehicle tracks and walking trails, which may have displaced (e.g., buried) resources from their original location.

6.4.4 Other Study Area Conditions

Ground surface visibility was relatively consistent throughout the Study Area and ranged from 75 to 100 percent within in the 79-acre on-site parcel and zero percent in the off-site areas due to existing pavement (roadways) that obstructed the natural ground surface (**Figure 4** through **Figure 6**, *Study Area Photographs*). Limitations to ground visibility including low-lying vegetation (primarily California buckwheat, salt-brush, white sage, and wild grasses) that occurred throughout the Study Area except in northern portion where large granite boulders, spares trees, and tall brush partially obstructed ground visibility.

6.4.5 June 2016 Pedestrian Survey

The pedestrian survey revealed that this portion of the Study Area (located immediately west of the intersection of Juniper Avenue and Moreno Beach Drive) is covered with dense vegetation. In particular, the ground surface visibility in this area is approximately 25 to 50 percent. A drainage was identified in the eastern portion of the alignment near Moreno Beach Drive. No archaeological, built environment, or paleontological resources were encountered during the June 2016 pedestrian survey.



Overview of Study Area, view west.



Overview of Study Area showing topography, view west.



Overview of elevated areas in northern portion of Study Area, view north.



Overview of southern areas of Study Area, view southwest.



Overview of Study Area where off-site water line is proposed, view south.



Overview of Study Area where off-site water line is proposed (Moreno Beach Dr.), view south.



Overview of Study Area where off-site sewer line is proposed (immediately south of U.S. Route 60), view north.

7.0 EVALUATION

Evaluation of cultural resources is determined by conducting an “evaluation” of a resource’s eligibility for listing in the California Register; determining whether it qualifies as a “unique archaeological resource”; and determining whether the resource retains integrity. This is achieved by applying the California Register criteria (including criteria for a “unique archaeological resource”) as defined in Chapter 2 of this report. If a resource is determined eligible for listing in the California Register or qualifies as a “unique archaeological resource” and retains integrity, then the resource is considered an archaeological resource and/or a historical resource pursuant to CEQA §15064.5 and any substantial adverse change to the resource is considered a significant impact on the environment. The CEQA guidelines do not provide criteria to evaluate paleontological resources.

7.1 ARCHAEOLOGICAL RESOURCES

7.1.1 P-33-024882/CA-RIV-12,333

Resource P-33-024882/CA-RIV-12,333 is a prehistoric archaeological resource that was previously recorded in the northwestern portion of the Study Area and was revisited by ESA PCR during the pedestrian survey. It consists of one boulder with one milling slick and one boulder with three milling slicks and measures 25 meters (north/south) x 6 meters (east-west). The Applicant has designed the project to avoid this resource and it is located in an area that is planned for open space; therefore no additional work or mitigation would be warranted. Since the resource would be avoided by the proposed project, no formal evaluation of the resource was performed by ESA PCR.

7.1.2 P-33-024883

Resource P-33-024883 was identified in a disturbed and isolated context and therefore the potential for intact subsurface archaeological deposits in the area where it was recorded by ESA PCR is low. As a result of these factors, P-33-024883 does not yield, or have the potential to yield information important to prehistory (Criterion 4 of the California Register) and therefore recommend as not eligible for listing in the California Register and does not qualify as a unique archaeological resource pursuant to CEQA. No additional work is necessary at this resource and impacts to it from the proposed project are not considered a significant impact on the environment.

7.2 BUILT ENVIRONMENT RESOURCES

As discussed in the previous chapter, no known built environment resources from the EIC records were recorded within the Study Area and no resources were identified during the pedestrian survey; therefore, no evaluation of built environment resources is necessary.

7.3 PALEONTOLOGICAL RESOURCES

As discussed in the previous chapter, no known paleontological resources from the SBCM records were recorded within the Study Area and no resources were identified during the pedestrian survey; therefore, no evaluation of paleontological resources is necessary.

8.0 IMPACTS/EFFECTS ANALYSIS

The purpose of this chapter is to discuss the potential impacts to archaeological, historical (built environment), and paleontological resources, and human remains associated with implementing the proposed project.

8.1 CEQA SIGNIFICANCE THRESHOLDS

8.1.1 Archaeological Resources

The current CEQA Guidelines state that a project will have a significant impact on the environment if it ***will cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.***

According to the CEQA Guidelines, an archaeological resource is further defined as a resource that qualifies as a “historical resource”⁶ pursuant to CEQA Guidelines Section 15064.5 or a “unique archaeological resource” pursuant to Section 21083.2 of the Public Resources Code. These terms are defined earlier in this report. Therefore, a project will have a significant impact on the environment if it will cause a “substantial adverse change” in the significance of a historical resource or “damage” to a unique archaeological resource.

A “substantial adverse change” (as defined in the CEQA Guidelines) is caused when one or more of the following occurs:

- Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- The significance of a historical resource is materially impaired when a project:
 - a. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
 - b. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
 - c. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for

⁶ A historical resource can be an archaeological object, site or district that is listed in or determined eligible for the CRHR.

inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

The CEQA Guidelines do not define “damage” when it comes to unique archaeological resources, but it can be reasonably interpreted as having a meaning similar to that of “substantial adverse change” (as defined above).

8.1.2 Historical Resources

The current CEQA Guidelines state that a project will have a significant impact on the environment if it ***will cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.***

According to the CEQA Guidelines, a historical resource is further defined as a resource that qualifies for listing in the California Register or another federal or local register. The criteria for listing are defined earlier in this report. Therefore, a project will have a significant impact on the environment if it will cause a “substantial adverse change” in the significance of a historical resource. The definition of “substantial adverse change” is provided in the previous section, 8.1.1.

The *Secretary of the Interior’s Standards for Rehabilitation* (Standards) are codified at 36 Code of Federal Regulations (CFR) Section 67.7. In most circumstances, the Standards are relevant in assessing whether there is a substantial adverse change under CEQA. Section 15064.5b(3) of the CEQA Guidelines states in part that “. . . a project that follows the *Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* or the *Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historic resource,” and therefore may be considered categorically exempt.

8.1.3 Paleontological Resources

The current CEQA Guidelines state that a project will have a significant impact on the environment if it ***will directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.***

The CEQA Guidelines do not define “directly or indirectly destroy,” but it can be reasonably interpreted as the physical damage, alteration, disturbance, or destruction of a paleontological resource.

8.1.4 Human Remains

The current CEQA Guidelines state that a project will have a significant impact on the environment if it ***will disturb any human remains, including those interred outside of formal cemeteries.***

The CEQA Guidelines do not define “disturb” but it can be reasonably interpreted as the physical damage, alteration, disturbance, or destruction of any human remains.

8.2 POTENTIAL IMPACTS

8.2.1 Project Description

As discussed earlier, the proposed project would include the construction of single-family residences, streets, infrastructure, utilities, parks, open spaces, and off-site water and sewer lines. Excavations associated with implementation of the proposed project would occur across the majority of the Study Area.

8.2.2 Archaeological Resources

P-33-024882/CA-RIV-12,333 was identified in the northwestern portion of the Study Area. As discussed earlier, the Applicant has designed the project to avoid this resource and it is located in an area that is planned for open space; therefore no impacts to the resource from the proposed project would occur.

These findings, however, do not preclude the existence of undiscovered archaeological resources located below the ground surface and lacking surface manifestation, which may be encountered during construction excavations associated with the proposed project. It is possible to encounter buried archaeological resources given the proven prehistoric occupation of the region, the identification of multiple surface archaeological resources within the vicinity of the Study Area (including two archaeological resources within the Study Area and numerous resources recorded in the Reche Hills Complex – see Section 4.1.5 of this report), and the favorable natural conditions (e.g., ephemeral drainages, natural spring, and vegetation communities) that would have attracted prehistoric inhabitants to the area. Therefore, despite the heavy disturbances of the Study Area that may have displaced archaeological resources on the surface, it is possible that intact archaeological resources exist at depth. As a result, recommended mitigation measures are provided in the following chapter to reduce potentially significant impacts to previously undiscovered archaeological resources that may be accidentally encountered during project implementation to a less than significant level.

8.2.3 Historical Resources (Built Environment Resources)

Results from the CHRIS-EIC indicated that there were no previously recorded historical (or built environment) resources within the Study Area and no historical resources were identified during the pedestrian survey; therefore, no impact analysis of historical resources is necessary.

8.2.4 Paleontological Resources

Results of the paleontological resources records search through SBCM indicate that no vertebrate fossil localities from the SBCM records have been previously recorded within the Study Area or within a one-mile radius. Moreover, no paleontological resources were identified by ESA PCR during the pedestrian survey. These findings; however, do not preclude the existence of undiscovered paleontological resources located below the ground surface and lacking surface manifestation, which may be encountered during construction excavations associated with the proposed project. The Study Area has been previously mapped geologically as containing surface exposures of early Pleistocene-aged fan deposits, overlain across much of the Study Area by a thin sedimentary veneer of recent Holocene-aged alluvium. The northwestern portion of the Study Area is mapped as Cretaceous-aged tonalite. The tonalite and the surficial Holocene-aged alluvium have very limited to no potential to be conducive to retaining paleontological resources; however, the Pleistocene-aged fan deposits may have high a paleontological sensitivity, depending upon their lithology, as these sediments

have yielded significant fossils of extinct animals from the Ice Age throughout the Inland Empire (Scott 2014). As a result, recommended mitigation measures are provided in the following chapter to reduce potentially significant impacts to previously undiscovered paleontological resources and/or unique geological features that may be accidentally encountered during project implementation to a less than significant level.

8.2.5 Human Remains

No known human remains have been identified from the CHRIS-EIC database within a half-mile radius of the Study Area. No human remains were identified during the pedestrian survey of the Study Area. However, these findings do not preclude the existence of previously unknown human remains located below the ground surface, which may be encountered during construction excavations associated with the proposed project. Similar to the discussion regarding archaeological resources above, it is also possible to encounter buried human remains during construction given the proven prehistoric occupation of the region, the identification of multiple surface archaeological resources within a half-mile of the Study Area, and the favorable natural conditions that would have attracted prehistoric inhabitants to the area. As a result, recommended mitigation measures are provided in the following chapter that would reduce potentially significant impacts to previously unknown human remains that may be unexpectedly discovered during project implementation to a less than significant level.

9.0 RECOMMENDED MITIGATION MEASURES

9.1 ARCHAEOLOGICAL RESOURCES

The following mitigation measures have been recommended to reduce potentially significant impacts to archaeological resources that are accidentally discovered during implementation of the proposed project to a less than significant level:

Mitigation Measure CULT-1: Conduct Archaeological Sensitivity Training for Construction Personnel. The Applicant shall retain a qualified professional archaeologist who shall conduct an Archaeological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session, shall be carried out by a cultural resources professional with expertise in archaeology, will focus on how to identify archaeological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event. The training session will include a Power Point presentation and/or handouts for all attendees. The basic topics to be addressed in the session include: a brief cultural and archaeological history of the area and the Applicant's and City's cultural resource compliance obligations; training in potential resources that may be encountered through the use of photographs or other illustrations; the duties of archaeological monitors; notification and other procedures to follow upon discovery of resources; and, the general steps that would be followed to conduct a salvage investigation if one is necessary. A sign-in sheet shall be compiled to track attendance and shall be submitted to the City with the Archaeological Monitoring Report.

Mitigation Measure CULT-2: Monitor Construction Excavations for Archeological Resources in Younger Alluvial Sediments. The Applicant shall retain a qualified archaeological monitor, who will work under the direction and guidance of a qualified professional archaeologist. The archaeological monitor shall be present during all construction excavations (e.g., grading, trenching, or clearing/grubbing) into non-fill younger Pleistocene alluvial sediments. Multiple earth-moving construction activities may require multiple archaeological monitors. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known archaeological resources, the materials being excavated (native versus artificial fill soils), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring can be reduced to part-time inspections if determined adequate by the project archaeologist.

Mitigation Measure CULT-3: Cease Ground-Disturbing Activities and Implement Treatment Plan if Archaeological Resources Are Encountered. In the event that archaeological resources are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A buffer area shall be established around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by project construction activities shall be evaluated by a qualified professional archaeologist. The Applicant and City shall coordinate with the archaeologist to develop an appropriate treatment plan for the resources. Treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and

analysis or preservation in place. The landowner, in consultation with the archaeologist, shall designate repositories in the event that archaeological material is recovered.

Mitigation Measure CULT-4: Prepare Report Upon Completion of Monitoring Services. The archaeological monitor under the direction of a qualified professional archaeologist shall prepare a final report at the conclusion of archaeological monitoring. The report shall be submitted to the Applicant and the Eastern Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures. The report shall include a description of resources unearthed, if any, evaluation of the resources with respect to the California Register and CEQA, and treatment of the resources.

9.2 HISTORICAL RESOURCES (BUILT ENVIRONMENT RESOURCES)

The proposed project would not impact historical resources therefore no mitigation measures are recommended.

9.3 PALEONTOLOGICAL RESOURCES

The following mitigation measures have been recommended to reduce potentially significant impacts to paleontological resources that are accidentally discovered during implementation of the proposed project to a less than significant level:

Mitigation Measure CULT-5: Conduct Paleontological Sensitivity Training for Construction Personnel. The Applicant shall retain a qualified paleontologist who shall conduct a Paleontological Sensitivity Training for construction personnel prior to commencement of excavation activities. The training session, shall be carried out by a cultural resources professional with expertise in paleontology, will focus on how to identify paleontological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event. The training session will include a Power Point presentation and/or handouts for all attendees. The basic topics to be addressed in the session include: a brief cultural and geologic history of the area and the City cultural resource compliance obligations; training in potential resources that may be encountered through the use of photographs or other illustrations; the duties of paleontological monitors; notification and other procedures to follow upon discovery of resources; and, the general steps that would be followed to conduct a salvage investigation if one is necessary.

Mitigation Measure CULT-6: Monitor Construction Excavations for Paleontological Resources in Older Pleistocene Alluvial Deposits. The Applicant shall retain a qualified paleontological monitor, who will work under the guidance and direction of a qualified professional paleontologist. The paleontological monitor shall be present during all construction excavations (e.g., grading, trenching, or clearing/grubbing) into non-fill older Pleistocene alluvial deposits. Multiple earth-moving construction activities may require multiple paleontological monitors. The frequency of monitoring shall be based on the rate of excavation and grading activities, proximity to known paleontological resources and/or unique geological features, the materials being excavated (native versus artificial fill soils), and the depth of excavation, and if found, the abundance and type of paleontological resources and/or unique geological features encountered. Full-time

monitoring can be reduced to part-time inspections if determined adequate by the qualified professional paleontologist.

Mitigation Measure CULT-7: Cease Ground-Disturbing Activities and Implement Treatment Plan if Paleontological Resources Are Encountered. In the event that paleontological resources and or unique geological features are unearthed during ground-disturbing activities, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A buffer area of at least 25 feet shall be established around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. The Applicant and City shall coordinate with a qualified professional paleontologist to develop an appropriate treatment plan for the resources. Treatment may include implementation of paleontological salvage excavations to remove the resource along with subsequent laboratory processing and analysis or preservation in place. At the paleontologist's discretion and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock samples for initial processing. Any fossils encountered and recovered shall be prepared to the point of taxonomic identification and catalogued and curated to a suitable museum or other repository with a research interest in the materials, such as the San Bernardino County Museum or Western Science Center. If no institution accepts the fossil collection, they shall be donated to a local school in the area for educational purposes. Accompanying notes, maps, and photographs shall also be filed at the repository and/or school.

Mitigation Measure CULT-8: Prepare Report Upon Completion of Monitoring Services. Upon completion of the above activities, the paleontologist shall prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted to the Applicant, City, the San Bernardino County Natural History Museum, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the project and required mitigation measures.

9.4 HUMAN REMAINS

Components of the proposed project that require excavation activities, the following mitigation measure is recommended to reduce potentially significant impacts to previously unknown human remains that are unexpectedly discovered during excavations to a less than significant level:

Mitigation Measure CULT-9: Cease Ground-Disturbing Activities and Notify County Coroner If Human Remains Are Encountered. If human remains are unearthed during implementation of the Proposed Project, the City shall comply with State Health and Safety Code Section 7050.5. The City shall immediately notify the County Coroner and no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the person(s) thought to be the Most Likely Descendent (MLD). The MLD may, with the permission of the landowner, inspect the site of the discovery of the Native American remains and may recommend to the landowner means for treating or disposing, with appropriate dignity, the human remains and any associated funerary objects. The MLD shall complete their inspection and make their recommendation within 48 hours of being

granted access by the landowner to inspect the discovery. The recommendation may include the scientific removal and nondestructive analysis of human remains and cultural items associated with Native American burials. Upon the discovery of the Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this mitigation measure, with the MLD regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. MLDs in the region typically recommend reburial of the remains as close to the original burial location as feasible accompanied by a ceremony. The MLD shall file a record of the reburial with the NAHC and the project archaeologist shall file a record of the reburial with the CHRIS-EIC.

If the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner rejects the recommendation of the MLD and the mediation provided for in Subdivision (k) of Section 5097.94, if invoked, fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the facility property in a location not subject to further and future subsurface disturbance. A record of the reburial shall be filed with the NAHC and the CHRIS-EIC.

10.0 REFERENCES CITED

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White, Raymond C.

1963 Luiseño Social Organization. University of California Publications in American Archaeology and Ethnology 48:91-194. Berkeley.

APPENDIX A – Personnel Qualifications



Kyle Garcia

Senior Archaeologist

EDUCATION

M.A., Anthropology
(Archaeology Option),
California State
University Los Angeles,
In Progress

B.A., Anthropology,
(Physical/ Biological
Emphasis), University of
California, Santa Barbara

13 YEARS EXPERIENCE

CERTIFICATIONS/ REGISTRATION

Riverside County
Registered Archaeologist
#202

40-Hour HAZWOPER
Training – Update, 2013

PROFESSIONAL AFFILIATIONS

Society for American
Archaeology

Society for California
Archaeology

Pacific Coast
Archaeological Society

Kyle Garcia has 13 years of experience in the archaeology and prehistory of California with a specialization in faunal analysis. He is well-versed in the archaeological resources of California's coastal, interior, and island settings. He is skilled in evaluation historic and prehistoric archaeological resources; agency and Native American consultation; pedestrian surveys, testing and evaluation excavations, and construction monitoring; application of the California Quality Act (CEQA), the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), and local regulations; and laboratory processing. During his tenure he has authored or contributed to more than 350 technical reports and sections to support all levels of CEQA and NEPA documents. In addition to his archaeological work, Kyle has been cross-trained in paleontological mitigation monitoring.

Relevant Experience

Kyle's portfolio of projects includes energy, water and transportation infrastructure; residential, commercial, mixed-use, institutional, and urban redevelopment serving public and private sector clients. He has conducted archaeological work throughout California.

Large-Scale Development Projects. Kyle directed the 1,400-acre field survey and the successful site recordation of over 150 prehistoric and historic archaeological resources per the Section 106 Process for a confidential project in Riverside County; served as the Deputy Project Manager for the 240-acre Archaeological Treatment & Restoration Plan for The Cove project that was subject to Section 106, responsible for the field survey, Native American consultation, final report, and supervised the thorough recordation and documentation of over 350 significant artifacts. In Arizona, he led crews on a pedestrian survey and site recordation of more than 200 historic and prehistoric archaeological resources during a Class III Inventory on an 11,000-acre portion of the La Osa Ranch Project site in Pinal County.

Water Infrastructure. Kyle has performed the archaeological and paleontological resources surveys and assessments for a number of regional water infrastructure projects including the Reservoir No. 1 Reconstruction Project MND for Burbank; the Pasadena Groundwater Storage Program; and recycled water facilities projects for San Clemente, the Town of Rosamond, and Palmdale.

Transportation Peer Reviews. Kyle is often sought after to conduct Peer Review services of controversial projects across southern California including the Needles Highway Safety Realignment Project for the County of San Bernardino, various infrastructure projects for Caltrans/San Bernardino Associated Governments, and the I-710 Corridor Project EIS/EIR for the City of Commerce.

Energy Projects. Kyle served as the Project Director for over 100 SCE projects, managing purchase orders totaling more than \$1.5M during PCR's on-call cultural resources management contract to Southern California Edison (SCE).



Fatima Clark

Archeologist

EDUCATION

B.A., Anthropology,
California State
University, Fullerton,
2005

9 YEARS EXPERIENCE

SPECIALIZED TRAINING

Workshop: The Art and
Science of Flintknapping,
California Desert Studies
Center, 2013

Successful CEQA,
Compliance-Southern
California Edison,
Environmental Training,
2011

Cultural Resources
Protection under CEQA
and Other Legislative
Mandates, UCLA
Extension, 2010

PROFESSIONAL AFFILIATIONS

Society for California
Archaeology

Fatima Clark has eight years of hands-on archaeological experience and is a practiced in project management and client and agency coordination. Her field experience is complimented by the course study and participation in numerous archaeological excavations in California, Arizona and Peru. In addition to her archaeology background, she has been cross trained in conducting paleontological surveys and monitoring and co-authored and managed associated reports.

Experience

Fatima has written CEQA-level technical reports, EIR sections, Initial Study sections, archaeological peer reviews, archaeological monitoring reports, and reports pursuant to Caltrans requirements. She is also experienced in performing archaeological testing, site recordation, pedestrian surveys, records searches through several California Historical Resources Information Systems-Information Centers, and monitoring for a wide variety of projects including mixed-use, residential, and energy, water, and road infrastructure projects.

Real Estate Development. Fatima has provided a full range of archaeological services to numerous projects throughout Southern California. Recent project experience includes the Uptown Newport Village Project in Newport Beach, the Shriners Hospital for Children in Pasadena, the San Juan Medical Office Building in San Juan Capistrano, and the Aidlin Property Residential Project in the Stevenson Ranch community of unincorporated Los Angeles County.

Infrastructure. Fatima has served a number of clients and lead agencies in the provision of a variety of archaeological services including municipalities, water agencies, Caltrans, large engineering firms, and energy providers. She also served as an in-house consultant to Southern California Edison for nearly six years during which time she worked on a wide variety of Environmental Compliance projects including the Deteriorated Pole and General Order 131D Programs and the Valley South Subtransmission (VSSP) Project. Fatima also performed the records search, Phase I pedestrian survey, Phase II testing, and monitoring for the SunEdison Cascade Solar Energy Project in the Sunfair Community of unincorporated San Bernardino County.

Her road and water infrastructure projects include serving as Project Manager for the I-10 Freeway/Pepper Avenue Interchange Project in Colton which in addition to the technical analysis involved coordination with the Prime Consultant, San Bernardino Associated Governments, and Caltrans' Environmental Unit. She is currently the Project Manager for the La Costa Chevron Drainage Improvements Project in Encinitas regarding the proposed repairs of an eroded gully into a Caltrans right-of-way requiring a Caltrans Extended Phase I excavation (XPHI). Other projects include the Badlands Landfill stockpile project for Riverside County, the Palos Verdes pipeline project and Crenshaw Reservoir project for the California Water Service Company, and the San Clemente Recycled Water project.

Education

- M.A., Anthropology, California State University, Fullerton, 2013
- B.A., Anthropology/Archaeology, (Geography Minor), California State University, Dominguez Hills, 2005

Permits/Certifications

- Register of Professional Archaeologist (RPA), ID No. 990027

Continuing Education

- OSHA 24-hr HazWaste Operations Certification, 2013
- Writing the Perfect EA/FONSI, 2011
- 5-Phase Project Management, UCLA Extension, 2008
- Basic CEQA Workshop Series, Association of Environmental Professionals, 2005
- World Class TQM 40-Hour Boot Camp Workshop, Technical Change Associates Inc., 2001

Awards/Recognition

- Professional Distinction Award for Field and Laboratory Analysis, California State University, Fullerton, 2007–2008

Professional Affiliations

- Society for American Archaeology
- Society for California Archaeology

Summary

Christopher Purtell is an archaeologist with nine years of professional experience in environmental compliance, archaeological surveys, excavations, monitoring, data recovery, laboratory analysis, and in the development of mitigation and treatment plans. An experienced project manager, Mr. Purtell has more than six years of experience in a decision-making capacity on cultural resources projects in California.

As an RPA his training and background meet the U.S. Secretary of the Interior's Professional Qualifications Standards as a Principal Investigator and Field Director for prehistoric and historic archaeology (36 CFR 61).

Experience

Mr. Purtell has undertaken and contributed to work efforts for prehistoric and historic archaeology throughout California pursuant to the California Environmental Quality Act (CEQA), and the National Environmental Policy Act (NEPA), and Sections 106 and 110 of the National Historic Preservation Act (NHPA). He has authored and co-authored Cultural Resources Management Plans, Worker Environmental Awareness Programs (WEAP), cultural analyses for Fatal Flaw studies; environmental compliance documents, such as Initial Studies, Environmental Impact Reports, and Cultural Resources Technical Reports; and, has compiled California Department of Parks and Recreation (DPR) site records. As a field director, he has managed field crews in intensive pedestrian surveys, surface collections, shovel test pits, excavations, and the curation of artifacts.

He has successfully coordinated cultural resource mitigation recommendations with a variety of lead and regulatory agencies, including Los Angeles County, Kern County, Inyo County, and he has obtained Cultural Use Permits and Field Authorizations with the Bureau of Land Management (BLM), among others.

High-Profile Monitoring Projects: Mr. Purtell implemented and managed the Cultural Treatment Plan for the Vasquez Rocks Natural Area Park and Interpretive Center for the County of Los Angeles Department of Public Works. He led contractor coordination, Native American consultation, and the Phase II and Phase III investigations which led to the recovery and curation of over 150 artifacts during pre-construction, and the recovery and curation of 73 artifacts during construction monitoring. Working with the Los Angeles County Chief Executive Office, Mr. Purtell served as the project manager for the LA Plaza de Cultura y Artes, a part of the El Pueblo de Los Angeles Historic District, responsible for the cultural mitigation and construction monitoring activities and report preparation.

Energy Projects: Mr. Purtell has worked on and managed large-scale renewable energy projects in Central and Northern California including a full suite of cultural resources services. As the cultural resources manager for the 7,300-acre Catalina Renewable Energy Project in Kern County he managed the record search, Native American consultation, led the pedestrian survey, coordinated technicians and staffing, prepared the cultural resources technical report and assisted with Phase II excavations to mitigate project impacts. He served a similar role on the 8,300-acre Avalon Wind Energy Project in Kern, which also included acquisition of a BLM Field Authorization Permit. Additional projects include the Jawbone Wind Energy Project, the Timber Hills Wind Energy Project, the Pacific Wind Energy Project, and the Hoffman Summit Wind Project, all in Kern County. In addition to renewable projects, Mr. Purtell has also served as an archaeological monitor and contractor trainer to ensure recognition and protection of cultural resources discovered during Southern California Edison earth-moving activities associated with the installation of grounding rods and laterals at the San Fernando Substation.

Transportation Infrastructure Projects: Working for clients like the Metro and Los Angeles World Airports, Mr. Purtell has participated in numerous transportation infrastructure projects. He performed a Phase I archaeological and paleontological investigation, Native American consultation, and the cultural resources technical section for the 2014 Doran Street Grade Separation Project. Working with a prime consultant, he served as the cultural resources manager for the Runway 6L-24R Safety Area Improvement Project. He worked with the lead agency, project archaeologists, biologists, and scientists to perform various technical assessments. Beyond the coordination effort, Mr. Purtell led the CEQA/NEPA compliance documentation including Section 106 of the National Historic Preservation Act, archaeological and paleontological investigations /surveys, Native American consultation and cultural resources technical sections for the runway improvement.



APPENDIX B – Native American Consultation Documentation

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-6471



November 24, 2014

Christopher W. Purtell
PCR Services Corporation
2121 Alton Parkway, Suite 100
Irvine, CA 92606

RE: 79 Acre Residential Development Site (APN 473-160-004) in the city of Moreno Valley,
Riverside County. *FAX (949) 753-7002*

Dear Mr. Purtell,

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3712.

Sincerely,

A handwritten signature in black ink that reads "Katy Sanchez".

Katy Sanchez
Associate Government Program Analyst

**Native American Contacts
Riverside County
November 21, 2014**

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

Ramona Band of Mission Indians
John Gomez, Environmental Coordinator
P.O. Box 391670 Cahuilla
Anza , CA 92539
Jgomez@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

Soboba Band of Mission Indians
Rosemary Morillo, Chairperson; Attn: Carrie Garcia
P.O. Box 487 Luiseno
San Jacinto , CA 92581
carrieg@soboba-nsn.gov
(951) 654-2765
(951) 654-4198 Fax

Santa Rosa Band of Mission Indians
Terry Hughes, Tribal Administrator
P.O. Box 609 Cahuilla
Hemet , CA 92546
tkentucky@aol.com
(951) 658-5311
(951) 658-6733 Fax

Morongo Band of Mission Indians
Denisa Torres, Cultural Resources Manager
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
dtorres@morongo-nsn.gov
(951) 572-6004 Fax

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road Cahuilla
Banning , CA 92220 Serrano
(951) 849-8807
(951) 755-5200
(951) 922-8146 Fax

Ramona Band of Cahuilla Indians
Manuel Hamilton, Vice Chairperson
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

Cahuilla Band of Indians
Luther Salgado, Chairperson
P.O. Box 391760 Cahuilla
Anza , CA 92539
Chairman@cahuilla.net
(760) 763-5549
(760) 763-2631 Tribal EPA

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed 79-Acre Residential Development Site (APN 473-160-004) in the city of Moreno Valley, Riverside County.

**Native American Contacts
Riverside County
November 21, 2014**

Ernest H. Siva
Morongo Band of Mission Indians Tribal Elder
9570 Mias Canyon Road Serrano
Banning CA 92220 Cahuilla
siva@dishmail.net
(951) 849-4676

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 Luiseno
San Jacinto CA 92581
jontiveros@soboba-nsn.gov
(951) 663-5279
(951) 654-5544, ext 4137
(951) 654-4198 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed 79-Acre Residential Development Site (APN 473-160-004) in the city of Moreno Valley, Riverside County.

December 5, 2014

Mr. Joseph Hamilton, Chairman
Ramona Band of Cahuilla Mission Indians
P.O. Box 391670
Anza, CA 92539

**Re: PROPOSED 79-ACRE RESIDENTIAL DEVELOPMENT SITE (APN 473-160-004) IN
THE CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA.**

Dear Mr. Hamilton:

PCR Services Corporation (PCR) is preparing environmental documentation in compliance with the California Environmental Quality Act for the proposed residential development (project) on an approximately 79-acre site (APN 473-160-004) located directly northwest of Ironwood Avenue and Nason Street in the City of Moreno Valley, Riverside County, California. The proposed project would include the construction of single-family residential houses, streets, infrastructure, utilities, parks, and open spaces. The project site is currently undeveloped. The proposed project would include excavations across the project site to currently unknown depths.

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Thank you for your assistance with our efforts to address possible Native American concerns that may be affected by the proposed project. If you have any questions or need additional information, please contact me at (949) 753-7001 or via email at c.purtell@pcrnet.com.

Sincerely,

PCR SERVICES CORPORATION



Christopher W. Purtell, RPA
Senior Archaeologist I

December 5, 2014

Ms. Rosemary Morillo, Chairperson
Soboba Band of Mission Indians
P.O. Box 487
San Jacinto, CA 92581

**Re: PROPOSED 79-ACRE RESIDENTIAL DEVELOPMENT SITE (APN 473-160-004) IN
THE CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA.**

Dear Ms. Morillo:

PCR Services Corporation (PCR) is preparing environmental documentation in compliance with the California Environmental Quality Act for the proposed residential development (project) on an approximately 79-acre site (APN 473-160-004) located directly northwest of Ironwood Avenue and Nason Street in the City of Moreno Valley, Riverside County, California. The proposed project would include the construction of single-family residential houses, streets, infrastructure, utilities, parks, and open spaces. The project site is currently undeveloped. The proposed project would include excavations across the project site to currently unknown depths.

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Sincerely,

PCR SERVICES CORPORATION



Christopher W. Purtell, RPA
Senior Archaeologist I

December 5, 2014

Ms. Denisa Torres, Cultural Resources Manager
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

**Re: PROPOSED 79-ACRE RESIDENTIAL DEVELOPMENT SITE (APN 473-160-004) IN
THE CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA.**

Dear Ms. Torres:

PCR Services Corporation (PCR) is preparing environmental documentation in compliance with the California Environmental Quality Act for the proposed residential development (project) on an approximately 79-acre site (APN 473-160-004) located directly northwest of Ironwood Avenue and Nason Street in the City of Moreno Valley, Riverside County, California. The proposed project would include the construction of single-family residential houses, streets, infrastructure, utilities, parks, and open spaces. The project site is currently undeveloped. The proposed project would include excavations across the project site to currently unknown depths.

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Sincerely,

PCR SERVICES CORPORATION



Christopher W. Purtell, RPA
Senior Archaeologist I

December 5, 2014

Mr. Manuel Hamilton, Vice Chairperson
Ramona Band of Cahuilla Indians
P.O. Box 391670
Anza, CA 92539

**Re: PROPOSED 79-ACRE RESIDENTIAL DEVELOPMENT SITE (APN 473-160-004) IN
THE CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA.**

Dear Mr. Hamilton:

PCR Services Corporation (PCR) is preparing environmental documentation in compliance with the California Environmental Quality Act for the proposed residential development (project) on an approximately 79-acre site (APN 473-160-004) located directly northwest of Ironwood Avenue and Nason Street in the City of Moreno Valley, Riverside County, California. The proposed project would include the construction of single-family residential houses, streets, infrastructure, utilities, parks, and open spaces. The project site is currently undeveloped. The proposed project would include excavations across the project site to currently unknown depths.

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Sincerely,

PCR SERVICES CORPORATION



Christopher W. Purtell, RPA
Senior Archaeologist I

December 5, 2014

Mr. John Gomez, Environmental Coordinator
Ramona Band of Mission Indians
P.O. Box 391670
Anza, CA 92539

**Re: PROPOSED 79-ACRE RESIDENTIAL DEVELOPMENT SITE (APN 473-160-004) IN
THE CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA.**

Dear Mr. Gomez:

PCR Services Corporation (PCR) is preparing environmental documentation in compliance with the California Environmental Quality Act for the proposed residential development (project) on an approximately 79-acre site (APN 473-160-004) located directly northwest of Ironwood Avenue and Nason Street in the City of Moreno Valley, Riverside County, California. The proposed project would include the construction of single-family residential houses, streets, infrastructure, utilities, parks, and open spaces. The project site is currently undeveloped. The proposed project would include excavations across the project site to currently unknown depths.

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Sincerely,

PCR SERVICES CORPORATION



Christopher W. Purtell, RPA
Senior Archaeologist I

December 5, 2014

Mr. Terry Hughes, Tribal Administrator
Santa Rosa Band of Mission Indians
P.O. Box 609
Hemet, CA 92546

**Re: PROPOSED 79-ACRE RESIDENTIAL DEVELOPMENT SITE (APN 473-160-004) IN
THE CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA.**

Dear Mr. Hughes:

PCR Services Corporation (PCR) is preparing environmental documentation in compliance with the California Environmental Quality Act for the proposed residential development (project) on an approximately 79-acre site (APN 473-160-004) located directly northwest of Ironwood Avenue and Nason Street in the City of Moreno Valley, Riverside County, California. The proposed project would include the construction of single-family residential houses, streets, infrastructure, utilities, parks, and open spaces. The project site is currently undeveloped. The proposed project would include excavations across the project site to currently unknown depths.

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Sincerely,

PCR SERVICES CORPORATION



Christopher W. Purtell, RPA
Senior Archaeologist I

December 5, 2014

Mr. Robert Martin, Chairperson
Morongo Band of Mission Indians
12700 Pumarra Road
Banning, CA 92220

**Re: PROPOSED 79-ACRE RESIDENTIAL DEVELOPMENT SITE (APN 473-160-004) IN
THE CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA.**

Dear Mr. Martin:

PCR Services Corporation (PCR) is preparing environmental documentation in compliance with the California Environmental Quality Act for the proposed residential development (project) on an approximately 79-acre site (APN 473-160-004) located directly northwest of Ironwood Avenue and Nason Street in the City of Moreno Valley, Riverside County, California. The proposed project would include the construction of single-family residential houses, streets, infrastructure, utilities, parks, and open spaces. The project site is currently undeveloped. The proposed project would include excavations across the project site to currently unknown depths.

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Sincerely,

PCR SERVICES CORPORATION



Christopher W. Purtell, RPA
Senior Archaeologist I

December 5, 2014

Mr. Luther Salgado, Chairperson
Cahuilla Band of Indians
P.O. Box 391760
Anza, CA 92539

**Re: PROPOSED 79-ACRE RESIDENTIAL DEVELOPMENT SITE (APN 473-160-004) IN
THE CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA.**

Dear Mr. Salgado:

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Sincerely,

PCR SERVICES CORPORATION



Christopher W. Purtell, RPA
Senior Archaeologist I

December 5, 2014

Mr. Ernest H. Siva, Tribal Elder
Morongo Band of Mission Indians
9570 Mias Canyon Road
Banning, CA 92220

**Re: PROPOSED 79-ACRE RESIDENTIAL DEVELOPMENT SITE (APN 473-160-004) IN
THE CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA.**

Dear Mr. Siva:

PCR Services Corporation (PCR) is preparing environmental documentation in compliance with the California Environmental Quality Act for the proposed residential development (project) on an approximately 79-acre site (APN 473-160-004) located directly northwest of Ironwood Avenue and Nason Street in the City of Moreno Valley, Riverside County, California. The proposed project would include the construction of single-family residential houses, streets, infrastructure, utilities, parks, and open spaces. The project site is currently undeveloped. The proposed project would include excavations across the project site to currently unknown depths.

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Sincerely,

PCR SERVICES CORPORATION



Christopher W. Purtell, RPA
Senior Archaeologist I

December 5, 2014

Mr. Joseph Ontiveros, Cultural Resources Department
Soboba Band of Luiseno Mission Indians
P.O. Box 487
San Jacinto, CA 92581

**Re: PROPOSED 79-ACRE RESIDENTIAL DEVELOPMENT SITE (APN 473-160-004) IN
THE CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA.**

Dear Mr. Ontiveros:

PCR Services Corporation (PCR) is preparing environmental documentation in compliance with the California Environmental Quality Act for the proposed residential development (project) on an approximately 79-acre site (APN 473-160-004) located directly northwest of Ironwood Avenue and Nason Street in the City of Moreno Valley, Riverside County, California. The proposed project would include the construction of single-family residential houses, streets, infrastructure, utilities, parks, and open spaces. The project site is currently undeveloped. The proposed project would include excavations across the project site to currently unknown depths.

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Sincerely,

PCR SERVICES CORPORATION



Christopher W. Purtell, RPA
Senior Archaeologist I

December 15, 2014

SUBJECT:

Proposed 79-Acre Residential Development Site (APN 473-160-004) In the city of Moreno Valley, Riverside County, California.

Dear

Christopher W. Purtell, RPA
Senior Archaeologist I

Thank you for contacting the Morongo Band of Mission Indians regarding the above referenced project. The Tribe greatly appreciates the opportunity to review the project and, respectfully, offer the following comments.

The project is outside of the Tribe's current reservation boundaries but within an area that may be considered a traditional use area or one in which the Tribe has cultural ties (e.g. Cahuilla/Serrano territory). However, the Morongo Band of Mission Indians asks that you impose specific conditions regarding cultural and/or archaeological resources and buried cultural materials on any development plans or entitlement applications as follows:

- If human remains are encountered during grading and other construction excavation, work in the immediate vicinity shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5.
- In the event that Native American cultural resources are discovered during project development/construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during this assessment period.

If significant Native American cultural resources are discovered, for which a Treatment Plan must be prepared, the developer or his archaeologist shall contact the Morongo Band of Mission Indians

("Tribe")¹. If requested by the Tribe, the developer or the project archaeologist shall, in good faith, consult on the discovery and its disposition (e.g. avoidance, preservation, return of artifacts to tribe, etc.).

If I may be of further assistance with regard to this matter, please do not hesitate to contact me at your convenience.

Very truly yours,

MORONGO BAND OF MISSION INDIANS

¹ The Morongo Band of Mission Indians realizes that there may be additional tribes claiming cultural affiliation to the area; however, Morongo can only speak for itself. The Tribe has no objection if the archaeologist wishes to consult with other tribes and if the city wishes to revise the condition to recognize other tribes.

APPENDIX C – Paleontological Resources Records Search Results



Museum

Leonard X. Hernandez
Interim Museum Director

26 November 2014

PCR Services Corporation
attn: Christopher W. Purtell, RPA, Senior Archaeologist I
One Venture, Suite #150
Irvine, CA 92618

re: **PALEONTOLOGY LITERATURE AND RECORDS REVIEW, PROPOSED
RESIDENTIAL DEVELOPMENT, CITY OF MORENO VALLEY, RIVERSIDE
COUNTY, CALIFORNIA**

Dear Mr. Purtell,

The Division of Geological Sciences of the San Bernardino County Museum (SBCM) has completed a literature review and records search for the above-named development in the City of Moreno Valley, Riverside County, California. Specifically, the proposed project property is located in the southwestern quadrant of section 34, Township 2 South, Range 3 West, San Bernardino Base and Meridian, as seen on the Sunnymead, California 7.5' United States Geological Survey topographic quadrangle map (1967 edition, photorevised 1980).

Previous mapping of the proposed property (Rogers, 1965; Morton and Matti, 2001) indicates that the majority of the proposed study area is situated upon surface exposures of early Pleistocene fan deposits (= unit **Qvof_a**), overlain across much of the property by a thin sedimentary veneer of recent alluvium (= **Qya_a**). The recent alluvial sediments have low paleontologic sensitivity. In contrast, the Pleistocene fan deposits may have high paleontologic sensitivity, depending upon their lithology. Pleistocene alluvium elsewhere throughout Riverside County and the Inland Empire has been reported to yield significant fossils of extinct animals from the Ice Age (Jefferson, 1991; Reynolds and Reynolds, 1991; Scott and Cox, 2008; Springer and others, 2009, 2010; Scott, 2010). Fossils recovered from these Pleistocene sediments represent extinct taxa including mammoths, mastodons, ground sloths, dire wolves, sabre-toothed cats, large and small horses, large and small camels, and bison, as well as plant macro- and microfossils (Jefferson, 1991; Reynolds and Reynolds, 1991; Anderson and others, 2002; Scott and Cox, 2008; Springer and others, 2009, 2010; Scott, 2010). If not previously disturbed by development, and depending upon the lithology exhibited, these sediments have high potential to contain significant nonrenewable paleontologic resources.

BOARD OF SUPERVISORS

ROBERT A. LOVINGOOD
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Vice Chair, Fourth District

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Fifth District

GREGORY C. DEVEREAUX
Chief Executive Officer

The northwestern portion of the study area is mapped (Morton and Matti, 2001) as Cretaceous tonalite (= unit **Kt**). These granitic rocks have no potential to contain fossil resources, and so are assigned low paleontologic sensitivity.

For this review, I conducted a search of the Regional Paleontologic Locality Inventory (RPLI) at the SBCM. The results of this search indicate that no previously-recorded fossil resource localities from Pleistocene older alluvium are present within the boundaries of the proposed development property, nor from at least within one mile in any direction.

Recommendations

The results of the literature review and the search of the RPLI at the SBCM demonstrate that the proposed development property is situated for the most part upon Pleistocene older alluvial deposits that, if not previously disturbed by development and depending upon their lithology, have high potential to contain paleontologic resources. A qualified vertebrate paleontologist must develop a program to mitigate impacts to nonrenewable paleontologic resources. This mitigation program must be consistent with the provisions of the California Environmental Quality Act (Scott and Springer, 2003), as well as with regulations currently implemented by the County of Riverside. This program should include, but not be limited to:

1. Monitoring of excavation in areas identified as likely to contain paleontologic resources by a qualified paleontologic monitor. Areas requiring monitoring include all previously-undisturbed Pleistocene older alluvial sediments present, at the surface or at depth, within the boundaries of the property. Paleontologic monitors should be equipped to salvage fossils as they are unearthed, to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced or eliminated if the potentially-fossiliferous units described herein are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.
2. Preparation of recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils are essential in order to fully mitigate adverse impacts to the resources (Scott and others, 2004).
3. Identification and curation of specimens into an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation (Scott and others, 2004) and CEQA compliance (Scott and Springer, 2003). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts to significant paleontologic resources is not complete until such curation into an established, accredited museum repository has been fully completed and documented.

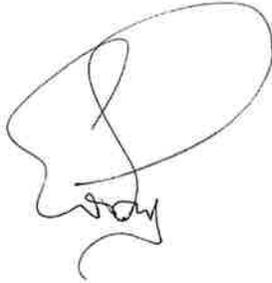
4. Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate Lead Agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, would signify completion of the program to mitigate impacts to paleontologic resources.

References

- Anderson, R.S., M.J. Power, S.J. Smith, K.B. Springer and E. Scott, 2002. Paleocology of a Middle Wisconsin deposit from southern California. *Quaternary Research* 58(3): 310-317.
- Jefferson, G.T., 1991. A catalogue of late Quaternary vertebrates from California: Part Two, mammals. Natural History Museum of Los Angeles County Technical Reports, No. 7.
- Reynolds, S.F.B. and R.L. Reynolds, 1991. The Pleistocene beneath our feet: near-surface Pleistocene fossils in inland southern California basins. *In* M.O. Woodburne, S.F.B. Reynolds, and D.P. Whistler (eds.), *Inland Southern California: the last 70 million years*. Redlands, San Bernardino County Museum Special Publication 38(3&4), p. 41-43.
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- Springer, K., E. Scott, J.C. Sagebiel, and L.K. Murray, 2010. Late Pleistocene large mammal faunal dynamics from inland southern California: the Diamond Valley Lake local fauna. *In* E. Scott and G. McDonald (eds.), *Faunal dynamics and extinction in the Quaternary: papers honoring Ernest L. Lundelius, Jr.* *Quaternary International* 217: 256-265.

Please do not hesitate to contact us with any further questions you may have.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric Scott". The signature is stylized with a large, sweeping loop at the top and a smaller, more intricate loop at the bottom.

Eric Scott, Curator of Paleontology
Division of Geological Sciences
San Bernardino County Museum

**APPENDIX D – CONFIDENTIAL APPENDIX (Not For Public
Dissemination) – Figure D1 (Resources Map) and DPR Site Forms**



SOURCE: Google Maps, 2015 (Aerial).

Ironwood Village Project
Figure D1
 Resources Map

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 33-024882
HRI #
Trinomial CA-RIV-12333
NRHP Status Code

Other Listings
Review Code Reviewer Date

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Resource Name or #: (Assigned by recorder) GID-Site-1

P1. Other Identifier: XX

P2. Location: Not for Publication Unrestricted a. County Riverside County

and (P2b and P2c or P2d. Attach location map as necessary.)

b USGS 7.5' Quad Sunnymead, CA Date 1967 (Photo-revised 1980) T 2 South; R 3 West; SW 1/4 of SW 1/4 of Sec 34; S.B.B.M.

c. Address N.A. City Moreno Valley Zip 92555

d. UTM: (Give more than one for large and/or linear resources) Zone 11, 482316 mE/ 3756487 mN (NAD 83)

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, etc., as appropriate): 220 meters north of Ironwood Avenue and 13 meters east of Nason Street, elevation 1,927 ft amsl

P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): This resource was recorded by PCR Services Corporation and consists of one granite boulder with one milling slick and one granite boulder with three milling slicks in a 25-meter-by-6-meter area (with no associated surface artifacts). This resource was originally recorded and described by McKenna as one milling slick on a single granite boulder and given its proximity to other nearby prehistoric resources, McKenna designated it as a component of the previously recorded resource CA-RIV-1604 (McKenna 2008a, 2008b). CA-RIV-1604 is located approximately 300 m to the west of 33-024882/CA-RIV-12333 and was originally recorded in 1976 as a rockshelter with more than 100 cupules and several pit-and-groove petroglyphs (Parr and Arkush 1987). Although PCR agrees with McKenna in that 33-024882/CA-RIV-12333 is likely associated with CA-RIV-1064, PCR has decided to give the resource a separate designation since other nearby bedrock milling stations were also designated separately and since this resource will be evaluated separately than CA-RIV-1064. PCR identified 33-024882/CA-RIV-12333 in the exact location where McKenna recorded it in 2008; however, PCR identified three milling slicks on the boulder as opposed to a single milling slick. Furthermore, PCR identified an additional milling slick on another low-lying granite boulder approximately 17 meters to the north and three separate milling slicks.

P3b. Resource Attributes: AP-4 Bedrock Milling Feature

P4. Resources Present: Building Structure Object Site District Other

Page 2 of 7

P5a. Photo or Drawing (Photograph required for buildings, structures, and objects)



P5b. Description of Photo: (View, date, accession #) Overview of site, view south, 12-24-2014

P6. Date Constructed/Age: and Sources:
 Historic
 Prehistoric Both

P7. Owner and Address: Global Investment & Development, LLC., 3470 Wilshire Blvd., Suite 1020, Los Angeles, CA 90010

P8. Recorded by (Name, affiliation, and address): PCR Services Corporation: 2121 Alton Parkway, Irvine, CA, 92606. Kyle Garcia, Chris Purtell, and Lauren Willey

P9. Date Recorded: December 24, 2014

P10. Type of Survey: (Describe) Pedestrian survey

P11. Report Citation (Provide full citation or enter "none."): (2015) Purtell, Chris and Kyle Garcia, Phase I Cultural Resources Assessment of the Proposed Ironwood Residential Development; City of Moreno Valley, County of Riverside, California.

Attachments: NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record Artifact Record Photograph Record Other (List):

ARCHAEOLOGICAL SITE RECORD

Page 3 of 7

Resource Name or # (Assigned by recorder) GID-Site-1

- A1. Dimensions:** a. Length 25 (m)N/S x b. Width 6 (m) E/W
Method of Measurement: Paced Taped Visual estimate Other: Google Earth Measure Tool
Method of Determination (Check any that apply): Artifacts Features Soil Vegetation Topography
 Cut bank Animal burrow Excavation Property boundary Other (Explain): Historic Topographic Maps and Aerials
Reliability of Determination: High Medium Low (Explain): XX
Limitations (Check any that apply): Restricted access Paved/built over Site limits incompletely defined
 Disturbances Vegetation Other (Explain): The site has been recently disked/tilled
- A2. Depth:** XX None Unknown Method of Determination:
- A3. Human Remains:** Present Absent Possible Unknown (Explain): None observed on surface.
- A4. Features** (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map.): Feature 1 - Granite boulder with 3 milling slicks; Feature 2 - low-lying granite boulder with 1 milling slick
- A5. Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.): None observed on surface.
- A6. Were Specimens Collected?** No Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)
- A7. Site Condition:** Good Fair Poor (Describe disturbances.): Disturbances include recently tilled soil that may have displaced surficial artifacts. Some areas of the site exhibit limited ground surface visibility which may have obstructed the identification of additional resources.
- A8. Nearest Water** (Type, distance, and direction.): Former ephemeral (USGS blue-line) drainages less than 350 m east of the site.
- A9. Elevation:** Approximately 1,927 (590 m) feet above mean sea level
- A10. Environmental Setting** (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.): Vegetation characterized as sparse plant communities consisting of coyote bush, white bur sage, native and non-native wild grasses. Previous mapping of area (Rogers 1965) suggests that the majority of the area is situated upon surface exposures of early Pleistocene fan deposits (Qvofa), overlain by a thin sedimentary veneer of recent alluvium (Qyaa). Cretaceous-aged tonalite (Kt) is also mapped in immediate area of site (Scott 2014).
- A11. Historical Information:** See Purtell and Garcia (2015)
- A12. Age:** Prehistoric Pre-Colonial (1500-1769) Spanish/Mexican (1769-1848) Early American (1848-1880) Turn of century (1880-1914) Early 20th century (1914-1945) Post WWII (1945+) Undetermined
Factual or Estimated Dates of Occupation (Explain): N/A
- A13. Interpretations** (Discuss data potential, functions(s), ethnic affiliation, and other interpretations):
- A14. Remarks:** Site may be impacted by proposed Ironwood Residential Project or may be avoided completely.
- A15. References** (Documents, informants, maps, and other references): See attached Continuation Sheet
- A16. Photographs** (List subjects, direction of view, and accession numbers or attach a Photograph Record.): See Purtell and Garcia 2015 (Reference Cited on Primary Record and Continuation Sheet)
Original Media/Negatives Kept at: PCR Services Corporation: 2121 Alton Pkwy., Suite 100, Irvine, CA 92606
- A17. Form Prepared by:** K. Garcia **Date:** February 10, 2015
Affiliation and Address: PCR Services Corporation: 2121 Alton Pwky., Suite 100, Irvine, CA 92606

Page 5 of 7

Resource Name or #: GID-Site-1

Recorded by: PCR Services Corporation

Date: December 2014

Continuation Update

Photographs:



Close-up of Feature 1, view south.



Overview of Feature 2, view east.



Overview of site, view north.



Overview of Feature 2, view west.

References Cited:

McKenna, Jeanette

2008a A Phase I Cultural Resources Survey of Two Alternative Moreno Valley Unified School District Sites, City of Moreno Valley, Riverside County, California. Report on file at the Eastern Information Center, University of California, Riverside.

2008b DPR Site Form for CA-RIV-1064 (update). Record on file at the Eastern Information Center, University of California, Riverside.

Parr, R. E., and B. Arkush

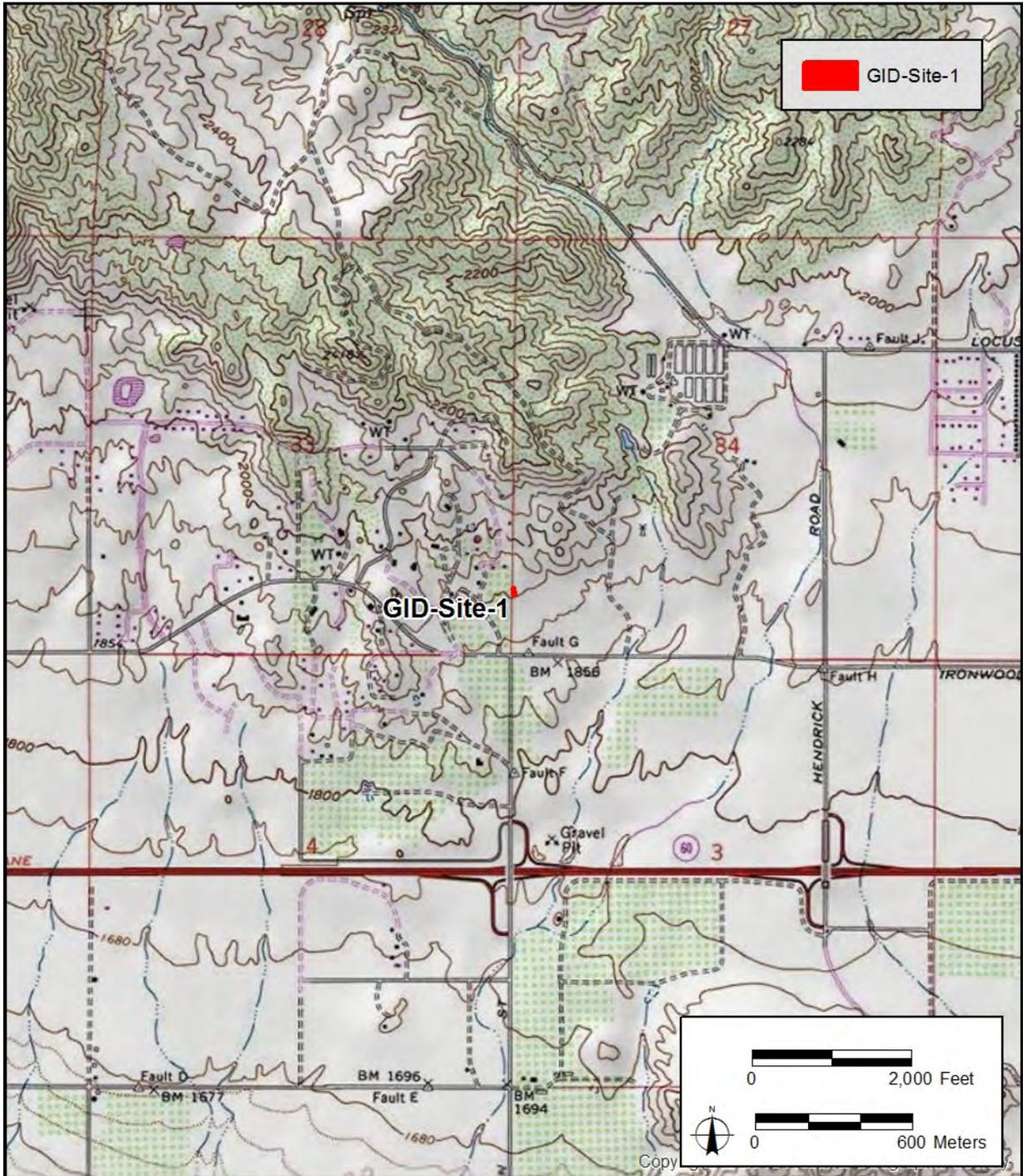
1987 DPR Site Form for Resource CA-RIV-1064. Record on file at the Eastern Information Center, University of California, Riverside.

Purtell, Chris and Kyle Garcia

2015 Phase I Cultural Resources Assessment of the Proposed Ironwood Residential Development; City of Moreno Valley, County of Riverside, California. Report on file at PCR Services Corporation, Irvine, CA.

Resource Name or #: GID-Site-1

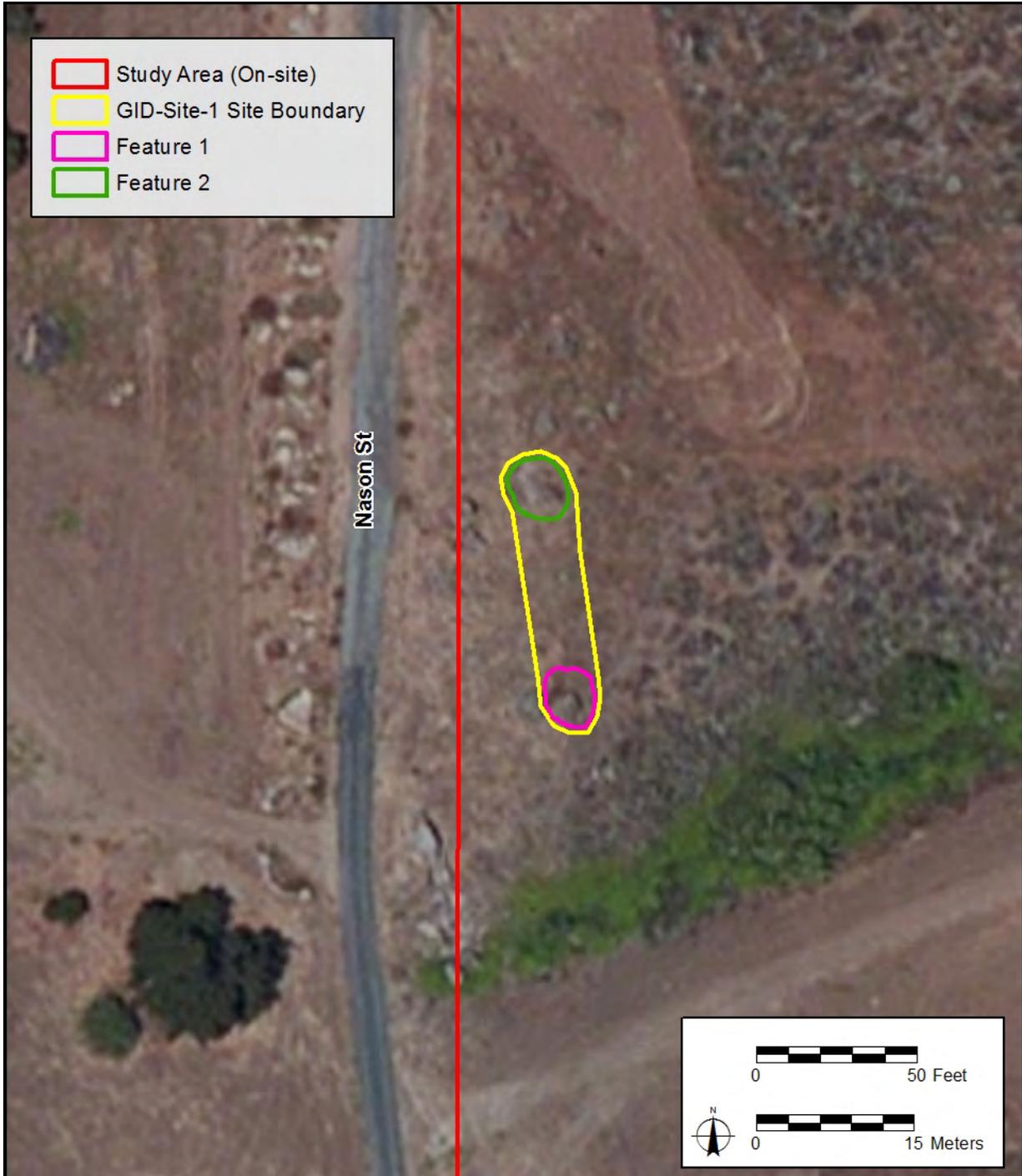
Map Name: Sunnymead, CA USGS 7.5' Scale: 1:24,000 Date of Map: 1967 (photo-revised 1980)



Resource Name or #: GID-Site-1

Drawn by: PCR Services Corporation GIS

Date of Map: February 2015



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # 33-024883
HRI # _____
Trinomial _____
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 2

Resource Name or #: (Assigned by recorder) GID-Iso-1

P1. Other Identifier: XX

P2. Location: Not for Publication Unrestricted a. County Riverside County

and (P2b and P2c or P2d. Attach location map as necessary.)

b USGS 7.5' Quad Sunnymead, CA Date 1967 (Photo-revised 1980) T 2 South; R 3 West; SW 1/4 of SW 1/4 of Sec 34; S.B.B.M.

c. Address N.A. City Moreno Valley Zip 92555

d. UTM: (Give more than one for large and/or linear resources) Zone 11, 482334 mE/ 3756366 mN (NAD 83)

e. Other Locational Data (e.g., parcel #, directions to resource, elevation, etc., as appropriate): 100 meters north of Ironwood Avenue and 25 meters east of Nason Street

P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): The isolate is a quartzite hammerstone identified on the surface by PCR Services Corporation during a phase I assessment of the proposed Ironwood Residential project. The hammerstone appears to be made from an exhausted and/or re-purposed mano. The hammerstone exhibits a flat semi-grounded bifacial surface, containing both pecked marks, and surface grinding around its margins. The artifact has likely been displaced from its original location from recent and recurring disking/plowing activities on the property. It was not collected by PCR.

P3b. Resource Attributes: AP16 (Isolate: Quartzite hammerstone)

P4. Resources Present: Building Structure Object Site District Other

P5a. Photo or Drawing (Photograph required for buildings, structures, and objects)



P5b. Description of Photo: (View, date, accession #) Close-up of isolate artifact, 12-24-2014

P6. Date Constructed/Age: and Sources: Historic Prehistoric Both

P7. Owner and Address: Global Investment & Development, LLC., 3470 Wilshire Blvd., Suite 1020, Los Angeles, CA 90010

P8. Recorded by (Name, affiliation, and address): PCR Services Corporation: 2121 Alton Parkway, Irvine, CA, 92606. Kyle Garcia, Chris Purtell, and Lauren Willey

P9. Date Recorded: December 24, 2014

P10. Type of Survey: (Describe) Pedestrian survey

P11. Report Citation (Provide full citation or enter "none."): (2015) Purtell, Chris and Kyle Garcia, Phase I Cultural Resources Assessment of the Proposed Ironwood Residential Development; City of Moreno Valley, County of Riverside, California.

Attachments: NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record Artifact Record Photograph Record Other (List):

Resource Name or #: GID-Iso-1

Map Name: Sunnymead, CA USGS 7.5' Scale: 1:24,000 Date of Map: 1967 (photo-revised 1980)

