HELIX
Environmental Planning

University and Innovation District

Cultural Resources Survey

April 2016

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Prepared for:
City of Chula Vista
Planning Division
276 Fourth Avenue
Chula Vista, CA 91910

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7578 El Cajon Boulevard
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CULTURAL RESOURCES SURVEY,
UNIVERSITY INNOVATION DISTRICT
CHULA VISTA, SAN DIEGO COUNTY, CALIFORNIA

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HELIX PROJECT NO. CCV-08

USGS quadrangle: Otay Mesa (7.5' series)
Acreage: Approximately 384 acres
Keywords: San Diego County, City of Chula Vista, Otay Ranch, Salt Creek; positive archaeological survey; CA-SDI-7217, CA-SDI-13454, CA-SDI-14224, CA-SDI-14225, CA-SDI-14228, CA-SDI-18136, CA-SDI-20155, CA-SDI-20160, CA-SDI-20162, CA-SDI-20165, CA-SDI-20441, CA-SDI-20551, CA-SDI-20552, CA-SDI-20553, CA-SDI-20554, P-37-015140, P-37-033126, P-37-033127, P-37-033128, P-37-033129, P-37-033130, P-37-033131, P-37-033132; flaked stone, ground stone, marine shell; no significant resources affected; T18S, R1W, unsectioned

NATIONAL ARCHAEOLOGICAL DATA BASE INFORMATION

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EXECUTIVE SUMMARY

The project site includes a total of approximately 383.8 acres in Otay Ranch known as the University and Innovation District (UID) planning area, which is split between the 353.8-acre Main Campus Property to the west and the 30-acre Lake Property to the east, just southwest of Otay Lake. The project site is located entirely within the City of Chula Vista (City), California, in the southeastern area of the City. Chula Vista is located in San Diego County, approximately seven miles south of the downtown area of the City of San Diego and about seven miles north of the U.S.-Mexico International Border.

The UID Specific Plan Area (SPA) Plan comprises a mixed-use community of academic/ university, commercial, retail, residential, and recreational development within a series of transects and sectors. The university-related uses are generally designated in the eastern half of the Main Campus Property while the western half would include mixed-use development (residential, commercial, and office) that would relate and transition to the adjacent mixed-use Village 9 and Millenia areas.

Proposed off-site utility improvements include sewer and storm drain infrastructure and trail access south of the site. Off-site sewer improvements would be necessary for the southeastern portion of the Main Campus Property and the Lake Property. For the Main Campus Property, off-site sewer and drainage would be conveyed within pipelines that would follow an existing trail easement. For the Lake Property, off-site improvements would be necessary for the proposed sewer system and would be located within existing access roads.

The cultural resources study consisted of an archaeological survey to identify cultural resources within the project area and determine the significance of potential impacts. This report addresses the methods and results of the cultural resources survey, which included records search and literature review, a field survey, and contact with the Native American community.

Fifteen archaeological sites and one isolated artifact had been recorded within the current project area, and one site had been recorded within an off-site improvement alignment. In addition, 11 isolates and one lithic scatter site were recorded during the current survey. Of the 17 archaeological sites identified within the project area and off-site improvements, 12 have been determined not to be significant resources under the California Environmental Quality Act (CEQA) and the City's guidelines; one additional site has been removed by grading. The four remaining sites are potentially significant resources pending evaluation. Two of these sites would not be subject to impacts from the project as proposed, and no further work is recommended there for the proposed project. The two potentially significant sites within the project impact footprint (CA-SDI-13454 and Site 1) will need to be tested to assess site significance and the significance of project impacts. If these sites are determined to be significant resources, appropriate mitigation measures would be developed and implemented in order to mitigate project impacts to below a level of significance. The isolates are not significant resources, and no further work is required for them. A monitoring program will be required during ground-disturbing activities in previously undisturbed soils, as detailed in this report.

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1.0 INTRODUCTION

1.1 PROJECT LOCATION

The project site includes a total of 383.8 acres in Otay Ranch known as the University and Innovation District (UID) planning area, which is split between the 353.8-acre Main Campus Property to the west and the 30-acre Lake Property to the east, just southwest of Otay Lake. The project site is located entirely within the City of Chula Vista (City), California, in the southeastern area of the City. Chula Vista is located in San Diego County, approximately seven miles south of the downtown area of the City of San Diego and about seven miles north of the U.S.-Mexico International Border.

Figure 1, *Regional Location Map*, and Figure 2, *Project Vicinity Map* (*USGS Topography*), show the project location. The Main Campus Property ranges in elevation from approximately 620 feet above mean sea level (AMSL) on the northwestern portion of the site near Hunte Parkway to approximately 340 feet AMSL at the southwestern end of the project near the Otay River Valley. The Lake Property ranges from north to south from about 500 to 560 feet AMSL. The Otay Valley Regional Park and the Otay River Valley are south of the site; State Route (SR) 125 is about 0.5 mile west of the site; and the EUC (currently under development) is located north of the site. Eastlake Parkway and Hunte Parkway, which currently terminate near the northwestern boundary of the project site, provide access to the northern part of the site. The project site is in an unsectioned portion of Township 18 South, Range 1 West, on the U.S. Geological Survey (USGS) 7.5' Otay Mesa quadrangle (Figure 2).

1.2 PROJECT DESCRIPTION

The UID Specific Plan Area (SPA) Plan Project and associated off-site improvements are consistent with the 1993 Otay Ranch General Development Plan (GDP). The UI District SPA Plan comprises a mixed-use community of academic/university, commercial, retail, residential, and recreational development within a series of transects and sectors (Figure 3, *Site Plan*). The transects consist of areas identified for urban development, while the sectors include areas identified to include common areas, pedestrian walkways, and habitat conservation areas. The university-related uses are generally designated in the eastern half of the Main Campus Property while the western half would include mixed-use development (residential, commercial, and office) that would relate and transition to the adjacent mixed-use Village 9 and Millenia areas. The planned development to occur as a result of the SPA Plan is the project addressed in this cultural resources study.

Proposed off-site utility improvements, shown on Figure 3, include sewer and storm drain infrastructure and trail access south of the site. Off-site sewer improvements would be necessary for the southeastern portion of the Main Campus Property and the Lake Property. For the Main Campus Property, off-site sewer and drainage would be conveyed within pipelines that would follow an existing trail easement. For the Lake Property, off-site improvements would be necessary for the proposed sewer system and would be located within existing access roads.

The cultural resources study consisted of an archaeological survey to identify cultural resources within the UID project area (the terms project site and project area are used interchangeably in this report) and determine the significance of potential impacts to the extent feasible at the survey level. Mary Robbins-Wade served as the project manager/principal investigator. Andrew Giletti was the field director. Native American monitoring was provided by Red Tail Monitoring and Research, overseen by Clint Linton. The background research and fieldwork for the cultural resources study were conducted by Affinis. HELIX Environmental Planning, Inc. (HELIX) acquired the cultural resources division of Affinis in September 2014. Thus, any work subsequent to that time has been conducted by HELIX; the cultural resources personnel are the same individuals at both Affinis and HELIX. This report addresses the methods and results of the cultural resources survey, which included records search and literature review, field survey, and contact with the Native American community.

1.3 APPLICABLE REGULATIONS

Resource importance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality illustrating or interpreting the heritage of the region in history, architecture, archaeology, engineering, and culture. Several criteria are used in demonstrating resource importance. Specifically, criteria outlined in the California Environmental Quality Act (CEQA) provide the guidance for making such a determination. The City's General Plan and Historic Preservation Ordinance also address cultural resources. This section details the criteria that a resource must meet in order to be determined significant.

1.3.1 California Environmental Quality Act (CEQA)

The CEQA Guidelines (§15064.5) address determining the significance of impacts to archaeological and historic resources.

(a) For purposes to this section, the term "historical resources" shall include the following:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR) (Public Resource Code [PRC] §5024.1, Title 14 California Code and Regulation [CCR], Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript 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 may be considered historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the

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Regional Location Map

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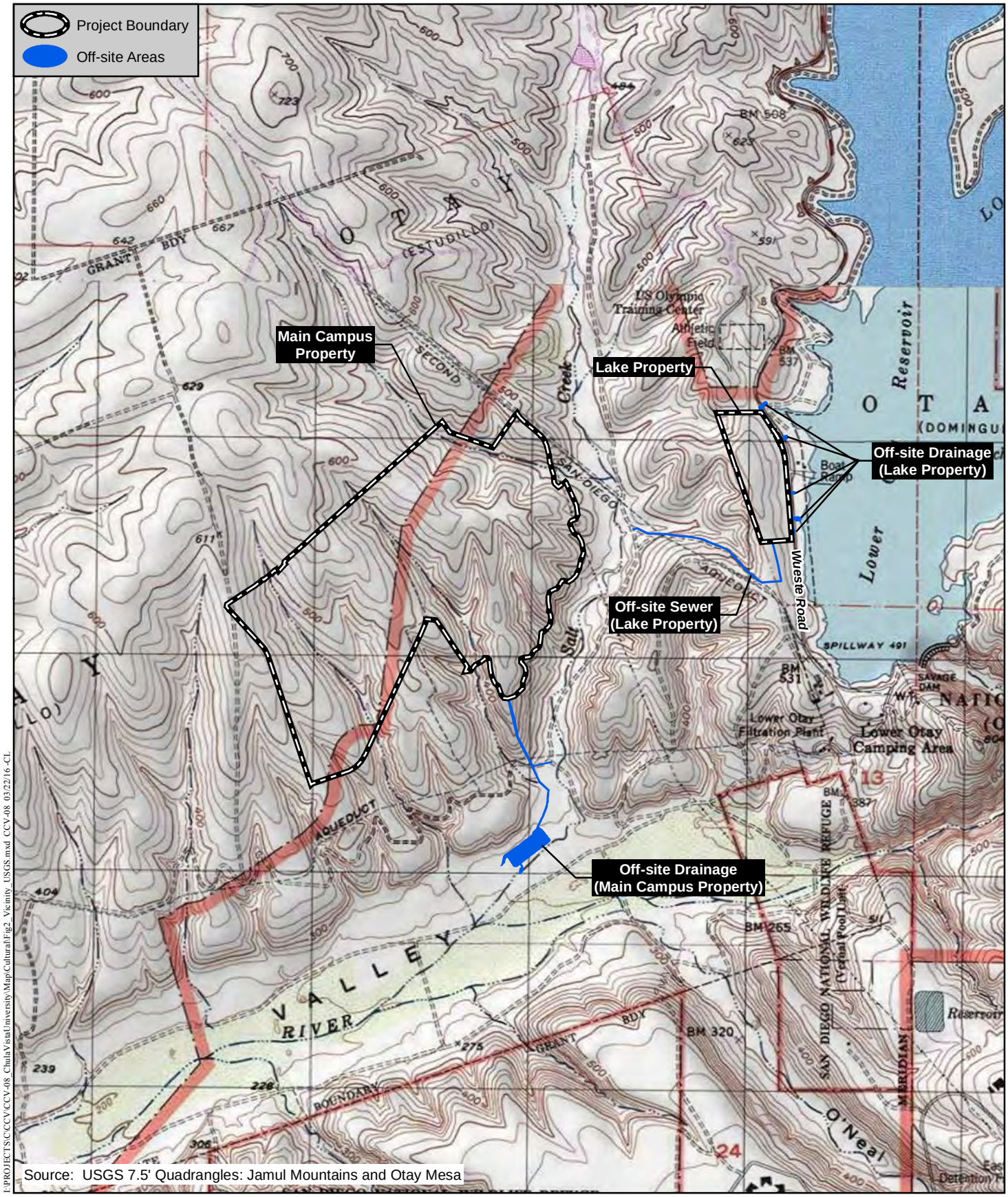
N 0 8 Miles

Figure 1



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Project Vicinity Map (USGS Topography)

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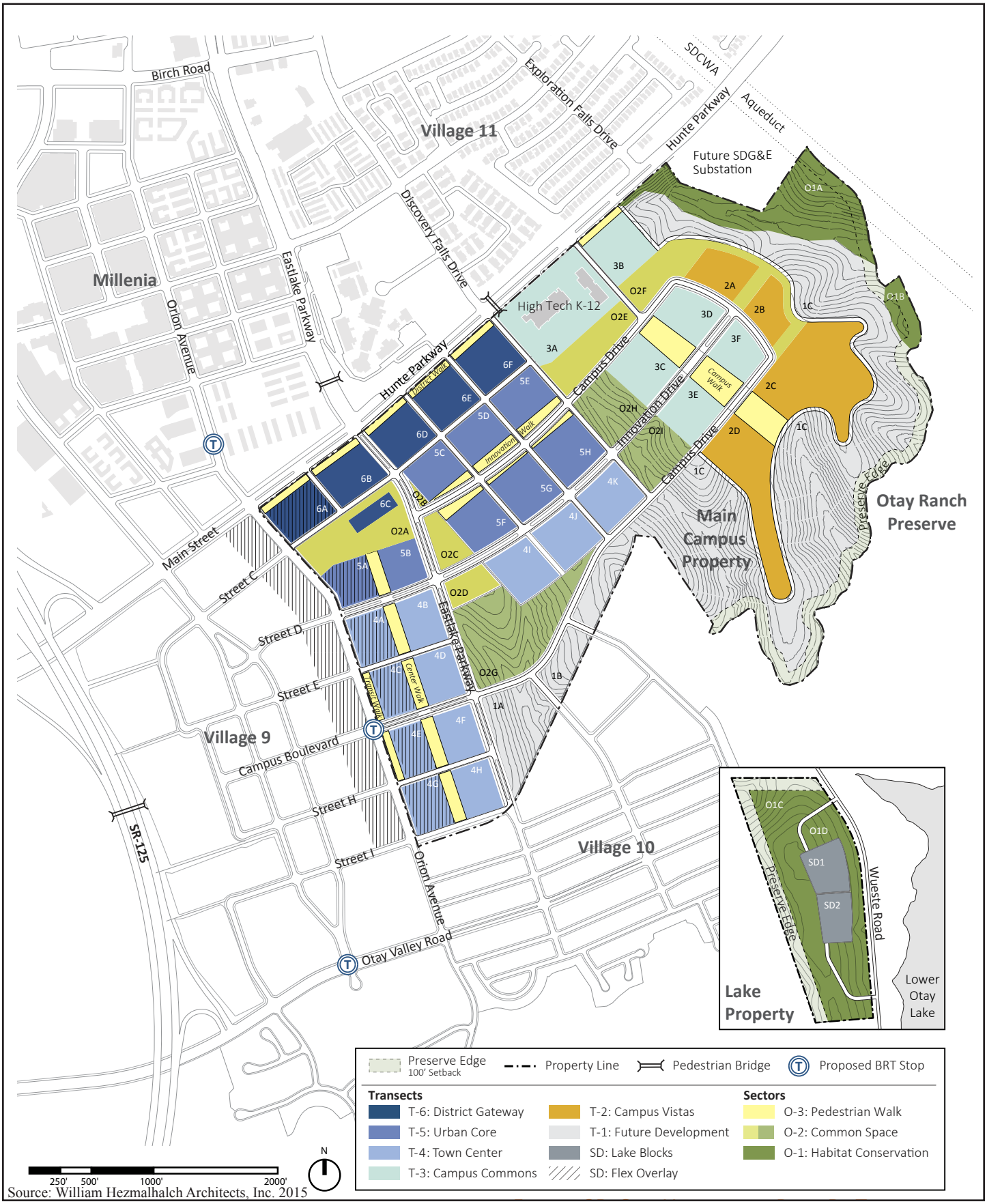
N 0 2,000 Feet

Figure 2



Source: William Hezmalhalch Architects, Inc. 2015

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Site Plan

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Figure 3

resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) 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

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resource Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Section 5020.1(j) or 5024.1.

(b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

(1) 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.

(2) The significance of an 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 an 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 an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

(c) CEQA applies to effects on archaeological sites.

(1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

(3) If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study (IS) or Environmental Impact Report (EIR), if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 15064.5 (d) & (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

(d) When an Initial Study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code §5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

(2) The requirements of CEQA and the Coastal Act.

1.3.2 City General Plan and Historic Preservation Program

The City of Chula Vista City General Plan, Chula Vista Vision 2020 (City of Chula Vista 2005), addresses historic resources and preservation in the Land Use and Transportation Element (Chapter 5, Section 3.4) and the Housing Element (Chapter 7, Appendix G). It addresses cultural resources in the Environmental Element (Chapter 9, Section 3.1.9). These sections of the General Plan are referenced in the City's Title 21, Ordinance No. 3196, and reproduced in the City's Historic Preservation Program (HPP).

Title 21 addresses Historic Preservation, including historical and archaeological resources. Section 21.03.004 defines archaeological resources as "subsurface or aboveground material remains of past human life or activities that are at least one hundred years of age, and may yield additional information about prehistory and history" (City of Chula Vista 2011a: 2). Significance standards are based upon the Secretary of the Interior Standards and Guidelines to determine appropriate "preservation, rehabilitation, restoration, and reconstruction" (City of Chula Vista 2011a: 9). These are addressed in more depth in the City's Historic Preservation Program (2011b) addressed below. Section 21.04.040 addresses the criteria for a historical resource to be included in the City of Chula Vista Register of Historical Resources, commonly referred to as the Local Register. Qualified resources include:

A. Those properties previously designated prior to the effective date of [the] ordinance;

B. Those properties designated by the HPC [Historic Preservation Commission] or Council;

C. Any Chula Vista Resource listed as a National Historic Landmark;

D. Any Chula Vista Resource listed on the National Register of Historic Places;

E. Any Chula Vista Resource listed on the California Register of Historical Resources by the California State Historical Resources Commission (City of Chula Vista 2011a: 11).

A new resource may be designated as a Historical Resource by the Historical Resources Commission if the following are met:

A. A Resource is at least 45 years old; and

B. A Resource possesses historical integrity defined under Chula Vista Municipal Code §21.03.084 and the Resource is determined to have historical significance by meeting at least one of the following criteria:

1. It is associated with an event that is important to prehistory or history on a national, state, regional, or local level.

2. It is associated with a person or persons that have made significant contributions to prehistory or history on a national, state or local level.

3. It embodies that (sic) distinctive characteristics of a style, type, period, or method of construction, or represents the work of a master or important, creative individual, and/or possesses high artistic values.

4. It is an outstanding example of a publicly owned Historical Landscape, that represents the work of a master landscape architect, horticulturalist, or landscape designer, or a publicly owned Historical Landscape that has potential to provide important information to the further study of landscape architecture or history.

5. It has yielded, or may be likely to yield information important in prehistory or the history of Chula Vista, the state, region, or nation (City of Chula Vista 2011a: 13).

The City of Chula Vista HPP was adopted by the City in 2011 and is referenced in City General Plan Title 21, Ordinance 3196. The goal of the HPP is:

> "To inform citizens, staff and elected or appointed officials of the regulatory requirements, program options and features, surveyed and designated properties, and economic benefits and incentives related to historic preservation in the City of Chula Vista" (City of Chula Vista 2011b: Title Page).

The HPP cites the Secretary of the Interior Standards for historical significance as including the importance in history, the physical condition, the proposed use, and the mandated code requirements (City of Chula Vista 2011b: 49). Cultural resources are addressed specifically under HPP Section 2.2, which references Chula Vista General Plan Chapter 9 (City of Chula Vista 2011b: 18-27). The goal of Objective E9 is to protect cultural resources in accordance with CEQA and encourage their accessibility to the public for "educational, religious, cultural, scientific, and other purposes" (City of Chula Vista 2011b: 27).

1.3.3 Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the study site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties (TCP) in discussions of cultural resource management (CRM) performed under federal auspices. According to Patricia L. Parker and Thomas F. King (1998), "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Cultural resources can also include TCPs, such as gathering areas, landmarks, and ethnographic locations in addition to archaeological districts. Generally, a TCP may consist of a single site, or group of associated archaeological sites (district or traditional cultural landscape), or an area of cultural/ethnographic importance.

The Traditional Tribal Cultural Places Bill of 2004 requires local governments to consult with Native American representatives during the project planning process. The intent of this legislation is to encourage consultation and assist in the preservation of Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance. It further allows for tribal cultural places to be included in open space planning. State Assembly Bill 52 (AB 52), effective July 1, 2015, introduced the Tribal Cultural Resource (TCR) as a class of cultural resource and additional considerations relating to Native American consultation into CEQA. As a general concept, a TCR is similar to the federally defined TCP; however, it incorporates consideration of local and state significance and required mitigation under CEQA. A TCR may be considered significant if included in a local or state register of historical resources; or determined by the lead agency to be significant pursuant to criteria set forth in Public Resources Code (PRC) §5024.1; or is a geographically defined cultural landscape that

meets one or more of these criteria; or is a historical resource described in PRC §21084.1, a unique archaeological resource described in PRC §21083.2; or is a non-unique archaeological resource if it conforms with the above criteria.

In 1990, the National Park Service (NPS) and Advisory Council for Historic Preservation introduced the term "TCP" through National Register Bulletin 38 (Parker and King 1998). A TCP may be considered eligible based on "its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community" (Parker and King 1998:1). Strictly speaking, TCPs are both tangible and intangible; they are anchored in space by cultural values related to community-based physically defined "property referents" (Parker and King 1998:3). On the other hand, TCPs are largely ideological, a characteristic that may present substantial problems in the process of delineating specific boundaries. Such a property's extent is based on community conceptions of how the surrounding physical landscape interacts with existing cultural values. By its nature, a TCP need only be important to community members and not the general outside population as a whole. In this way, a TCP boundary, as described by Bulletin 38, may be defined based on viewscape, encompassing topographic features, extent of archaeological district or use area, or a community's sense of its own geographic limits. Regardless of why a TCP is of importance to a group of people, outsider acceptance or rejection of this understanding is made inherently irrelevant by the relativistic nature of this concept.

2.0. ENVIRONMENTAL SETTING

2.1 PHYSICAL AND BIOLOGICAL ENVIRONMENT

The project area is in the coastal plains of western San Diego County, near the juncture with the foothills. The climate is characterized as Mediterranean hot summer. Annual temperatures range from an average January low of about 40 degrees Fahrenheit (^{o} F) to an average July high of 75° to 80° F, and annual rainfall averages around 10 inches (Griner and Pryde 1976). The Otay River Valley is just south of the project (Figure 2). To the southeast and east lie the San Ysidro Mountains and Jamul Mountains, composed of metavolcanic rocks (Tan and Kennedy 2002; Tan 2002) valued for use in stone tool manufacture.

The project area consists of rolling hillsides that range in elevation from approximately 620 feet AMSL in the northern portion to 340 feet AMSL in the southern portion of the Main Campus (western) property. The Lake Property (eastern) features a north-south trending central ridgeline and ranges in elevation from a high of approximately 570 feet AMSL in the central portion to 350 feet AMSL in the eastern portion near Wueste Road. Steep slopes greater than 25 percent gradient occur on both portions of the UID project area. Salt Creek and its associated open space is located between the west and east properties that comprise the UID project area.

In general, the western (Main Campus) parcel is underlain by the Tertiary Otay Formation, with fingers of Otay Formation-fanglomerate facies in some canyons and two pockets of middle to early Pleistocene alluvial deposits (Tan and Kennedy 2002). The Otay Formation-fanglomerate facies underlay the eastern parcel (Lake Property) in its entirety (Tan and Kennedy 2002). Soil types mapped on the Main Campus Property include Diablo clay,

Olivenhain cobbly loam, Linne clay loam, and Diablo-Olivenhain complex. The Lake Property is mapped as Olivenhain cobbly loam (Bowman 1973). Water would have been available in large drainages within the project site, some of which are tributary to the Otay River; one is tributary to Salt Creek, which lies between the two parcels (Figure 2). The Otay River is less than 0.5 mile to the south. Salt Creek is only about 500 feet east of the Main Campus property. Lower Otay Reservoir is immediately east of the Lake Property. Prior to the construction of the original dam in 1897, water would have been available in the creek there (Figure 2).

The bluffs abutting the Otay River Valley are located to the south. The Main Campus property consists of vacant, ranch and dry-farmed lands that currently support non-native grasslands and Diegan coastal sage scrub, with small areas of mule fat scrub and southern willow scrub. The Lake Property is undeveloped and mainly features coastal sage scrub habitat. The vegetation communities in and around the project area would have provided a number of plant species known to have been used by Native people for food, medicine, tools, shelter, ceremonial and other uses (Christenson 1990; Cuero 1970; Hedges and Beresford 1986; Luomala 1978). Many of the animal species found in these communities would have been used by native populations as well.

2.2 CULTURAL ENVIRONMENT

2.2.1 General Culture History

Several summaries discuss the prehistory of San Diego County and provide a background for understanding the archaeology of the general area surrounding the project. Moratto's (1984) review of the archaeology of California contains important discussions of Southern California, including the San Diego area, as does a relatively recent book by Neusius and Gross (2007). Bull (1983, 1987), Carrico (1987), Gallegos (1987), and Warren (1985, 1987) provide summaries of archaeological work and interpretations, and another paper (Arnold et al. 2004) discusses advances since 1984. The following is a brief discussion of the culture history of the San Diego region.

Carter (1957, 1978, 1980), Minshall (1976) and others (e.g., Childers 1974; Davis 1968, 1973) have long argued for the presence of Pleistocene humans in California, including the San Diego area. The sites identified as "early man" are all controversial. Carter and Minshall are best known for their discoveries at Texas Street and Buchanan Canyon. The material from these sites is generally considered nonartifactual, and the investigative methodology is often questioned (Moratto 1984).

The earliest accepted archaeological manifestation of Native Americans in the San Diego area is the San Dieguito complex, dating to approximately 10,000 years ago (Warren 1967). The San Dieguito complex was originally defined by Rogers (1939), and Warren published a clear synthesis of the complex in 1967. The material culture of the San Dieguito complex consists primarily of scrapers, scraper planes, choppers, large blades, and large projectile points. Rogers considered crescentic stones to be characteristic of the San Dieguito complex as well. Tools and debitage made of fine-grained green metavolcanic material, locally known as felsite, were found at many sites that Rogers identified as San Dieguito. Often these artifacts were

heavily patinated. Felsite tools, especially patinated felsite, came to be seen as an indicator of the San Dieguito complex. Until relatively recently, many archaeologists felt that the San Dieguito culture lacked milling technology and saw this as an important difference between the San Dieguito and La Jolla complexes. Sleeping circles, trail shrines, and rock alignments have also been associated with early San Dieguito sites. The San Dieguito complex is chronologically equivalent to other Paleoindian complexes across North America, and sites are sometimes called "Paleoindian" rather than "San Dieguito". San Dieguito material underlies La Jolla complex strata at the C. W. Harris site in San Dieguito Valley (Warren, ed. 1966).

The traditional view of San Diego prehistory has the San Dieguito complex followed by the La Jolla complex at least 7,000 years ago, possibly as long as 9,000 years ago (Rogers 1966). The La Jolla complex is part of the Encinitas tradition and equates with Wallace's (1955) Millingstone Horizon, also known as Early Archaic or Milling Archaic. The Encinitas tradition is generally "recognized by millingstone assemblages in shell middens, often near sloughs and lagoons" (Moratto 1984:147). "Crude" cobble tools, especially choppers and scrapers, characterize the La Jolla complex (Moriarty 1966). Basin metates, manos, discoidals, a small number of Pinto series and Elko series points, and flexed burials are also characteristic.

Warren et al. (1961) proposed that the La Jolla complex developed with the arrival of a desert people on the coast who quickly adapted to their new environment. Moriarty (1966) and Kaldenberg (1976) have suggested an in situ development of the La Jolla people from the San Dieguito. Moriarty has since proposed a Pleistocene migration of an ancestral stage of the La Jolla people to the San Diego coast. He suggested this Pre-La Jolla complex is represented at Texas Street, Buchanan Canyon, and the Brown site (Moriarty 1987).

Since the 1980s, archaeologists in the region have begun to question the traditional definition of San Dieguito people simply as makers of finely crafted felsite projectile points, domed scrapers, and discoidal cores, who lacked milling technology. The traditional defining criteria for La Jolla sites (manos, metates, "crude" cobble tools, and reliance on lagoonal resources) have also been questioned (Bull 1987; Cárdenas and Robbins-Wade 1985; Robbins-Wade 1986). There is speculation that differences between artifact assemblages of "San Dieguito" and "La Jolla" sites reflect functional differences rather than temporal or cultural variability (Bull 1987; Gallegos 1987). Gallegos (1987) has proposed that the San Dieguito, La Jolla, and Pauma complexes are manifestations of the same culture, with differing site types "explained by site location, resources exploited, influence, innovation and adaptation to a rich coastal region over a long period of time" (Gallegos 1987:30). The classic "La Jolla" assemblage is one adapted to life on the coast and appears to continue through time (Robbins-Wade 1986; Winterrowd and Cárdenas 1987). Inland sites adapted to hunting contain a different tool kit, regardless of temporal period (Cárdenas and Van Wormer 1984).

Several archaeologists in San Diego, however, do not subscribe to the Early Prehistoric/Late Prehistoric chronology (Cook 1985; Gross and Hildebrand 1998; Gross and Robbins-Wade 1989; Shackley 1988; Warren 1998). They feel that an apparent overlap among assemblages identified as "La Jolla," "Pauma," or "San Dieguito" does not preclude the existence of an Early Milling period culture in the San Diego region, separate from an earlier culture. One perceived problem is that many site reports in the San Diego region present conclusions based on interpretations of stratigraphic profiles from sites at which stratigraphy cannot validly be

used to address chronology or changes through time. Archaeology emphasizes stratigraphy as a tool, but many of the sites known in the San Diego region are not in depositional situations. In contexts where natural sources of sediment or anthropogenic sources of debris to bury archaeological materials are lacking, other factors must be responsible for the subsurface occurrence of cultural materials. The subsurface deposits at numerous sites are the result of such agencies as rodent burrowing and insect activity. Recent work has emphasized the importance of bioturbative factors in producing the stratigraphic profiles observed at archaeological sites (see Gross 1992). Different classes of artifacts move through the soil in different ways (Bocek 1986; Erlandson 1984; Johnson 1989), creating vertical patterning (Johnson 1989) that is not culturally relevant. Many sites that have been used to help define the culture sequence of the San Diego region are the result of just such nondepositional stratigraphy.

The Late Prehistoric period is represented by the Cuyamaca complex in the southern portion of San Diego County and the San Luis Rey complex in the northern portion of the county. The Cuyamaca complex is the archaeological manifestation of the Yuman forebears of the Kumeyaay people. The San Luis Rey complex represents the Shoshonean predecessors of the ethnohistoric Luiseño. The name Luiseño derives from Mission San Luis Rey de Francia and has been used to refer to the Indian people associated with that mission, while the Kumeyaay people are also known as Ipai, Tipai, or Diegueño (named for Mission San Diego de Alcala). Agua Hedionda Creek is often described as the division between the territories of the Luiseño and the Kumeyaay people (Bean and Shipek 1978; White 1963), but various researchers have described somewhat different boundaries for traditional use areas. The traditional songs and stories of the Native people often describe their territories and traditional use areas. The UID project area is within Kumeyaay territory.

Elements of the Cuyamaca and San Luis Rey complexes include small, pressure-flaked projectile points (e.g., Cottonwood and Desert Side-notched series); milling implements, including mortars and pestles; *Olivella* shell beads; ceramic vessels; and pictographs (True 1970; True et al. 1974). Of these elements, mortars and pestles, ceramics, and pictographs are not associated with earlier sites. True noted a greater number of quartz projectile points at San Luis Rey sites than at Cuyamaca complex sites, which he interpreted as a cultural preference for quartz (True 1966). He considered ceramics to be a late development among the Luiseño, probably learned from the Diegueño. The general mortuary pattern at San Luis Rey sites is ungathered cremations.

The Cuyamaca complex also differs from the San Luis Rey complex in the following points:

1. Defined cemeteries away from living areas;
2. Use of grave markers;
3. Cremations placed in urns;
4. Use of specially made mortuary offerings;
5. Cultural preference for side-notched points;
6. Substantial numbers of scrapers, scraper planes, etc., in contrast to small numbers of these implements in San Luis Rey sites;

7. Emphasis placed on use of ceramics; wide range of forms and several specialized items;
8. Steatite industry;
9. Substantially higher frequency of milling stone elements compared with San Luis Rey;
10. Clay-lined hearths (True 1970:53-54).

While Juan Rodriguez Cabrillo visited San Diego briefly in 1542, the beginning of the historic period in the San Diego area is generally given as 1769. It was that year that the Royal Presidio and the first Mission San Diego were founded on a hill overlooking Mission Valley. The Mission San Diego de Alcala was constructed in its current location five years later. The Spanish Colonial period lasted until 1821 and was characterized by religious and military institutions bringing Spanish culture to the area and attempting to convert the Native American population to Christianity. Mission San Diego was the first mission founded in Southern California. Mission San Luis Rey, in Oceanside, was founded in 1798. *Asistencias* (chapels) were established at Pala (1816) and Santa Ysabel (1818).

The Mexican period lasted from 1821, when California became part of Mexico, to 1848, when Mexico ceded California to the United States under the treaty of Guadalupe Hidalgo at the end of the Mexican-American War. Following secularization of the missions in 1834, mission lands were given as large land grants to Mexican citizens as rewards for service to the Mexican government. The society made a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. The Pueblo of San Diego was established during this period, and transportation routes were expanded. Cattle ranching prevailed over agricultural activities.

The American period began in 1848, when California was ceded to the United States. The territory became a state in 1850. Terms of the Treaty of Guadalupe Hidalgo brought about the creation of the Lands Commission in response to the Homestead Act of 1851, which was adopted as a means of validating and settling land ownership claims throughout the state. Few of the large Mexican ranchos remained intact, due to legal costs and the difficulty of producing sufficient evidence to prove title claims. Much of the land that once constituted rancho holdings became available for settlement by immigrants to California. The influx of people to California and to the San Diego region resulted from several factors, including the discovery of gold in the state, the end of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. During the late nineteenth and early twentieth centuries, rural areas of San Diego County developed small agricultural communities centered on one-room schoolhouses. Such rural farming communities consisted of individuals and families tied together through geographical boundaries, a common schoolhouse, and a church. Farmers living in small rural communities were instrumental in the development of San Diego County. They fed the growing urban population and provided business for local markets. Rural farm school districts represented the most common type of community in the county from 1870 to 1930. The growth and decline of towns occurred in response to boom and bust cycles in the 1880s.

3.0 PREVIOUS RESEARCH

The Main Campus Property is within a large area surveyed for cultural resources by ERCE as part of the studies for the Otay Ranch project (Carrico et al. 1992). A very small portion of the Main Campus Property was surveyed for the Otay Ranch project at a later date by Brian F. Smith and Associates (BFSA) (Smith 1996). Studies for High Tech High also covered a portion of this parcel (Smith and Moreno 2006). Based on site records on file at the South Coastal Information Center (SCIC) at San Diego State University, other portions of both the Main Campus Property and the Lake Property have been addressed by previous studies; however, reports were not available for these studies, so the extent of these studies and the precise areas covered are not known. In addition, reports of cultural resource studies for the Otay Ranch Villages project (also known as the University Villages project) (Smith and Stropes 2014) and Otay Ranch Village 9 (Guerrero and Gallegos 2009, revised by Noah 2010a) became available subsequent to the background research and field survey conducted for the current UID project; these were reviewed in 2016, when they were made available to HELIX.

A proposed off-site sewer line and detention basin located south of the Main Campus is within the area surveyed for Otay Ranch by BFSA (Smith 1996), as is the western portion of the off-site sewer line from the Lake Property. The north-south portion of the Lake Property off-site sewer alignment was surveyed as part of proposed improvements for the Otay Water District (Kyle and Gallegos 1994).

As summarized in Table 1 *(Previously Recorded Sites Within Project Area and Off-site Improvement Areas*), 15 archaeological sites and one isolate have been previously recorded within the project area, and one site was recorded within off-site improvements areas prior to the current study. The locations of these resources are shown in Figure 4 (*Previously Recorded Sites within Project Area*). Several of these sites include only a portion within the project area, extending off property; in some cases, the vast majority of the site is off property (see Figure 4). Eleven of the sites have been tested to assess site significance. For the other four sites, there is no record at SCIC that testing has been undertaken (see Table 1). Of the sites that have been assessed, two were noted on the site record as not significant resources under CEQA, and a testing report was available for several sites. For four of the sites, significance was not noted on the site record, and no reports are available for these sites at SCIC. However, based on the information on the site records, none of the sites tested appear to represent significant cultural resources, at least for the portion within the current project (e.g., CA-SDI-7217 has loci that are significant, but the portion within the project is not).

Table 1 PREVIOUSLY RECORDED SITES WITHIN PROJECT AREA AND OFF-SITE IMPROVEMENT AREAS				
CA-SDI-#	**Site Description**	**Tested?**	**Significant?**	**Comments**
7217	Lithic scatter; multiple loci but only a small portion located inside the project boundary	Portion within project tested by BFSA in 2010	No. Significance not noted on site record, but no subsurface material	Very large site with only a small portion located within this project
13453	Lithic scatter	Tested by BFSA in 2010	No. Significance not noted on site record, but only five artifacts were recovered in test unit	
13454	Lithic scatter	No	Undetermined	
14224	Lithic scatter	No	Undetermined	
14225	Lithic scatter	Portion within project tested by BFSA in 2001	No	
14228	Lithic scatter	No	Undetermined	
18136	Marine shell scatter	Tested by BFSA in 2006	No	Site removed by development of High Tech High
20155	Lithic scatter, ground stone artifacts, marine shell scatter	Tested by Noah in 2010	No	
20160	Lithic scatter	Tested by BFSA in 2010	No. Significance not noted on site record, but no subsurface material	
20162	Lithic scatter	Tested by BFSA in 2010	No. Significance not noted on site record, but no subsurface material	
20165	Lithic scatter	Tested by BFSA in 2010	No. Significance not noted on site record, but no subsurface material	
20441	Marine shell scatter with some flaked stone artifacts	Tested by BFSA in 2011	No	

Table 1 (cont.) PREVIOUSLY RECORDED SITES WITHIN PROJECT AREA AND OFF-SITE IMPROVEMENT AREAS				
CA-SDI-#	**Site Description**	**Tested?**	**Significant?**	**Comments**
20551	Sparse lithic and marine shell scatter	Tested by BFSA in 2012	No	
20552	Marine shell scatter	No record of testing	Unknown	Site removed by development of Eastlake Parkway/Hunte Parkway
20553	Marine shell scatter	Tested by BFSA in 2012	No	
20554	Marine shell scatter	Tested by BFSA in 2012	No	
P-37-#	**Description**	**Tested?**	**Significant?**	**Comments**
015140	Isolated flake	NA	No	Collected during ERCE survey

4.0 RESEARCH METHODS

A records search was obtained from the SCIC for the project site and a 0.5-mile radius around it (Confidential Appendix A). An effort was made to find and review reports of past archaeological studies covering the project area. Reports were not available for some surveys and testing projects, but the reports that could be obtained were reviewed. These reports included studies for Otay Ranch (Carrico et al. 1992; Smith 1996), off-site grading for Otay Ranch Village 9 (Noah 2010b), Otay Water District Improvements (Kyle and Gallegos 1994), Lower Otay Lake Boat Launching Facility (Kyle and Gallegos 1990), and High Tech High Chula Vista (Smith and Moreno 2006). Two reports became available to HELIX in 2016: Otay Ranch Village 9 (Noah 2010a), which is adjacent to the project area, and Otay Ranch Villages (University Villages) (Smith and Stropes 2014), which includes some small portions of the project area. Testing was conducted at a few sites within the UID project area as part of the Otay Ranch Villages study. These two reports were reviewed in 2016, and information from them was incorporated into this report.

The Native American Heritage Commission (NAHC) was contacted for a Sacred Lands File Check and a list of Native American contacts. Letters were sent to the contacts listed by the NAHC (see Confidential Appendix B).

The Main Campus Property and the Lake Property were surveyed for cultural resources by Affinis archaeologists and Native American monitors from Red Tail Monitoring and Research from April 18 to 23, 2013. (Personnel are listed in Chapter 8.0, *Personnel.*) To the extent feasible, the project area was surveyed using parallel transects spaced approximately 15 meters (m) apart. In some areas, the survey was impeded by steep slopes and thick brush. As shown in Figure 5, *Ground Visibility During Survey*, ground visibility was generally poor, especially in the western half of the Main Campus Property. A proposed off-site pipeline and detention basin running south from the Main Campus were surveyed on March 28, 2014 by an Affinis archaeologist and a Native American monitor from Red Tail Monitoring and Research. An off-site sewer alignment associated with the Lake Property was surveyed for cultural resources by a HELIX archaeologist and a Native American monitor from Red Tail Monitoring and Research on April 15, 2016.

Primary record forms were submitted to SCIC for the newly identified resources. Site records are included as Confidential Appendix C.

5.0 RESULTS

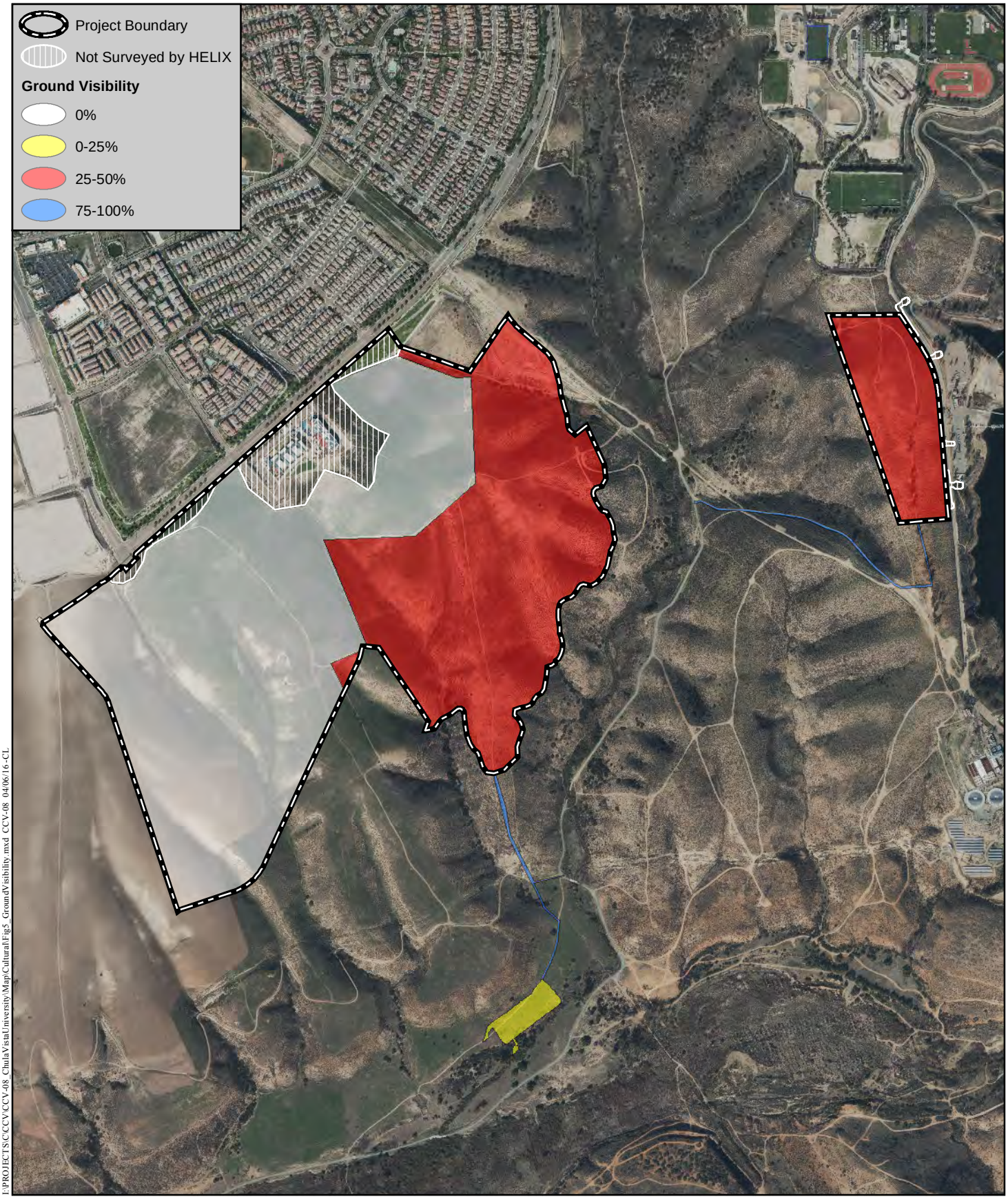
A total of 17 archaeological sites and 12 isolates have been identified within the project area and the off-site improvement areas. Fifteen archaeological sites and one isolated artifact were previously recorded within the current project area; one site had been recorded within the off-site improvement areas prior to the current study. Table 2, *Status of Archaeological Sites Within Project Area and Off-site Improvement Areas,* summarizes the current condition/status of these sites. In addition, 11 isolates and one small lithic scatter site were recorded during the current survey. The site and isolate locations are shown in Figure 6, *Locations of Cultural Resources* (found in Confidential Appendix D), and the resources are described below.

5.1 CA-SDI-7217

This large site includes multiple loci, and the majority of the site is located outside the project. While the overall site covers 20 acres (see 2011 site record update), the portion of the site within the current project area measures 76 m by 61 m (2010 BFSA site record update). The portion within the project does not have a locus designation, but it was tested by BFSA in 2010. One description of the portion of the site within the project indicates: "This resource consists of an artifact scatter of over 15 metavolcanic lithics, 1 core and 1 flake tool. It is approximately 175 by 85 meters in size. A dirt road runs through 5% of the site." Another part of the site record notes: "This resource consists of an artifact scatter of over 100 metavolcanic lithics, 2 cores, 1 biface, 1 steep-edge tool, 3 hammerstones and 1 flake tool". The sketch map shows 25 shovel test pits (STPs) and 2 test units excavated, as well as numerous surface artifacts collected. No significance determination is given on the site record, and there is no report available, but the site record does note: "Excavations indicate that the site is a surface deposit with no subsurface component." The artifact listing on the site record shows that in 25 STPs and two test units, only one flake was recovered. Given this, the portion of CA-SDI-7217 within the project is not a significant resource under CEQA or the City's guidelines (presented in the General Plan and the Historic Preservation Program), which are discussed in Chapter 1.3, *Applicable Regulations*. In addition, all visible surface artifacts were collected during the 2010 testing program. A single flake was observed during the current survey. No further work is recommended at this site for the current project. Other portions of CA-SDI-7217 outside the UID project area may retain significance.

5.2 CA-SDI-13453

This site is mapped as partially within the off-site sewer line running south from the Lake Property. CA-SDI-13453 was originally recorded in conjunction with Otay Water District improvements and described as over 10 flakes and two cores in and adjacent to a dirt road. The site was tested by BFSA in 2010 and described as "an artifact scatter of over 100 metavolcanic lithics, cores, hammerstones and steep-edge tools" covering an area of 225 m by 95 m (2010 site record). The test unit excavated at the site yielded only five artifacts: four pieces of debitage and one tool. Although significance was not specifically noted on the site record, it was noted that sites such as this are common in the Otay Mesa area. Given the lack of a subsurface deposit and any cultural features or diagnostic material, the site does not meet the significance criteria of CEQA or the City's guidelines. In addition, BFSA collected all visible surface artifacts. The site is mapped as mainly to the east of the proposed



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Ground Visibility During Survey

UNIVERSITY INNOVATION DISTRICT

HELIX Environmental Planning

N 0 1,250 Feet

Figure 5

sewer alignment, but the dirt road in which the alignment would be located crosses the site. One metavolcanic flake was observed at the site during the April 2016 survey.

5.3 CA-SDI-13454

This small lithic scatter (5 m by 5 m) was recorded in conjunction with a water project in 1993; it included three artifacts observed in a dirt road. The site was not within any of the preferred alignments for the water project, so it was not tested (Kyle and Gallegos 1994). There is no subsequent site record update indicating that any testing has been conducted. One artifact was noted in the mapped area of this site during the current survey. The site is in the Lake Property. Because the site has not been evaluated, it is potentially a significant resource under CEQA and the City's guidelines.

5.4 CA-SDI-14224

This sparse lithic scatter was recorded during the BFSA survey for Otay Ranch. "Dense vegetation obscured visibility, making a total inventory impossible, but artifacts noted include 15+ flakes, two scrapers, and one core" (Smith 1996:3.1-6). Site dimensions were given as 98 m by 55 m. There is no record that the site was ever tested to assess significance. CA-SDI-14224 could not be relocated during a 2010 survey for the San Diego Gas & Electric Co. (SDG&E) wood-to-steel pole conversion project, which involved the replacement of existing wood power poles with new steel poles between the Miguel and Border substations. No report was available at SCIC for this project; information is based on the site record update (Blotner 2010a). No artifacts were observed during the current survey, but ground visibility was poor. Only a small portion of the site is within the current project area. The site is potentially a significant resource under CEQA and the City's guidelines. Under the proposed project design there would be no impacts.

Table 2
STATUS OF ARCHAEOLOGICAL SITES WITHIN PROJECT AREA AND OFF-SITE IMPROVEMENT AREAS

Site (CA-SDI-#)	Tested	Significant?	Status	Recommendations
7217	Portion within project tested by BFSA in 2010	No (for portion with project area)	One flake noted during current survey	No further work for this project
13453	Tested by BFSA in 2010	No	Found as previously recorded	No further work

Table 2 (cont.) STATUS OF ARCHAEOLOGICAL SITES WITHIN PROJECT AREA AND OFF-SITE IMPROVEMENT AREAS				
Site (CA-SDI-#)	**Tested**	**Significant?**	**Status**	**Recommendations**
13454	No	Undetermined	One flake noted during current survey	Test in mapped area of site
14224	No	Undetermined	Only small portion of site within project; no artifacts noted during current survey	No further work for this project; impacts avoided by project design
14225	Portion within project tested by BFSA 2001	No	Only small portion of site within project; no artifacts noted during current survey	No further work for this project; impacts avoided by project design
14228	No	Undetermined	Only small portion of site within project; no artifacts noted during current survey	No further work for this project; impacts avoided by project design
18136	Tested by BFSA in 2006	No	Site destroyed by development of school	No further work
20155	Tested by Noah in 2010	No	Only small portion of site within project; sparse shell scatter joins this site and CA-SDI-20441	No further work
20160	Tested by BFSA in 2010	No	No cultural material observed during current survey	No further work
20162	Tested by BFSA in 2010	No	No cultural material observed during current survey	No further work

Table 2 (cont.) STATUS OF ARCHAEOLOGICAL SITES WITHIN PROJECT AREA AND OFF-SITE IMPROVEMENT AREAS				
Site (CA-SDI-#)	**Tested**	**Significant?**	**Status**	**Recommendations**
20165	Tested by BFSA in 2010	No	No cultural material observed during current survey	No further work
20441	Tested by BFSA in 2011	No	Sparse shell scatter joins this site and CA-SDI-20155	No further work
20551	Tested by BFSA in 2012	No	No cultural material observed during current survey; ground visibility poor	No further work
20552	No	Unknown	Site destroyed by development of Eastlake Parkway/Hunte Parkway	Site has been destroyed; no further work
20553	Tested by BFSA in 2012	No	Site found as previously recorded	No further work
20554	Tested by BFSA in 2012	No	No cultural material observed during current survey; ground visibility poor	No further work
Site 1	No	Undetermined	Site recorded as part of current study	Test to assess significance

5.5 CA-SDI-14225

This lithic scatter was also recorded during the BFSA Otay Ranch survey (Smith 1996). Twenty-five flakes, at least five scrapers, and one core were noted in an area measuring 122 m by 99 m. Site boundaries were expanded in 2001 as a result of surface collection of artifacts and excavation of 10 STPs in conjunction with a detention basin project. The expanded site area is within the current project, while the original mapped location is just east of the property. "Although the January 2001 study extended the boundaries of the lithic scatter, the area is heavily disturbed and subsurface testing recovered no artifacts. The site is determined as not significant according to CEQA" (2001 site record update). Based on this, the site would

not be a significant resource under City guidelines. A 2010 site record for the SDG&E wood-to-steel pole conversion project noted: "According to the BFSA sketch maps, the eastern boundary of CA-SDI-14225 contracted towards the west after the 2001 testing program. During the 2010 HDR|e^2M survey, however, artifacts were identified near the eastern portion of the original (1996) site boundary. Based on artifact locations, the eastern site boundary should remain consistent with the one delineated on the 1996 BFSA site form. A new comprehensive site boundary is suggested that encompasses both prior site boundaries (see sketch and location maps)" (Blotner 2010b). Only the portion of CA-SDI-14225 tested by BFSA in 2001 is within the current project. No artifacts were observed during the current survey. No further work is recommended at this site for the current project.

5.6 CA-SDI-14228

CA-SDI-14228 was recorded as a lithic scatter covering 107 m by 91 m. Artifacts noted included a core, a scraper, a retouched flake, a hammerstone, and at least 18 flakes (Smith 1996). There is no indication that testing was ever conducted at the site. This site is located in the Lake Property; only a portion of the site is mapped within the project area, and no artifacts were noted during the current survey. Because the site has not been evaluated, it is potentially a significant resource under CEQA and the City's guidelines. The project as proposed would have no impacts to the site, so no further work is recommended for this project.

5.7 CA-SDI-18136

This small scatter of marine shell was recorded during an archaeological study for High Tech High Chula Vista. Testing at the site consisted of three shovel scrapes, 10 shovel tests, and one test unit. No cultural material was found other than shell. Due to the low recovery and extensive disturbance, the site was determined not to be a significant resource under CEQA or City guidelines (Smith and Moreno 2006). The site was removed by the development of High Tech High.

5.8 CA-SDI-20155

This site was recorded in conjunction with environmental review for off-site grading for the proposed Otay Ranch Village 9. It was described as "a marine shell and flaked lithic and groundstone scatter. Much of the shellfish is highly fragmented, the site area having been disked for many years. Three concentrations were noted, with shellfish thinly spread between the concentrations, most likely the result of the agricultural activity" (2010 site record). Site dimensions were noted as 605 m by 170 m. The site record also noted that the "site appears to be generally a surface scatter, which has been pushed to a depth of ~ 20 cm by repeated agricultural disking." Cultural material collected during the testing included "750 shellfish fragments, one fish scale (but no animal bones), two manos, one battered implement, one flake tool, 23 flaked lithics, including one battered implement flake and one SEUT/adze flake" (2010 site record).

The testing program at CA-SDI-20155 consisted of mapping and collecting surface artifacts, surface collection of a 10-m-by-10-m grid in an area of relatively high shell density, excavation of STPs and a 1-m-by-1-m unit, as well as the cataloging and analysis of cultural

material collected. AMS radiocarbon dates of 3100 ± 40 years BP and 3540 ±40 years BP were obtained on samples of shell from the site. "The site is considered to be essentially a surface scatter dominated by shellfish remains, which repetitive agricultural disking has fragmented to a high degree and moved both laterally and vertically along the mesa top" (Noah 2010b:v). "Given the losses to site integrity, low subsurface artifact counts, absence of vertebrate faunal materials, and site disturbance, CA-SDI-20155 is identified as not significant under City of Chula Vista and CEQA criteria and is recommended as ineligible for listing on the CRHR" (Noah 2010b:v). Monitoring of grading was recommended for the site, due to the potential for subsurface features, such as hearths.

Only a small portion of CA-SDI-20155 is located within the project site. However, during the current survey, a thin shell scatter was noted between this site and CA-SDI-20441, connecting the two sites. The site record for CA-SDI-20155 noted that marine shell was dispersed across the area by years of agricultural use.

5.9 CA-SDI-20160

This lithic scatter, recorded by BFSA in 2010, includes flakes, a core, a hammerstone, and a tool over an area of 152 m by 121 m. The site map shows the excavation of 13 STPs and one test unit at the site. Although site significance was not specified on the site record, it was noted: "Excavations indicate that the site is a surface deposit with no subsurface component" (2010 site record). Given this, the site is not a significant cultural resource under CEQA or the City's guidelines. No cultural material was found during the current survey. No further work is recommended for this site.

5.10 CA-SDI-20162

This site, too, was recorded by BFSA in 2010 and was tested with the excavation of 15 STPs, one test unit, and surface collection. In one part of the site record, CA-SDI-20162 is described as "30 metavolcanic lithics, 1 core, 1 hammerstone, and 1 steep-edge tool. It is approximately 400 by 200 feet in size." Another part of the site record indicates that "this resource consists of an artifact scatter of over 10 metavolcanic lithics, 1 core and 1 hammerstone" and gives the site dimensions as "150f. by 75f." The site sketch map and artifact listing both show all the STPs as negative, and the site record notes "the site is a surface deposit with a minimal subsurface component." Based on this, CA-SDI-20162 does not represent a significant cultural resource under CEQA or the City's guidelines. No cultural material was found during the current survey, and no further work is recommended.

5.11 CA-SDI-20165

Recorded by BFSA in 2010, CA-SDI-20165 was described as "an artifact scatter of over 35 metavolcanic lithics, 1 core, 1 hammerstone and 1 steep-edged tool. It is approximately 500 by 250 feet in size" (2010 site record). The site record noted that 50 percent of the ground surface was visible. While surface artifacts were recovered, 15 STPs and one test unit yielded only one hammerstone, which was in the 0-10 cm level. Although significance was not specifically addressed in the site record, it was noted: "Excavations indicate that the site is a surface deposit with a minimal subsurface component" (2010 site record). Given this,

CA-SDI-20165 is not considered a significant cultural resource under CEQA or City guidelines. No cultural material was found during the current survey; no further work is recommended.

5.12 CA-SDI-20441

This site was recorded in 2011 as a large, dispersed scatter of marine shell with three pieces of debitage, covering an area approximately 1,500 feet in diameter. "However, due to property boundaries. the portion of the site accessible measures 200 feet by 150 feet" (2011 site record). The site record noted that 12 STPs and two test units were excavated; the site sketch map did not show the locations of excavation, nor did it show the areas that were inaccessible due to property boundaries. The Otay Ranch Villages cultural resource report noted:

> The eastern portion of SDI-20,441 was initially tested; however, with changes to the development plan, additional testing was focused on the southern tip of the site, which corresponds to the area of the site now situated within Village 10. The surface expression of the site was mapped and recorded, all exposed artifacts were recovered that correspond to the development area within the Village 10 Project, surface scrapes were conducted in areas of limited visibility, and excavations were completed to evaluate the potential of the site to contain subsurface cultural deposits [Smith and Stropes 2014:5.0-503].

The report also noted: "The area defined by the surface scatter of artifacts and ecofacts is 82,709 square meters (889,949 square feet)" (Smith and Stropes 2014:5.0-503). Although the site record only noted the excavation of 12 STPs, the report indicated that 12 STPs were excavated in the eastern portion of the site, which is located within the UID project area, based on maps provided to HELIX by BFSA, and two additional STPs were excavated in the southern portion of the site, within the Otay Ranch Villages project site. Two 1-m-by-1-m test units were also excavated within what is now the UID project area. "Subsurface test results did not identify any significant cultural deposits, as only marine shell was recovered from the site" (Smith and Stropes 2014:5.0-504). Ten pieces of debitage were collected from the surface of the site. The vast majority of the site as it is mapped is within the UID project area.

Test excavations, surface scrapes, and surface collection at CA-SDI-20441 yielded only 10 pieces of debitage and 340.9 g of marine shell over a large area. The cultural material is concentrated within the upper 30 cm. Given these data, the site is not a significant resource under CEQA or the City's guidelines.

The only cultural material found during the current survey was marine shell. In addition, a thin shell scatter was noted between this site and CA-SDI-20155, connecting the two sites. The site record for CA-SDI-20155 noted that marine shell was dispersed across the area by years of agricultural use. Based on the almost total lack of subsurface cultural material at both CA-SDI-20155 and CA-SDI-20441 and the extremely limited research potential at both sites, no further assessment is recommended.

5.13 CA-SDI-20551

CA-SDI-20551 was described as a scatter of 8 to 10 pieces of debitage spread over an area of approximately 3,000 m^2. The 2012 site record indicated that the site is "likely a surface deposit." The Otay Ranch Villages cultural resources report describes CA-SDI-20551 as a sparse lithic and marine shell scatter. Testing by BFSA in 2012 resulted in the collection of 12 pieces of marine shell but no artifacts; surface artifacts noted during the January 2012 survey could not be seen during the May 2012 testing program, due to vegetation growth (Smith and Stropes 2014). Excavation of six shovel tests and one 1-m-by-1-m test unit yielded no subsurface cultural material. "The testing of Site SDI-20,551 has exhausted the research potential of this site" (Smith and Stropes 2014:5.0-578). Given this, the site is not a significant resource under CEQA and the City's guidelines. No cultural material was observed during the current survey.

5.14 CA-SDI-20552

This site was recorded as a "small shell scatter dispersed across an approximately 5000 square meter area. The site consists of primarily Chione and Argopecten shell species" (2012 site record). Although there is no report for this site, it appears to have been destroyed by the construction of Eastlake Parkway and Hunte Parkway. No evidence of this site was found during the current survey. Given the nature of the site as described (small, dispersed shell scatter), no subsurface deposits would be expected to be present. Because the site has been destroyed, there would be no impacts from the project. In addition, the mapped location of the site is outside the project impact area.

5.15 CA-SDI-20553

CA-SDI-20553 was recorded as a scatter of marine shell, primarily Chione, dispersed across a 980 m^2 area. No artifacts were noted on the site record. "Testing of the site consisted of the mapping and recordation of all surface artifacts, and the excavation of 10 STPs and one standard test unit. The field investigations were conducted in February of 2012" (Smith and Stropes 2014:5.0-603). No cultural material was found on the surface during the testing program, but marine shell was recovered in six of the STPs. "The analysis of the cultural materials recovered from SDI-20,553 revealed a localized, shallow cultural deposit. Based on the information derived from the testing program, the site is not considered to retain any research potential" (Smith and Stropes 2014:5.0-604). Given these data, the site is not a significant resource under CEQA or the City's guidelines. During the current survey, this site was found essentially as previously recorded.

5.16 CA-SDI-20554

CA-SDI-20554 was described as a "small shell scatter dispersed across an approximately 1400 square meter area. The site consists of primarily Chione and Argopecten shell species" (2012 site record). The site was tested by BFSA in 2012; the testing program included excavation of 10 STPs and one test unit. No surface artifacts were observed, but 110.3 g shell was collected, 99.7 g of which came from the test unit.

Based on the information derived from the testing program, the site is not considered significant according to CEQA criteria. The site exhibits a shell scatter, but no segregated special-use areas/features or other unique elements were encountered. The level of information already obtained from this site represents a large portion of the research potential of the site and it is unlikely that any significantly different information would be gathered from further investigation [Smith and Stropes 2014:5.0-610].

The site also does not meet the City's significance criteria, which are essentially the same as those of CEQA. No cultural material was observed during the current survey, but ground visibility was quite poor.

5.17 SITE 1

During the field survey of the off-site sewer alignment associated with the Lake Property, conducted in April 2016, a portion of the alignment within the Lake Property was resurveyed. Ground visibility was better than it had been during the survey conducted in 2013. A small lithic scatter was identified, consisting of approximately five flakes and debitage (metavolcanic and quartzite) over an area approximately 15 m in diameter. The area is disturbed by an existing road, so the potential for subsurface cultural resources is considered to be low; however, the potential must be explored in order to assess site significance.

5.18 ISOLATES

As summarized in Table 3, *Isolates Within Project Areas*, 11 isolates were found during the current survey: four in the Main Campus Property, five in the Lake Property, and two in the off-site sewer alignment associated with the Lake Property. The isolates include one hammerstone, three flakes (one primary flake and two secondary flakes), two cores (one multidirectional, one bidirectional), and one bifacial mano. None of the isolates were collected. In addition, one isolate was recorded in the Main Campus parcel during the Otay Ranch survey by ERCE: P-37-015140. The artifact, a flake, was collected by ERCE archaeologists.

Table 3
ISOLATES WITHIN PROJECT AREA

Isolate (P-37-#)	Description
015140	Flake, porphyritic metavolcanic
033126	Hammerstone, medium- to coarse-grained metavolcanic
033127	Flake, secondary, fine-grained metavolcanic
033128	Core, multidirectional, medium- to coarse-grained metavolcanic
033129	Mano, bifacial with battering, medium- to coarse-grained metavolcanic
033130	Flake, primary, medium- to coarse-grained metavolcanic
033131	Core, bidirectional, medium- to coarse-grained metavolcanic
033132	Flake, secondary, fine-grained metavolcanic
OS-I-2	Core, fine-grained metavolcanic

Table 3 (cont.) ISOLATES WITHIN PROJECT AREA	
Isolate (P-37-#)	**Description**
OS-I-7	Possible core, fine-grained metavolcanic
OS-I-9	Flake, tertiary, fine-grained metavolcanic
OS-I-10	Flake, tertiary, fine-grained metavolcanic

5.19 NATIVE AMERICAN CONCERNS

The NAHC was contacted for a search of their Sacred Lands Files and a list of Native American contacts for this area. Letters were sent to those contacts identified by the NAHC in May 2013. The Sacred Lands File search did not indicate the presence of significant Native American cultural resources in the immediate project area. To date, the only response received has been from the Campo Band of Mission Indians, who indicated they have no comments at this time.

6.0 PROJECT EFFECTS AND MITIGATION MEASURES

As addressed in Chapter 1.3, *Applicable Regulations*, resource significance and the significance of potential project impacts are assessed under the criteria of CEQA and the City's cultural resource significance criteria, as outlined in Chapter 9 of the City's General Plan (2005), Ordinance No. 3196 (2011a), and Section 2.2 of the Historic Preservation Program (2011b). The City's criteria align with those of CEQA. 6.1

6.1 PROJECT IMPACTS AND SIGNIFICANCE

The locations of the archaeological sites and isolates identified within the project area and off-site improvement areas are shown in relation to project impact areas in Figure 7 (*Cultural Resources in Relation to Project Plans*, found in Confidential Appendix D). As summarized in Tables 2 and 4 *(Project Impacts and Recommendations),* of the 17 archaeological sites identified within the project area and off-site improvement areas, 12 have been determined not to be significant resources under CEQA and the City's guidelines; one additional site has been removed by grading. The four remaining sites are potentially significant resources pending evaluation. Two of these sites would not be subject to impacts from the project as proposed, and no further work is recommended there (Table 4, *Project Impacts and Recommendations*). The two potentially significant sites within the project impact footprint (CA-SDI-13454 and Site 1) will need to be tested to assess site significance and the significance of project impacts. If these sites are determined to be significant resources, appropriate mitigation measures would be developed and implemented in order to mitigate project impacts to below a level of significance. The isolates are not significant resources, and no further work is required for them.

Table 4 PROJECT IMPACTS AND RECOMMENDATIONS		
CA-SDI- #	**Direct Impacts**	**Recommendations**
7217	Yes	None; not a significant resource
13453	Yes from off-site improvements	None; not a significant resource
13454	Yes	Site testing required to assess significance. Appropriate mitigation measures will be developed and implemented if determined to be a significant resource
14224	No	None; no impacts
14225	No	None; no impacts
14228	No	None; no impacts
18136	No	None; site no longer exists
20155	Yes	None; not a significant resource
20160	Yes	None; not a significant resource
20162	Yes	None; not a significant resource
20165	Yes	None; not a significant resource
20441	Yes	None; not a significant resource
20551	Yes	None; not a significant resource
20552	Yes	None; site no longer exists
20553	Yes	None; not a significant resource
20554	Yes	None; not a significant resource
Site 1	Yes	Site testing required to assess significance. Appropriate mitigation measures will be developed and implemented if determined to be a significant resource

6.2 MITIGATION MEASURES

Construction activities associated with the project could inadvertently result in significant impacts to presently unknown archaeological resources that may be uncovered during clearing and grading. Based on this, the following mitigation measures shall be implemented.

CUL-1 **Archaeological Monitor**. Prior to issuance of land development permits, including clearing or grubbing and grading permits, the applicant shall provide written confirmation and incorporate into grading plans, to the satisfaction of the Development Services Director (or their designee), that a principal investigator as listed by the Secretary of the Interior (Code of Federal Regulations Title 36, Section 61) has been retained in an oversight capacity to ensure that an archaeological monitor will be present during all cutting of previously undisturbed soil. If these cutting activities would occur in more than one location, multiple monitors shall be provided to monitor these areas, as determined necessary by the principal investigator.

CUL-2 **Resource Discovery Procedure**. During the initial grading of previously undisturbed soils within the UID project area and any off-site improvement areas, prehistoric and historic resources may be encountered. In the event that the monitor identifies a potentially significant site, the archaeological monitor shall secure the discovery site from further impacts by delineating the site with staking and flagging, and by diverting grading equipment away from the archaeological site. Following notification to the Development Services Director (or their designee), the archaeological monitor shall conduct investigations as necessary to determine if the discovery is significant under the criteria listed in CEQA and the environmental guidelines of the City of Chula Vista.

If the discovery is determined to be not significant, grading operations may resume and the archaeological monitor shall summarize the findings in a letter report to the Development Services Director (or its designee) following the completion of mass grading activities. The letter report shall describe the results of the on-site archaeological monitoring, each archaeological site observed, the scope of testing conducted, results of laboratory analysis (if applicable), and conclusions. The letter report will be completed to the satisfaction of the Development Services Director (or their designee) prior to release of grading bonds. Any artifacts recovered during the evaluation shall be curated at a curation facility approved by the Development Services Director (or their designee). For those prehistoric/historic resources that are determined to be significant, the following measures shall be implemented:

i. An alternate means of achieving mitigation shall be pursued. In general, these forms of mitigation include: 1) site avoidance by preservation of the site in a natural state in open space or in open space easements; 2) site avoidance by preservation through capping the site and placing landscaping on top of the fill; 3) data recovery through implementation of an excavation and analysis program; or 4) a combination of one or more of the above measures. Procedures for implementing the alternative forms of mitigation described herein are further detailed in the Mitigation Monitoring and Reporting Program (MMRP) adopted as part of the 1993 Otay Ranch General Development Plan Program EIR (EIR 90-01).

ii. For those sites for which avoidance and preservation is not feasible or appropriate, the applicant shall prepare a Data Recovery Plan. The plan will, at a minimum, include the following: 1) a statement of why data recovery is appropriate as a mitigating measure; 2) a research plan that explicitly provides the research questions that can reasonably be expected to be addressed by excavation and analysis of the site; 3) a statement of the types and kinds of data that can reasonably be expected to exist at the site and how these data will be used to answer important research questions; 4) a step-by-step discussion of field and laboratory methods to be employed; and 5) provisions will be stated for curation and storage of the artifacts, notes, and photographs. In cases involving historic resources, archival research and historical documentation shall be used to augment field-testing programs. Grading operations within the affected area may resume once the site has been fully

evaluated and mitigated to the satisfaction of the Development Services Director (or their designee). All significant artifacts collected during the implementation of the Data Recovery Plan shall be curated at a facility approved by the Development Services Director (or their designee).

iii. Following the completion of mass grading operations, the applicant shall prepare a plan that addresses the temporary on-site presentation and interpretation of the results of the archaeological studies for the project. This could be accomplished through exhibition within a future community center, civic building and/or multi-purpose building. This exhibition will only be for temporary curation of those materials being actively used for interpretation and display, and that permanent curation of artifacts and data will be at a regional repository, such as the San Diego Archaeological Center. All significant artifacts collected during the implementation of the Data Recovery Plan shall be permanently curated at a facility approved by the Development Services Director (or their designee).

CUL-3 **Human Remains Disturbance Protocol.** If human remains are discovered during grading or site preparation activities within the UID project area and any off-site improvements, the archaeological monitor shall secure the discovery site from any further disturbance. State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the San Diego County Coroner has made the necessary findings as to the origin and disposition of the remains 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 NAHC. The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American. The Most Likely Descendent will assist the Development Services Director (or their designee) in determining what course of action shall be taken to deal with the remains. Grading operations within the affected area may resume once the site has been fully evaluated and mitigated to the satisfaction of the Development Services Director (or their designee). The archaeological monitor shall summarize the findings in a letter report to the Development Services Director (or their designee) following the completion of mass grading activities.

7.0 INDIVIDUALS AND AGENCIES CONSULTED

Kim Bactad, Executive Director	Kumeyaay Diegueño Land Conservancy
Steve Banegas, Spokesperson	Kumeyaay Cultural Repatriation Committee
Frank Brown, Coordinator	Inter-Tribal Cultural Resource Protection Committee
Ron Christman	Kumeyaay Cultural Historic Committee
Leroy J. Elliott, Chairperson	Manzanita Band of Kumeyaay Nation
Ralph Goff, Chairperson	Campo Band of Mission Indians
Raymond Hunter, Chairperson	Jamul Indian Village
Clifford LaChappa, Chairperson	Barona Group of the Capitan Grande
Allen E. Lawson, Chairperson	San Pasqual Band of Mission Indians
Clint Linton, Director of Cultural Resources	Ipay Nation of Santa Ysabel
Carmen Lucas	Kwaaymii Laguna Band of Mission Indians
Will Micklin, Executive Director	Ewiiaapaayp Tribal Office
Rebecca Osuna, Spokesperson	Inaja Band of Mission Indians
Bernice Paipa, Vice-Spokesperson	Kumeyaay Cultural Repatriation Committee
Gwendolyn Parada, Chairperson	La Posta Band of Mission Indians
Virgil Perez, Spokesman	Iipay Nation of Santa Ysabel
Anthony R. Pico, Chairperson	Viejas Band of Mission Indians
Mark Romero, Chairperson	Mesa Grande Band of Mission Indians
G. David Singleton	Native American Heritage Commission
Daniel Tucker, Chairperson	Sycuan Band of the Kumeyaay Nation

8.0 PERSONNEL

The following persons participated in the preparation of this report:

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8.2 Red Tail Monitoring and Research

Clint Linton, B.A.	Native American Representative
Nate Curo	Native American Monitor
Gabe Kitchen	Native American Monitor
Tuchon Phoenix	Native American Monitor

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