

# A CULTURAL RESOURCES STUDY FOR THE PORTOLA CENTER PROJECT

## ORANGE COUNTY

APNs 606-161-10, -12, and -25 to -32;  
606-321-01 to -09; 606-331-01 to -03;  
606-332-01; 606-341-01 and -03 to -07;  
606-351-01

*Submitted to:*

City of Lake Forest  
25550 Commercentre Drive, Suite 100  
Lake Forest, California 92630

*Prepared for:*

USA Portola Properties  
610 West Ash Street, Suite 1500  
San Diego, California 92101  
and  
Rancho Portola Investment  
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*August 29, 2011*

**National Archaeological Data Base Information**

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**Report Date:** August 29, 2011

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**USGS Quadrangle:** *El Toro*, California (7.5 minute)

**Study Area:** 196.7 acres

**Key Words:** Archaeological assessment of six sites; ORA-441, ORA-442, ORA-443, ORA-445, ORA-446, ORA-447; prehistoric temporary camps, resource extraction sites; not significant; USGS *El Toro* quadrangle. Mitigation Monitoring and Reporting Program (MMRP) required.

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## **Abbreviations**

AMSL	Above mean sea level
BFSA	Brian F. Smith and Associates
BMF	Bedrock milling feature
BTS	Below the surface
CEQA	California Environmental Quality Act
FCR	Fire-cracked rock
SCCIC	South Central Coastal Information Center
CSUF	California State University, Fullerton
SHPO	State Historic Preservation Office
STP	Shovel test pit
TU	Test unit
USGS	United States Geologic Survey

## **1.0 MANAGEMENT SUMMARY/ABSTRACT**

In response to a request from the project applicant, Brian F. Smith and Associates, Inc. (BFSA) conducted a Phase I and Phase II archaeological assessment of the Portola Center Project located in the City of Lake Forest in southern Orange County, California. The original assessment was conducted in 2007. Subsequently, revisions to the project required that the cultural resources study be updated, which was accomplished in 2010 and 2011. The assessment was conducted as part of the environmental review required for the development of the subject property (APNs 606-161-10, -12, and -25 to -32; 606-321-01 to -09; 606-331-01 to -03; 606-332-01; 606-341-01 and -03 to -07; and 606-351-01). The evaluation program was conducted in accordance with CEQA Section 15064.5, the City of Lake Forest, and Orange County guidelines to determine the presence of any archaeological or historical cultural resources that would be affected by the proposed project and whether these resources meet the eligibility requirements for the California Register of Historic Resources (CRHR).

A records search was requested from the South Central Coastal Information Center (SCCIC) in 2007 and again in 2010 to identify previously discovered archaeological sites in the project area, and a Sacred Lands File search was requested from the Native American Heritage Commission (NAHC) to list potentially sacred or ceremonial sites or landforms on or near the project. The SCCIC records search was positive for the presence of five prehistoric cultural resources within the project boundaries. The resources are Sites CA-ORA-441 through CA-ORA-443, and Sites CA-ORA-445 and CA-ORA-446. The Sacred Lands File search by the NAHC was negative for the presence of sacred or ceremonial sites or landforms considered important to local tribes.

The Portola Center property had been previously studied in 1973, 1977, 1980, and 1986 as part of broader studies for the Portola Hills Community. The Portola Center Project encompasses approximately 194.5 acres. The survey process from the previous projects was duplicated for the current project in August of 2011 to ensure all resources were identified. For those sites previously recorded, the scope of work for the 2007 study focused upon the evaluation of the sites and an assessment of potential impacts from the proposed development. BFSA archaeologists conducted a significance evaluation from January 24-29, 2007. The significance evaluation included a surface collection and subsurface excavations with shovel test pits and test units, which were predominantly negative for the presence of subsurface artifacts or culturally modified soil. Site records were updated to reflect the results of the testing program. In 2010, portions of the project were studied that were previously outside of the development envelope but are now part of the project. Due to project concerns, in August of 2011, the entire parcel was resurveyed to verify the results of previous studies. No additional resources were identified as a consequence of this survey in 2010 or 2011.

The subsurface excavations conducted in 2007 combined with the collection and curation of surface artifacts (except at ORA-445) and recordation of the sites has exhausted the research potential for Sites ORA-441 through ORA-443, ORA-445, and ORA-446, and mitigated potential significant impacts to the sites represented by the proposed project to a level that is less than significant. Nevertheless, there remains the possibility that subsurface artifacts and features may be encountered during construction activity. Monitoring is therefore recommended during all ground-disturbing activities within the project boundaries. Any resources that are identified during grading should be assessed for significance and impacts mitigated as necessary.

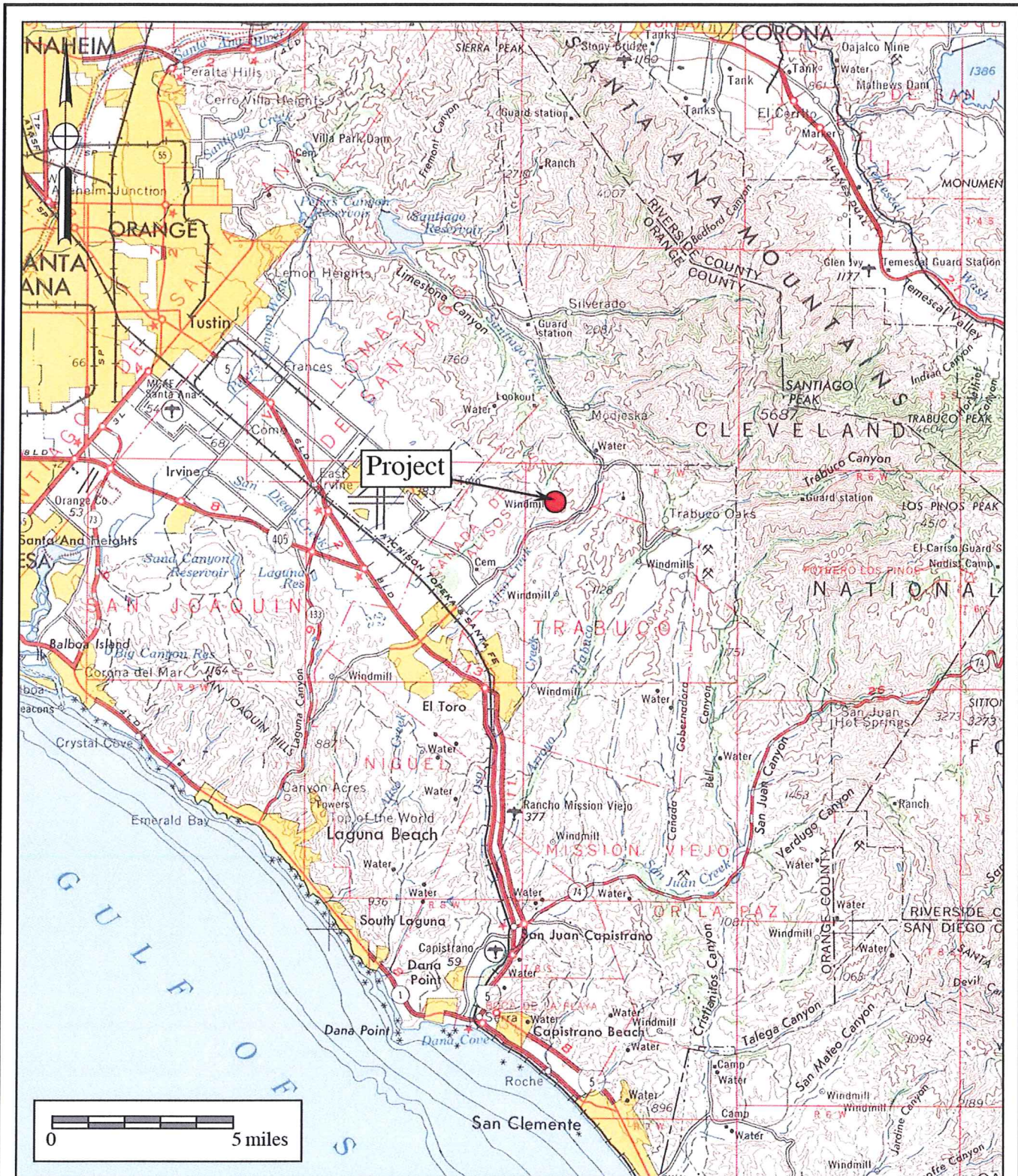
A copy of this report will be permanently filed with the SCCIC at California State University, Fullerton. All notes and other materials related to this project will be curated at the archaeological laboratory of BFSa in Poway, California.



## **2.0 INTRODUCTION**

The 194.5-acre project area is located in the City of Lake Forest in southern Orange County, just west of the Cleveland National Forest, on the northwest side of El Toro Road just east of the Foothills Corridor (Figures 2.0-1 and 2.0-2, Plate 2.0-1). Specifically, the property lies within unsectioned land of Rancho Cañada De Los Alisos, Township 6 South, Range 7 West of the San Bernardino Base Meridian, as shown on the USGS *El Toro* 7.5-minute topographic quadrangle (Figure 2.0-2). The proposed project involves land development within the 194.5-acre property for single- and multi-family residential housing, commercial and mixed use, and open space (Figure 2.0-3). The archaeological assessment of the cultural resources located within the property was performed from January 24-29, 2007, November 1-2, 2010, and August 3-4, 2011.

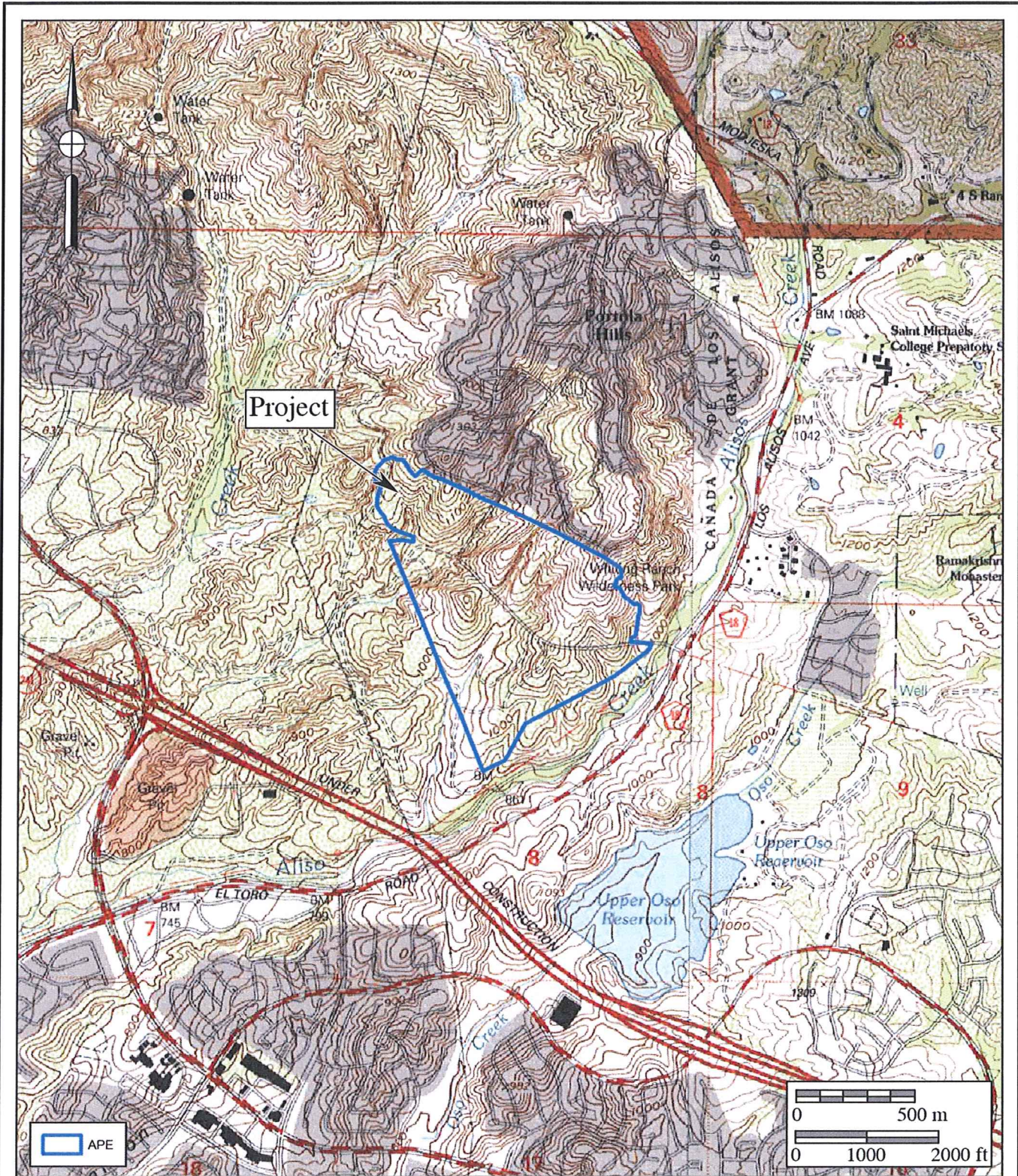
The scope of work for this project included records searches, an intuitive resurvey of the development area, and a testing and evaluation program for five prehistoric sites, ORA-441 through ORA-443, ORA-445, and ORA-446, identified within the development area. Site investigations were conducted by senior project archaeologist Tracy A. Stropes, M.A., RPA, and field archaeologists Charles Callahan, Brad Comeau, Clarence Hoff, Andrew Hoge, Justin Houghton, Jennifer Kraft, Benjamin Marshall, Shaun Murphy, Ryan Robinson, and Matthew Smith under the direction of Brian F. Smith, Principal Investigator. All recovered cultural and ecofactual materials from the investigation were returned to the BFSA laboratory for cataloging and analysis. The field notes, photographs, and materials related to this project are curated at the offices of BFSA. All artifact collections will be temporarily housed at BFSA until permanent curation can be arranged.



**Figure 2.0-1**  
**General Location Map**  
 The Portola Center Project

USGS Santa Ana and San Diego (1:250,000 series)





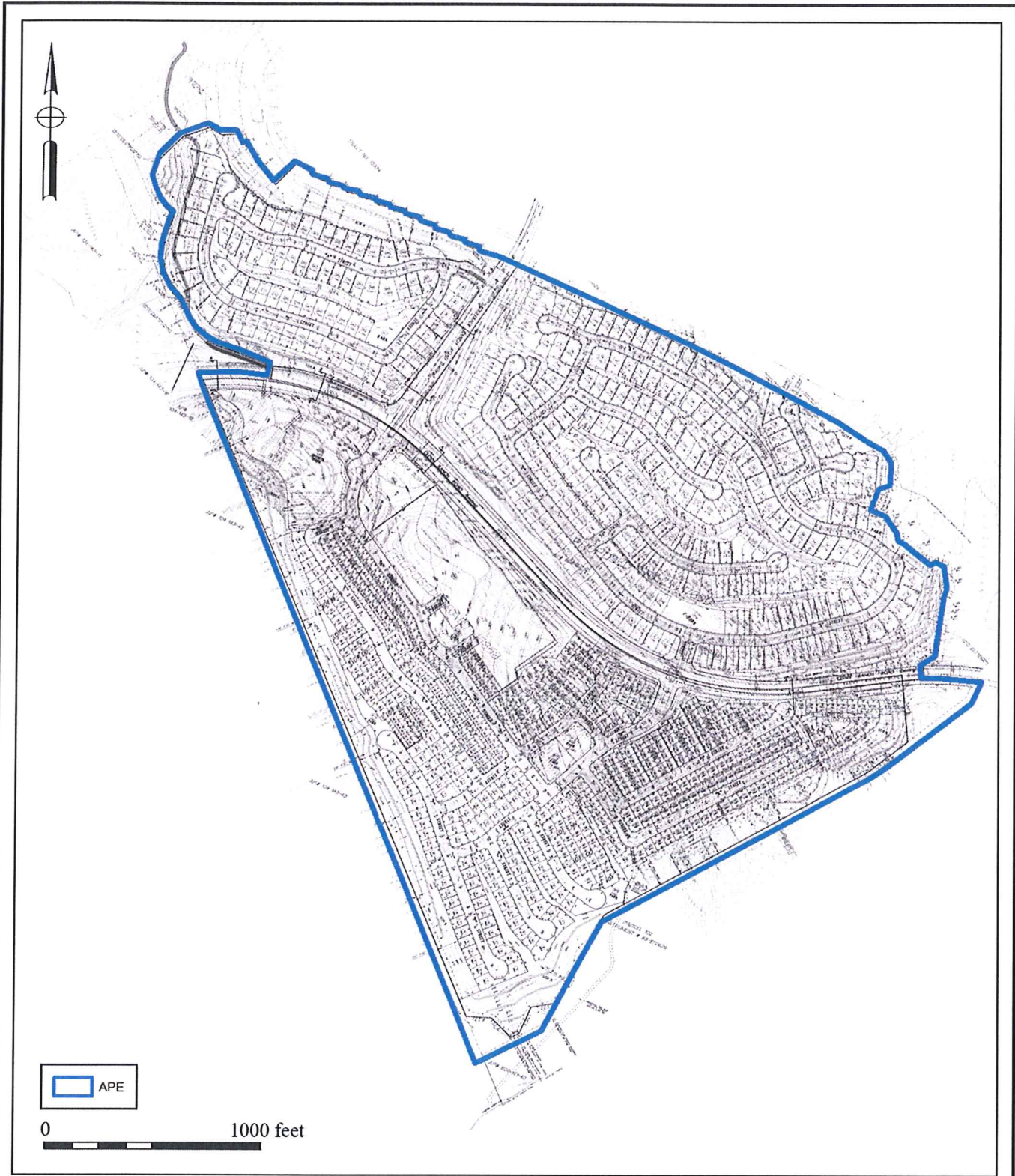
**Figure 2.0-2**

**Project Location Map**

The Portola Center Project

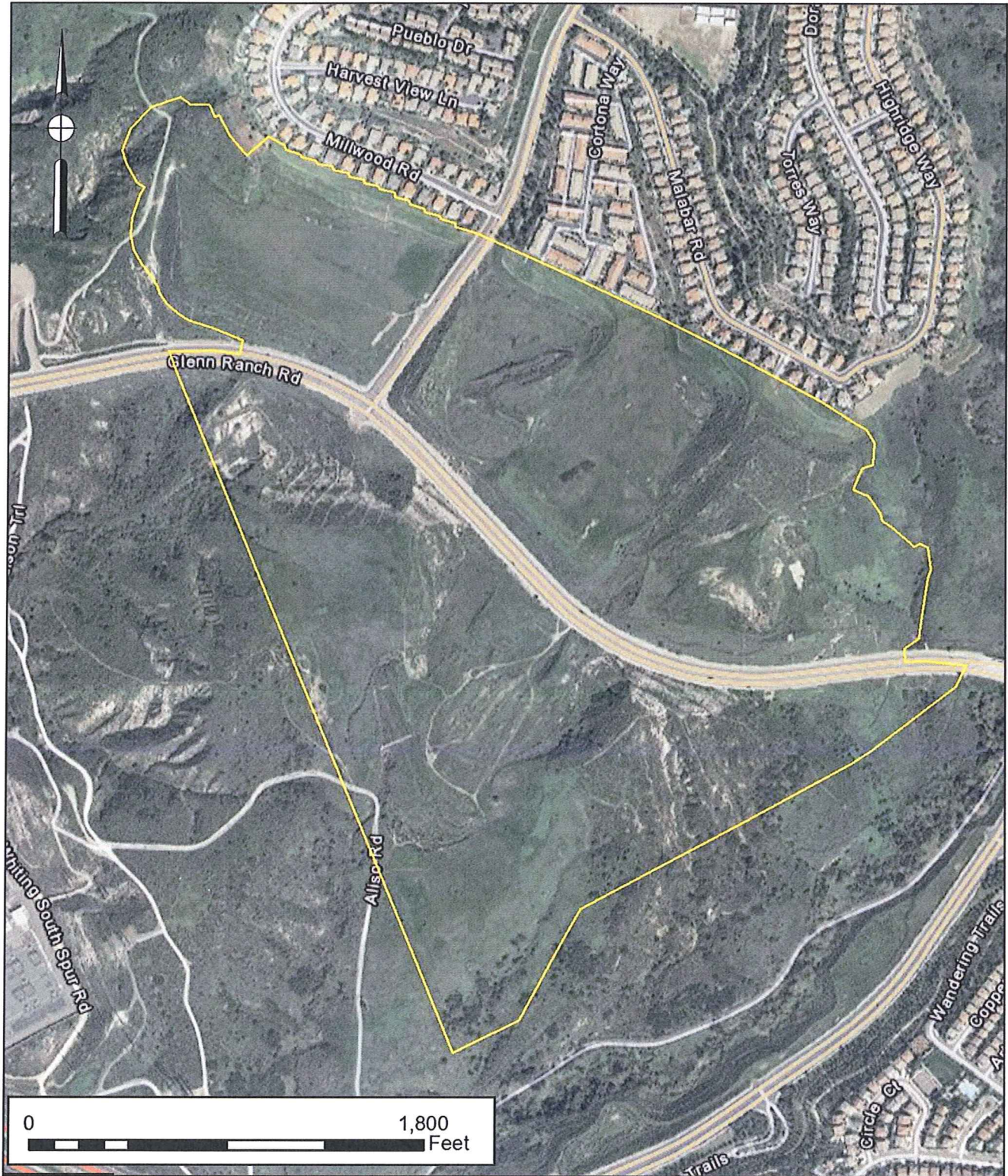
USGS Santiago Peak and El Toro Quadrangles (7.5 minute series)





**Figure 2.0-3**  
**Project Development Map**  
The Portola Hills Project





**Plate 2.0-1**  
**Aerial Photograph**  
The Portola Center Project

### **3.0 PROJECT SETTING**

The project setting includes the natural physical, geological, and biological context of the proposed project, as well as the cultural setting of prehistoric and historic human activities in the general area. The following sections discuss both the environmental and cultural settings at the subject property.

#### **3.1 Environmental Setting**

The project is situated in the foothill region east of the coastal plain, just west of the rugged terrain of the Santa Ana Mountains that separate Orange and Riverside Counties. The project elevation ranges from 900 to 1,200 feet above mean sea level (AMSL). The terrain varies from moderate to steeply sloping, with numerous drainages and steep canyons. Vegetation in the project area includes introduced grasses and weeds and coastal sage scrub community along the slopes and highlands and a riparian environment along Aliso Creek, which is located just southeast of the project. The vegetation during prehistoric times most likely consisted of a river valley riparian environment within the Aliso Creek watershed, native oak trees, and coastal/inland sage/scrub and chaparral in the surrounding foothills. The property shows evidence of disturbance as portions of the property have been disked for agricultural purposes, or previously graded as part of the development of the Portola Hills community. Ground visibility was good due to sparse ground cover. The soil appeared to be a medium grayish-tan colored (10 YR 5/2, fine to coarse grain) sandy, silty loam.

#### **3.2 Cultural Setting**

Archaeological investigations in southern California have documented a diverse and rich record of human occupation spanning the past 10,000 years. In northern San Diego, Orange, and Riverside Counties, most researchers organize prehistory into the PaleoIndian, Archaic, and Late Prehistoric Periods and history into the Mission, Rancho, and American Settlement Periods. The San Dieguito Complex, Millingstone Horizon, La Jolla Complex, Pauma Complex, and San Luis Rey Complex are archaeological manifestations that have been used to describe the Archaic and Late Prehistoric periods in the region.

The San Dieguito Complex/Paleo-Indian Period is associated with the terminus of the late Pleistocene (12,500 to 9,000 YBP). The term “San Dieguito Complex” is a cultural distinction used to describe a group of people that occupied sites in the region between 11,500 and 7,000 YBP. Initially believed to have been big game hunters, the San Dieguito are better typified as wide-ranging hunter-gatherers. The earliest evidence of the San Dieguito Complex sites are known from San Diego County, the Colorado Desert, and further north along the California coast. These people abandoned the drying inland lakes of the present California desert and arrived in San Diego County circa 9,000 years before present (YBP), as documented at the

Harris Site SDI-149 (Warren 1966); Rancho Park North Site SDI-4392 (Kaldenberg 1982); and Agua Hedionda Sites SDI-210/UCLJ-M-15 and SDI-10,965/SDM-W-131 (Moriarty 1967; Gallegos and Carrico 1984; Gallegos 1991). A San Dieguito component appears to have been present in the lower strata at the Malaga Cove site within the city of Palos Verdes Estates, Los Angeles County (Walker 1951).

Diagnostic San Dieguito artifacts include finely crafted scraper planes, choppers, scrapers, crescentics, elongated bifacial knives, and intricate leaf-shaped points (Rogers 1939; Warren 1967). This tool assemblage resembles those of the Western Lithic Co-Tradition (Davis et al. 1969) and the Western Pluvial Lakes Tradition (Bedwell 1970; Moratto 1984). Typical San Dieguito sites lack groundstone tools. The San Dieguito Complex is the least understood of the cultures that occupied the southern California region. Debate continues as to whether the San Dieguito sites are actually different activity areas of the early Encinitas Tradition peoples (Bull 1987; Gallegos 1987), or whether the San Dieguito Complex peoples had a separate origin and culture from the Encinitas Tradition (Hayden 1987; Moriarty 1987; Smith 1987). According to this second scenario, the San Dieguito Complex peoples may have been assimilated into the dominant Encinitas Tradition culture (Kaldenberg 1982; Moriarty 1967). A third possibility is that the San Dieguito Complex gave rise to the Encinitas Tradition (Koerper et al. 1991).

The Archaic Period begins with the onset of the Holocene around 9,000 YBP. The transition from the Pleistocene to the Holocene was a period of major environmental change throughout North America (Antevs 1953; Van Devender and Spaulding 1979). In southern California, the general climate at the beginning of the early Holocene is marked by cool/moist periods and an increase in warm/dry periods and rising sea levels. The warming trend and rising sea levels generally continued until the late Holocene. Archaeological research indicates that southern California was occupied between 9,000 YBP and 1,300 YBP by population(s) that utilized a wide range of both marine and terrestrial resources. A number of different archaeological manifestations based on geographical setting, tool kit, and/or chronology, are recognized during the Archaic Period, including the San Dieguito, La Jolla, Encinitas, Millingstone, and Pauma Complexes. Archaic sites generally contain milling tools, especially manos and metates, cobble and flake tools, dart projectile points and the concomitant use of the atlatl, crescents, shell, fish bone, and animal bone representing large and small game. Additionally, Archaic groups buried their dead as flex inhumations, a religious and cultural practice that is distinct from the succeeding Late Prehistoric groups.

The La Jolla Complex is regionally associated with the Encinitas Tradition (Warren 1968), and shared cultural components with the widespread Millingstone Horizon (Wallace 1955). The coastal expression of this complex, with a focus on coastal resources and development of deeply stratified shell middens located primarily around bays and lagoons, appeared in the southern California coastal areas, and some of the older sites associated with this expression are located at Topanga Canyon, Newport Bay, Agua Hedionda Lagoon, and some of

the Channel Islands. Radiocarbon dates from sites attributed to this complex span a period of more than 7,000 years in this region, beginning more than 9,000 YBP.

The Encinitas Tradition is best recognized for its pattern of large coastal sites characterized by shell middens, grinding tools closely associated with the marine resources of the area, cobble-based tools, and flexed human burials (Shumway et al. 1961; Smith and Moriarty 1985). While groundstone tools and scrapers are the most recognized tool types, coastal Encinitas Tradition sites also contain numerous utilized flakes, which may have been used to pry open shellfish. Artifact assemblages at coastal sites indicate a subsistence pattern focused on shellfish collection and near-shore fishing, suggesting an incipient maritime adaptation with regional similarities to more northern sites of the same period (Koerper et al. 1986). Other artifacts associated with Encinitas Tradition sites include stone bowls, doughnut stones, discoidals, stone balls, and stone, bone, and shell beads.

By 5,000 YBP, an inland expression of the La Jolla Complex, which exhibits influences from the Campbell Tradition from the north, is evident in the archaeological record. These inland Millingstone Horizon sites have been termed “Pauma Complex” (True 1958; Warren et al. 1961; Meighan 1954). By definition, Pauma Complex sites share a predominance of grinding implements (manos and metates), lack mollusc remains, have a greater tool variety (including atlatl dart points, quarry-based tools, and crescentics), and seem to express a more sedentary lifestyle with a subsistence economy based on the use of a broad variety of terrestrial resources. Although originally viewed as a separate culture from the coastal La Jolla Complex (True 1980), it appears that these inland sites may be part of a subsistence and settlement system utilized by the coastal peoples.

The Late Prehistoric period, sometimes referred to as San Luis Rey I and II, begins approximately 1,300 YBP. Cremation, ceramics, bow and arrow, small triangular points, the use of Obsidian Butte obsidian, and the reliance upon the acorn as a main food staple are the defining characteristics of the Late Prehistoric period (Chartkoff and Chartkoff 1984; Gallegos 2002, Moratto 1984). These characteristics are thought to represent the movement of Shoshonean speaking groups into northern San Diego, Orange, Riverside, and Los Angeles Counties. Economic systems diversified and intensified during this period with the continued elaboration of trade networks, cremation of the dead, the use of shell-bead currency, and the appearance of more labor-intensive, but effective, milling technologies such as the bedrock mortar for use in acorn processing.

The ethnographic period begins with the Hispanic intrusion into southern California and the founding of the Mission San Juan Capistrano, located near the Lake Forest area, in 1776. Ethnohistorical and ethnographic evidence indicates that three Shoshonean-speaking groups that occupied the southern and eastern portions of Orange County were the Luiseño, Gabrielino, and the Acjachemem (Juaneño), each culturally similar but possessing slight dialectic differences. Along the coast, the groups made use of the marine resources available by fishing and collecting



molluscs for food. Seasonally available terrestrial resources, including acorns and game, were also sources of nourishment for these groups. The elaborate kinship and clan systems between these groups facilitated a wide-reaching trade network that included trade of Obsidian Butte obsidian, resources from the eastern deserts, and steatite from the Channel Islands. All three groups also shared a distinct world view that stemmed from use of the hallucinogen datura, and an elaborate religion that included ritualized sand paintings of the sacred being, “Chingichngish” (Bean and Shipek 1978; Kroeber 1925). Some notable differences, however, can be seen in the material culture between the three groups. For example, the Gabrielino used containers made from steatite, which is a soapstone material from the Santa Catalina Islands, instead of pottery, which was the preferred material for the Juaneño and the Luiseño (Kroeber 1925).

The Luiseño, Gabrielino, and Juaneño occupied sedentary villages most often located in sheltered areas in valley bottoms, along streams, or along coastal strands near mountain ranges. Villages were located near water sources to facilitate acorn leaching, and in areas that offered thermal and defensive protection. Villages were composed of areas that were both publicly and privately, or family, owned. Publicly owned areas included trails, temporary campsites, hunting areas, and quarry sites. Inland groups had fishing and gathering sites along the coast that were utilized, particularly from January to March, when inland food resources were scarce. During October and November, most of the village would relocate to mountain oak groves to harvest acorns. For the remainder of the year, most would remain at the village sites, where food resources were within a day’s travel (Bean and Shipek 1978; Kroeber 1925).

The Aliso Creek watershed, located just to the south and east of the subject property, has been reported to be the ethnohistoric boundary between the Luiseño, Gabrielino, and Juaneño. The Gabrielino occupied territory northwest of Aliso Creek, the Juaneño occupied territory to the south, and the Luiseño occupied territory to the southeast and east. However, there are also reports that the boundary is located further north, and marked by the Santa Ana River. A map of the tribal territories is shown in Figure 3.0–1.

The historic period begins July 16, 1769, when the first Spanish exploring party commanded by Gaspar de Portolá (with Father Junípero Serra in charge of religious conversion of the native populations) arrived in San Diego to secure California for the Spanish Crown (Palou 1926). The natural attraction of the harbor at San Diego and the establishment of a military presence in the area solidified the importance of San Diego to the Spanish colonization of the region and the growth of the civilian population. Missions were constructed from San Diego to as far north as San Francisco. The mission locations were based on a number of important territorial, military, and religious considerations. Grants of land to persons who made an application were made, but many tracts reverted to the government for lack of use. As an extension of territorial control by the Spanish empire, each mission was placed so as to command as much territory and as large a population as possible. Mission San Juan Capistrano, located near the Lake Forest area, exerted much influence over the Acjachemem (Juaneño), who either

adapted to mission life, rebelled and ran away, or died from European disease. While primary access to California during the Spanish Period was by sea, the route of El Camino Real served as the land route for transportation, commercial, and military activities. This route was considered to be the most direct path between the missions (Rolle 1969). As increasing numbers of Spanish and Mexican people, and later Americans during the Gold Rush, settled in the area, the Native populations diminished as they were displaced or decimated by disease (Carrico and Taylor 1983).

By 1821, Mexico had gained independence from Spain, and the northern territories were subject to political repercussions. By 1834, all of the mission lands had been removed from the control of the Franciscan Order under the Acts of Secularization. Without proper maintenance, the missions quickly began to disintegrate, and after 1836, missionaries ceased to make regular visits inland to minister the needs of the native peoples (Engelhardt 1921). Large tracts of land continued to be granted to persons who applied for them or had gained favor with the Mexican government. Grants of land were also made to settle government debts.

The Rancho Period represents the time between 1821 and 1848. By 1821, Mexico had gained independence from Spain, and the northern territories were subject to political repercussions. By 1834, all of the mission lands had been removed from the control of the Franciscan Order, under the Acts of Secularization (Engelhardt 1921). The Mexican government granted large tracts of land to persons who applied for them or had gained favor with the Mexican government. Numerous Mexican land tracts, or *rancheros*, were established throughout coastal and interior California. Jose Serrano was granted the 10,668-acre Rancho Cañada de Los Alisos in 1842, which encompassed most of the present-day community of Lake Forest.

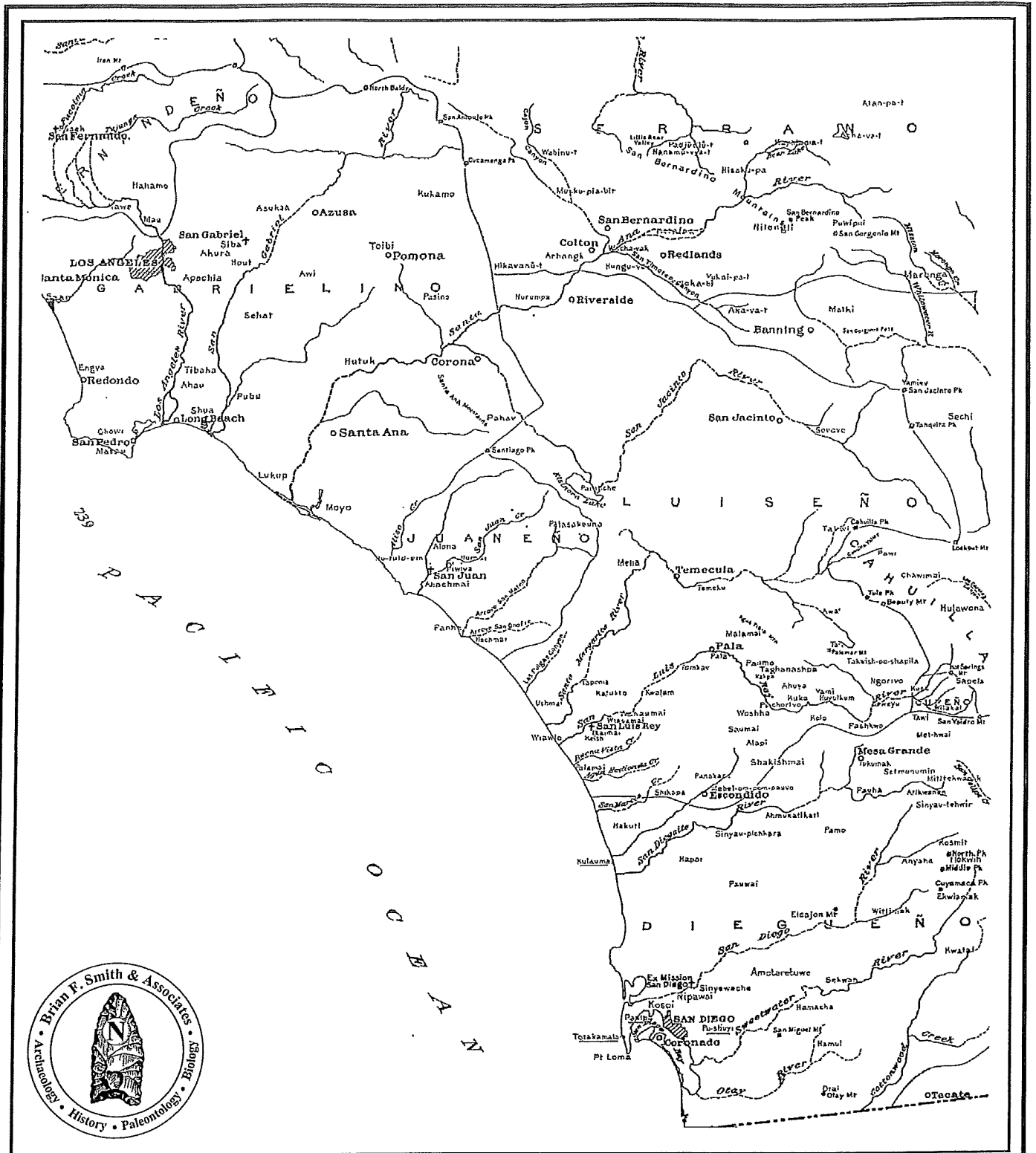
California was invaded by United States troops during the Mexican-American War of 1846-1848. The acquisition of strategic Pacific ports and California land was one of the principal objectives of the war (Price 1967). At the time, the inhabitants of California were practically defenseless, and they quickly surrendered to the United States Navy in July, 1847 (Bancroft 1886).

In 1848, the Treaty of Guadalupe Hidalgo gave sovereignty over Alta California, New Mexico, and Arizona to the United States, and thus began the American Settlement Period. The new colonial order soon seized power in California with disastrous results for the native people (Castillo 1978). European control over Alta California had been concentrated along the coast, but with the great influx of American colonists seeking land and mineral resources, the inland became more populated and native populations were displaced from more of their lands. Conflicts between the Indians and the intruding white colonists led to the establishment of reservations for some villages by executive order.

The cattle ranchers of the “counties” of southern California had prospered during the cattle boom of the early 1850s. Cattle raising soon declined, however, contributing to the expansion of agriculture. The completion of the transcontinental railroad in 1869 encouraged

developers, land speculators, and colonists to invest and live in southern California. Orange County's economy changed from stock raising to farming, and growing grain or citrus crops replaced the raising of cattle in many of the county's inland valleys (Blick 1976; Elliott 1883 [1965]).

Dwight Whiting purchased most of Jose Serrano's Rancho Cañada de Los Alisos, which comprises most of the present-day Lake Forest area after the U.S. took control of California and terminated the rancho system. Whiting introduced dry farming, citrus farming, and later citrus production. As a result, the town of El Toro developed as a shipping, commerce, and social center. Eucalyptus groves, a prominent feature of the Lake Forest landscape, were planted by Whiting for construction wood and still exist today as a reminder of Whiting's past endeavors. The town did not grow substantially until an imported water infrastructure was extended to the area in the 1960s. During the 1970s, a number of planned communities were developed under County jurisdiction with several created lakes. The City of Lake Forest was incorporated in 1991. Of more than 20,000 residences in the City, six were built before 1940. None of these residences are located on project area sites (EIP 2006).



**Figure 3.0-1**  
**Ethnohistoric Boundary Map (Kroeber 1925)**  
 The Portola Center Project

#### **4.0 RESEARCH DESIGN**

Because this report treats a significance evaluation of cultural resources identified by the records search results, no detailed research design was prepared. The archaeological investigation focused on assessing the potential significance of five previously recorded sites. Nevertheless, the recovered data provided the basis for interpretation of site function within a subsistence area. The resultant data will aid in the understanding of just how these resources came into being. In this way, the present study will contribute to the overall understanding of how such resources were developed and where additional resources with similar characteristics might be expected, an exercise known as predictive modeling. The circumstances surrounding the creation of the sites can be formulated into a testable hypothesis for the occurrence of like deposits, then tested on the many similar projects currently underway or planned for the eastern Orange County, City of Lake Forest area.

## **5.0 METHODOLOGY**

The cultural resources study of the Portola Center Project consisted of records searches, an intense pedestrian survey, and an archaeological testing and significance evaluation program for five prehistoric cultural resources located within the project. This study was conducted in conformance with agency guidelines and CEQA. Specific definitions for archaeological resource type(s) used in this report are those established by the State Historic Preservation Office (SHPO). The report format follows the Archaeological Resource Management Report (ARMR) guidelines, as required by the County of Orange. All recovered cultural materials were returned to the BFSa laboratory for cataloging and analysis. The results of the assessment are discussed in detail in Section 6.0.

### **5.1 Institutional Records Searches**

The records search was requested from the South Central Coastal Information Center (SCCIC), the results of which were reviewed to determine if any known archaeological sites, historic structure locations, or other cultural resources are present in or adjacent to the current project area. The complete results of the records search are provided in Appendix III. A search of the Sacred Lands Files of the NAHC was also requested by BFSa, the results of which are provided in Appendix II.

### **5.2 Field Methodology**

The archaeological survey, testing program, and significance evaluation were conducted on January 24-29, 2007, November 1-2, 2010, and August 3-4, 2011. Project personnel included senior project archaeologist Tracy A. Stropes, M.A., RPA, and field archaeologists Charles Callahan, Brad Comeau, Clarence Hoff, Andrew Hoge, Justin Houghton, Jennifer Kraft, Benjamin Marshall, Shaun Murphy, Ryan Robinson, and Matthew Smith under the direction of Brian F. Smith, Principal Investigator.

The most recent and comprehensive archaeological survey of the property was conducted on August 3-4, 2011. The intensive pedestrian survey included a series of parallel transects, spaced at approximately five- to 10-meter intervals as appropriate. The entire 194.5-acre project area was included in the survey process. Photographs were taken to document project conditions during the survey (see Section 6). Ground visibility throughout the property was moderate, with recently cut ground cover. In addition, all rodent spoil piles and alluvial cuts were closely inspected for evidence of archaeological materials. With the exception of steep slope in the southern portion of the project area, no constraints were encountered during the field survey.

Testing included re-recording each resource through photographs, the creation of maps by global positioning system (GPS), a surface collection of prehistoric artifacts, and subsurface excavations with shovel test pits and one-meter-square test units. The purpose of the excavations

was to find the boundaries and overall depth of each site based on the presence or absence of subsurface artifacts and/or culturally modified soil. The test unit and shovel test pits were excavated using hand tools, and vertical control within the units was maintained by excavating in standard decimeter levels. The shovel test series consisted of 30-by-30 centimeter excavations, which proceeded in decimeter levels to subsoil or a culturally sterile soil horizon. The test units were also excavated to a culturally sterile level. The placement of the test units was based on the shovel test recoveries. All excavated soils were sifted through one-eighth-inch hardware mesh screens. All of the artifacts recovered from the excavations were bagged, labeled with provenience information, and returned to the laboratory for analysis. Level record sheets were completed after the excavation of each STP or TU level, describing the soil types encountered and the materials recovered. All surface collections, shovel tests, and the test unit were mapped using a Trimble GeoXT GPS unit equipped with TerraSync software. Photographs were taken to document field conditions during the testing phase.

### **5.3 Laboratory Methods**

Cultural material recovered from the testing programs at Sites ORA-441, -442, -443, -445, and -446 was returned to the laboratory of BFSa for cataloging, identification, analysis, repackaging, and curation in keeping with generally accepted archaeological procedures. Comparative collections curated in the laboratory of BFSa are often helpful in identifying the unusual or highly fragmentary specimens. The cataloging process for the recovered specimens utilized a classification system commonly employed in this region. After cataloging and identification, the collections were marked with the appropriate provenience and catalog information, then packaged for permanent curation. No radiocarbon dating or other specialized studies were conducted as part of this project.

The definitions for some of the lithic artifact types were taken from the Office of Historic Preservation, *California Archaeological Resource Identification and Data Acquisition Program: Sparse Lithic Scatters* (1988). In addition to this source, a modified artifact typology system based on Smith and Moriarty (1985) was employed.

### **5.4 Curation**

The project field notes, photographs, and reports will be curated at the offices of BFSa in Poway, California. All artifact collections will be temporarily housed at BFSa until permanent curation can be arranged at the Cooper Center. All fees associated with this curation will be the responsibility of the project applicant(s).

### **5.5 Native American Consultation**

The analysis of site components indicated no identifiable Native American religious, ritual, or other special activities at this location. Additionally, a records search of the Sacred

Lands Files of the Native American Heritage Commission was requested by BFSA (Appendix II).



## **6.0 REPORT OF FINDINGS**

The cultural resources study of the Portola Center Project consisted of institutional records searches, intensive pedestrian survey, and an archaeological testing and significance evaluation program for five prehistoric cultural resources located within the project.

The results of the records searches (2007 and 2010 update) showed that five previously recorded cultural resources, Sites ORA-441 through ORA-443, ORA-445, and ORA-446, are located within the project boundaries. The presence of these five prehistoric resources within the project required a significance evaluation program at each site. Section 6.1 describes the results of the records searches, and Sections 6.2 through 6.6 describe the results of the field investigations.

The Phase II significance evaluation included a testing program that generally involved the creation of maps by GPS, photographs of the site area, a surface collection of the prehistoric artifacts, and subsurface excavations consisting of shovel test pits and test units to determine the presence and/or integrity of a subsurface cultural deposit.

**Figure 6.0-1**  
**Cultural Resource Location Map (USGS)**  
*(Deleted for Public Review; Bound Separately)*

## **6.1 Records Search and Survey Results**

### *6.1.1 Records Search Results*

Records searches were requested from the SCCIC and NAHC. The original records search was processed in 2007. An update of the records search was requested in 2010 and is included in this report. The archaeological records search results from SCCIC showed that 22 previous surveys have been conducted within one mile of the property, 11 of which involved the current project. The records search also showed that five prehistoric cultural resources have been recorded within the project boundaries. The sites are as follows: Sites ORA-441 through ORA-443, ORA-445, and ORA-446. A summary of the sites within the project is presented in Table 6.1-1. Additionally, more than 50 previously recorded prehistoric cultural resources and at least three historic resources are located within one mile of the project. Primarily, the prehistoric sites consist of artifact scatters containing groundstone tools, flakes, and precision tools, as well as numerous sites that also contain midden soil, scrapers, cores, and hammerstones. A summary of site descriptions located within previous Portola Hills/Glen Ranch projects is presented in Table 6.1-2. The Sacred Lands File records search by the NAHC was negative for the presence of sacred or ceremonial sites or landforms considered important to local tribes (Appendix II). The results of the records searches are bound separately in the Confidential Appendix.

### *6.1.2 Survey Results*

The Portola Center property had been previously studied in 1973, 1977, 1980, and 1986 as part of broader studies for the Portola Hills Community. The survey process from the previous projects was duplicated for the current project in August of 2011 to ensure all resources were identified. For those sites previously recorded, the scope of work for the 2007 study focused upon the evaluation of the sites and an assessment of potential impacts from the proposed development. BFSA archaeologists conducted a significance evaluation from January 24-29, 2007. The significance evaluation included a surface collection and subsurface excavations with shovel test pits and test units, which were predominantly negative for the presence of subsurface artifacts or culturally modified soil. Site records were updated to reflect the results of the testing program. In 2010, portions added to the project were studied that were previously outside of the development envelope. These areas have since been abandoned as part of the project. Previous surveys conducted by other parties as well as by BFSA identified cultural resources within the project area including sites CA-ORA-441, CA-ORA-442, CA-ORA-443, CA-ORA-445, and CA-ORA-446.

Due to project concerns and changes in the northern portion of the project area, in August of 2011, the entire parcel was resurveyed to verify the results of previous studies. The most recent and comprehensive archaeological survey of the property was conducted on August 3-4, 2011 by senior project archaeologist Tracy A. Stropes M.A. RPA, and staff archaeologists Clarence Hoff, Charles Callahan, and Matthew Smith under the direction of Brian F. Smith,

Principal Investigator. The survey area consisted of approximately 194.5 acres of undulating terrain. Overall, a high amount of waist-high brush and dense grasses and weeds across all project alignments resulted in moderate to poor ground visibility (approximately 50 to 35 percent). The graded portions of the properties (dirt roads and pads) contained less dense ground coverage (permitting from 95 to 70 percent ground visibility). Those portions of the properties with drainages and areas of relatively flat land were intensively surveyed using five- to 10-meter transects depending on the terrain. All of the previously recorded sites were relocated. However, no additional cultural resources (features, soils, or artifacts) were identified within the boundaries of the current project. The drainages, animal burrow backdirt, and areas of native vegetation were all closely inspected for evidence of prehistoric activity. None was observed.

**Table 6.1-1**  
**Archaeological Sites Located within**  
**The Portola Center Project**

Sites	Results	Artifacts	Features	Area (approx.)	Notes	Date
ORA-441	midden on slope	choppers, cores, hammerstones, manos, metates, scrapers	Cairn, 5 meter diameter	200 x 150 meters	Recommended testing	1973
ORA-442	artifact and detritus scatter	cores, manos, scrapers		Ill-defined		1973
ORA-443	artifact and detritus scatter	hammerstones, manos, scrapers, scraper planes	possible rock cluster	180 x 300 meters		1973
ORA-445	artifact scatter	chert, fire-cracked rock (FCR), manos, mortar fragments		200 x 160 meters	Recommended testing	1973
ORA-446	artifact scatter	cores, manos, scrapers		100 x 200 meters		1973

**Table 6.1-2**  
**Archaeological Sites within Earlier Phases of the**  
**Portola Hills Community Area**

Sites	Results	Artifacts	Features	Area (approx.)	Date
ORA-444	artifact scatter	cores, flakes, hammerstones, manos, scrapers		700 x 400 meters	1974
ORA-447	midden on slope	cores, hammerstones, manos, scrapers		425 x 100 meters	Nothing found when revisited in 1978
ORA-450	artifact scatter	chert, FCR, manos, metate		150 x 100 meters	1974
ORA-452	midden on slope	cores, hammerstones, knives, manos, points, scrapers		50 x 130 meters	1974
ORA-453	artifact scatter	flakes, manos, scrapers	rock shelter with FCR, flakes and scraper inside; "1887/A" carved inside shelter	75 x 180 meters	1974
ORA-454	artifact scatter	flakes, manos, metate fragments, scrapers		200 x 60 meters	1974
ORA-455	artifact scatter	hammerstones, manos, utilized flakes		120 x 50 meters	1974
ORA-485	artifact scatter	chipping waste, cores, manos		60 x 80 meters	1975
ORA-486	artifact scatter	chipping waste, cores, manos		100 x 120 meters	1975
ORA-487	artifact scatter	chipping waste, core, FCR, manos		60 x 60 meters	1975
ORA-488	artifact scatter	chipping waste, chopper, hammerstone, manos		100 x 100 meters	1975

Table 6.1-2 (continued)

Sites	Results	Artifacts	Features	Area (approx.)	Date
ORA-507	chipping station	chipping waste, cores, hammerstones, metate fragments, scrapers		300 x 200 meters	1975
ORA-726	artifact scatter	FCR, manos		40 x 40 meters	1978
ORA-825	artifact scatter	cores, flakes, manos		17.5 x 18 meters	1979
ORA-827	artifact scatter	FCR, flakes, tools		17.5 x 16.5 meters	1979
ORA-876	large prehistoric village with historic features and artifacts	abalone, bone, ceramics, flakes, hammerstones, manos, metates	Trabuco Adobe	600 x 300 meters	1980
ORA-954	open air site with dark soil that could be a primary or secondary deposition	cores, hammerstones, manos, metates, scrapers, utilized flakes		80 x 700 meters	1980
ORA-1373	chipped and groundstone scatter	chopper, cores, debitage, FCR, flakes, hammerstones, manos, metates, mullers, scrapers, uniface	rock clusters	120 x 130 meters	1994
ORA-1430	surface scatter	debitage, flakes, manos, metates, pecked slab, projectile point	rock cluster	90 x 12.5 meters	1995
ORA-1497	historic site		windmill		1998
ORA-1501	historic site	wire nails, corrugated tin roof, tin cans, milled lumber	collapsed shed		1998
ORA-100312	historic site		cattle watering trough		1998

**Table 6.1-3**  
**Previous Studies that Included**  
**The Portola Center Project**

Bean and Vane

- 1979 Survey of Transmission Line from San Onofre to Santiago Substation and Black Star Canyon. Edited by L.J. Bean and S.B. Vane of Cultural Systems Research Incorporated.

Brock, James

- 1997 *Report on Archaeological Monitoring of Planning Area 12, Foothill Ranch, El Toro, Orange County, California.* Archaeological Advisory Group. Report on file at the SCCIC at CSUF.

EIP

- 2006 *Lake Forest Opportunities Study Program Draft EIR, Sch #2004071039.* Report on file at the SCCIC at CSUF.

Howard, Jerry B.

- 1975 *Archaeological Site Survey, El Toro Road Realignment (P.O. #4091).* Archaeological Research, Inc. Report on file at the SCCIC at CSUF.
- 1978 *A Reevaluation of the Cultural Resources of the Glen Ranch.* Environmental Research Archaeologists. Report on file at the SCCIC at CSUF.

McCoy and Phillips

- 1980 *National Register Assessment program of Cultural Resources of the 230 KV Transmission Line Right-Of-Way from San Onofre Nuclear Generating Station to Black Star Canyon and Santiago Substation and to Encina and Mission Valley Substation.* Cultural Resource Report, Vol. 1. WESTEC Services, Inc. Report on file at the SCCIC at CSUF.

Munoz, Jeanne, and Theodore Cooley

- 1977 *Glen Ranch: Archaeological Resources and their Recommended Management.* Archaeological Research, Inc. Report on file at the SCCIC at CSUF.

Pacific Bay Homes

- 1997 *Draft Subsequent EIR #459A. Portola Hills Residential Conversion General Plan Amendment.* Report on file at the SCCIC at CSUF.

Schilz, Allan (WESTEC Services, Inc.)

- 1980 *Archaeological Investigations and Management Recommendations for the Glen Ranch.* WESTEC Services, Inc. Report on file at the SCCIC at CSUF.



The Baldwin Company

1986 *Portola Hills Planned Community Program Environmental Impact Report, Program EIR #459*. Report on file at the SCCIC at CSUF.

## 6.2 Testing Results at Site ORA-441

### 6.2.1 Previous Studies of Site ORA-441

Site ORA-441 was first described in 1973 as a prehistoric midden deposit and artifact scatter with groundstone tools, choppers, scrapers, cores, hammerstones, and at least one feature consisting of a rock cairn measuring five meters in diameter. The site was reported as being situated on a moderately sloping south-facing slope between 970 to 1,000 feet AMSL, and measuring approximately 200 by 150 meters. The soil within the site was noted as a medium-gray loamy midden, and the native soil was a very light-tan sandy alluvium. Vegetation consisted of a native coastal sage scrub plant community, various cacti, and grasses. No disturbances were noted within the site area (Crabtree et al. 1973).

The site was surveyed in 1977 for the Glenn Ranch development project, and several rock cairns were noted as being associated with the site, which “make the site particularly interesting, as these are most unusual in the area” (Munoz and Cooley 1977). In 1980, the site was revisited and described as being located on a low ridge, with four rock cairns, one of which contained fire-cracked rock and groundstone fragments. The site area measured 100 by 75 meters, and contained hammerstones and flakes (Schilz 1980). The site was described again in a 1986 report for The Baldwin Company as a scatter of artifacts and chipping waste. None of the above-mentioned surveys involved testing the site.

### 6.2.2 Site Description

Site ORA-441 was recorded during the current field investigation as a *marine shell* and artifact scatter on a south-facing slope between 990 to 1,060 feet AMSL that measures 108 by 35 meters. The site is centrally located on the western property boundary, approximately 400 meters due south of the Glen Ranch Road and Saddleback Ranch Road intersection. One piece of debitage and a few shell fragments were observed on the surface near the drainage. No evidence remains of the four cairns observed during previous surveys, and no additional features were observed. Vegetation within the area consists of a native coastal sage scrub plant community, various cacti, and grasses. Disturbances noted within the site area include disking on the ridge top and an artificial cut made in part of the drainage to the west of the site. The previous disking has removed most of the native vegetation, and appears to have removed the previously identified rock cairns. An artifact location and excavation map of the site is provided in Figure 6.2–1. An overview of the site area is shown in Plate 6.2–1 and a north wall profile of the test unit is shown in Plate 6.2–2. The testing recovery is summarized in Tables 6.2–1 through 6.2–3.