4.11 CULTURAL RESOURCES

4.11.1 Introduction

This section describes existing cultural resources on the North and West Campuses, and analyzes the potential for the project to cause a substantial adverse change in the significance of a historical or archaeological resource (as defined in Section 15064.5 of the CEQA Guidelines), to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or result in the disturbance of any human remains, including those interred outside of formal cemeteries.

Information in this section was taken from a variety of historiographic sources, previous environmental documentation, and a records check performed at the Central Coast Information Center of the California Historic Resources Inventory System (CHRIS). Full bibliographic entries for all reference materials appear in Section 4.11.6 (References) of this section.

One comment letter and three verbal comments related to cultural resources were received in response to the NOP circulated for the proposed project. The NOP, comments on the NOP, and a summary of issues raised during scoping are included in Appendices A and B of this EIR.

Among the comments received were suggestions that the EIR address: (1) the effects on the bridges at historic creek crossings in the area; (2) the historic use of resources by the Chumash tribe and other local Native Americans; (3) the potential effects on the Ellwood Marine Terminal; (4) the effects on the adjacent old oil station as an historic landmark; and (5) the protection of the historical Campbell barn and De Anza trail.

4.11.2 Existing Conditions

4.11.2.1 Overview

The areas proposed for residential development and open space by the University has long and significant occupation by humans going back at least 8,000 years. There are a number of remains of this occupation known to be present in the general project region.

4.11.2.1.1 Prehistoric Overview. The creeks, river valleys, and flood plains in the general project area, along with the fringing coastline, have supported a continuous cultural occupation for at least the last 8,000 years. An early Holocene occupation has been identified in the archaeological record that reflects the early emergence of non-agricultural village-based groups in the region. Current archaeological evidence suggests that a relatively small population existed in these areas, but by 2,000 years B.P., populations appear to have expanded considerably into resource-rich coastal and near-shore estuarine environments (Dillon, 1990: 6). Accounts by Juan Rodriguez Cabrillo (Wagner, 1929: 79-93) and Sebastian Vizcaino (Bolton, 1930: 52-103) indicate that by the time of European contact to this area of the California coast, some of the large coastal villages had hundreds of occupants and were engaged in both terrestrial and maritime long distance trade.
**Paleoindian Period.** The San Dieguito Complex (Warren, 1967; Wallace, 1978:27) is found throughout southern California and includes non-fluted points such as leaf-shaped projectile points and various leaf-shaped bifacial tools. Unfortunately, there are few reliable published radiometric dates from this period, with most of the artifacts identified as isolated find spots.

One fluted point fragment is known from the Santa Barbara area. The artifact, consisting of a basal fragment from a fluted point, was found at CA-SBA-1951 on the coastal plain to the west of Santa Barbara (Erlandson et al., 1987; Erlandson, 1994: 44).

**The Millingstone Period.** The Millingstone Period extends to at least 6000 B.P. and probably as far back to 8500 + B.P. (cf. Warren, 1968; Wallace, 1955). Hard seed processing became one of the major components of subsistence during this period. Overall, the economy was based on plant collecting, but was supplemented by fishing and hunting, and general exploitation of marine and estuarine resources (Wallace, 1955). Large, heavy ground stone milling tools such as deep basin metates and wedge-shaped manos, and large core/cobble choppers and scrapers, typifies the Millingstone Period.

In the northern Channel Islands, two sites have produced fairly reliable early Holocene dates. Radiometric dates have been obtained from shells at Daisy Cave, on San Miguel Island (Erlandson et al., 1996; Rick et al., 2001), and human remains were found in a secure early Holocene context on Santa Rosa Island at Arlington Springs (the so-called Arlington Woman). Both loci did not have extensive archaeological remains, but nevertheless, these dates put humans on the Channel Islands by at least 9750 B.C., and possibly earlier (circa 11,000 for the Arlington Woman).

Along Santa Barbara coastal areas, Millingstone sites are common on terraces and knolls, typically set back from the current coastline (Glassow et al., 1988: 68; Erlandson, 1994: 46). The larger sites usually contain extensive midden deposits, possible subterranean house pits, and cemeteries. Most of these sites probably reflect intermittent use over many years of local cultural habitation and resource exploitation. Erlandson has noted that the typical Millingstone manos/metates are not common on contemporaneous Channel Island sites, possibly reflecting an alternate insular resource exploitation (Erlandson, 1994: 47).

In the Gaviota Creek area, Early Holocene evidence from this period has been excavated at CA-SBA-97 by Stephen Bowers (Erlandson et al., 1992; Erlandson, 1994: 39), while at nearby CA-SBA-96, a Millingstone or “Oak Grove” site noted by D.B. Rogers has been identified (Rogers, 1929: 256; Erlandson, 1994: 40).

**The Intermediate Period.** The Intermediate period has also been called the “Hunting Period” or “Middle Horizon.” About 5000 years B.P., the Milling Stone traditions, with their heavy reliance on vegetal food sources, began to gravitate more towards animal proteins and marine resources. Procurement of plants for caloric intake was not necessarily replaced in kind by game hunting, but rather the local Milling Stone dietary regimen began to transition towards other/alternate resources. Mortars and pestles predominate the tool kit, rather than manos and
metates. Glassow has hypothesized that, in the Santa Barbara geographic setting, this could reflect greater use of acorns (Glassow et al., 1988). In the Santa Barbara area, the reliance on shellfish probably declined during the Intermediate Period, as the maritime and coastal marine exploitations expanded into the aforementioned terrestrial resources (Erlandson, 1988). Intermediate Period sites appear locally, such as those in the environs of Gaviota Creek (e.g., CA-SBA-97).

The Late Prehistoric Period. The Late Prehistoric Period probably began sometime around the B.C./A.D. transition, but expanded culturally around A.D. 500 with the introduction of bow and arrow technology (Meighan, 1954). The end of the period is recognized as the end of the 18th Century, when full implementation of the Spanish mission system took effect on the native populations.

The Santa Barbara coastal areas, along with the western areas of Ventura and the Los Angeles Basin, were occupied during the Late Prehistoric Period by the so-called Canaliño culture (Rogers, 1929). During this period, the coastal populations expanded greatly and probably took advantage of a wide variety of ecological niches, especially marine resources. Small projectile points, frequently side-notched, are typical in the bow and arrow-based toolkit. Specialty items such as basketry, ollas or large water vessels, shell and stone beads, and shell and bone fish hooks appear, as does elaborate rock painting (Grant, 1965). Anthropologists believe that the Chumash are directly descended from the Canaliño culture of the archaeological record.

During the Late Prehistoric Period, a highly advanced fishing and hunting strategy developed that included the exploitation of a wider variety of fish and shellfish. These new subsistence strategies, coupled with the appearance of the bow and arrow, enabled a substantial increase in local populations, the development of permanent settlements, and a “money” economy based on the shell trade.

The Late Prehistoric Period Chumash, with a Hokan linguistic stock, lived in large villages along the coastal byte and the wide valleys leading into the California interior. This was an ethnohistoric boundary group situated between the Chumash to the northwest and the Gabrieliño to the south and east. In the archaeological record, the Gabrieliño material culture (Johnston, 1962; Blackburn, 1963; Bean and Smith, 1978) is often (but not always) indistinguishable from the Chumash (Landberg, 1965; Grant, 1965, 1978a,b).

The Chumash were highly sea oriented. Given the presence of earlier sites on the offshore islands, this evidence suggests that there was a maritime tradition at least partially carried over from the Milling Stone and Intermediate Period cultures (Harrington, 1978). By at least 1000 B.P, the Chumash were relying on blue-water vessels in an exploitation strategy partially based on deep-sea fishing and marine mammal hunting.

4.11.2.1.2 Chumash Ethnography. The following summary discussion has been synthesized primarily from Dillon (1990), Bean and Smith (1978), Moratto (1984), and Grant (1978a,b). Specific citations are indicated, where appropriate.

4.11-3
Europeans first encountered the Chumash in 1542, when Cabrillo landed on the shores of Ventura. The Spanish later contacted the Chumash in 1602, when Vizcaíno entered the Santa Barbara Channel (Grant, 1978a: 505). The pre-European-contact Chumash probably had between 10,000 and 15,000 individuals. Anthropologists and linguists note that the Hokan language stock of the Chumash appears to be one of the oldest language groups in California, suggesting that Chumash ancestors must have been present in the area for at least several thousand years prior to European contact.

At the time of contact, the Chumash ranged from San Luis Obispo to Malibu Canyon along the coast, inland as far as the southwestern margin of the southern San Joaquin Valley, and out to the Channel Islands. There were at least six Chumash languages. The project area is located within the ethnographic boundaries of the coastal Barbareño Chumash. The Chumash were incorporated rather quickly into the Spanish mission system. This precipitated the rapid demise of their native culture and language, enough so that by the time anthropologists were making the rounds to interview Chumash individuals, most of their culture had long since disappeared. By the early 1800s, nearly the entire Chumash population, except for individuals who had escaped to the interior, was incorporated into the mission system (Grant, 1978a: 505).

The early Spanish travelers provided valuable details concerning Chumash dwellings. The huts were described as hemispherical in shape, with many containing internal subdivisions, possibly for privacy. Some of the larger dwelling structures could house up to 70 people, and the Spanish noted that many villages also contained sweathouses.

The Chumash were comprised of patrilineal decent groups, with most villages having one “chief,” and three or four “captains” (Grant, 1978b: 510). Most Chumash marriages were monogamous, except for village chiefs. Puberty rites are not well known. Girls entering puberty were not allowed to eat meat and could not look into a burning fire. Boys were taken out at night and given a psychotropic concoction made from Datura root to induce visions (Harrington, 1942: 36-37 in Grant, 1978b: 511).

The Chumash had a high level of material culture and craftsmanship, including intricate basketry, woodcarving, fine stone objects, well-developed rock art, and excellent ocean-going plank canoes (tomol) that highly impressed Spanish explorers. The Coastal Chumash had an extensive trading network that reached well beyond the Santa Barbara Channel region. Most Chumash lived in permanent villages, composed of large round houses up to 50 feet in diameter, which might be home to as many as 10 families. The dietary staple for all Chumash groups was the acorn, though the addition of pine nuts, soap root, berries, mushrooms, seeds, mollusks, fish, and game varied the diet.

Coastal Chumash village sites were often located at the mouths of creeks and rivers, usually on higher ground just above the shoreline (Grant, 1978b: 510). Smaller hunting camps and resource exploitation sites were located in smaller perennial creek areas, in the upper elevations, and in the immediate interior (Landberg, 1965: 89).
In 1775, Spaniard Pedro Fages commented that the Chumash were very inclined to trade, barter, and general commerce (Erlandson, 1994: 48-49). Johnson also notes that the Spanish observed persistent Chumash intervillage warfare (McLendon and Johnson, 1999: 29-39), possibly due to raids of neighboring group’s stored resources (Landberg, 1965: 89).

The project area is located between what were two intensive areas of Chumash settlement: the Goleta Slough area and the mouth of Dos Pueblos Creek. Juan Crespi noted seven ethnohistoric villages in the general area of the Goleta estuary (Johnson, 1989: 2). However, only four ethnohistoric villages, S’axpilil, heliyik, Helo’, and ‘Alkash, are recorded in the Spanish mission documents (Grant, 1978b: 509, 510; Johnson, 1989: 4). Johnson notes that this is probably due to the existence of smaller (or satellite) communities that were grouped together under a higher village identity (1989: 4). Of these villages, Helo’, which was located on Mescalitan Island, was the largest. There, Crespi observed (probably generously) approximately 100 houses and between 600 to 800 residents. On the north side of the lagoon, north of the present Santa Barbara Airport, was the village of S’axpilil. This village site was located near the present intersection of Hollister and Fairview Avenue. Johnson also notes that more inhabitants were baptized from S’axpilil than any other Chumash village except Mikiw, situated at Dos Pueblos (ibid.). In general, the Goleta Slough villages probably had at least 2,000 inhabitants, over 100 houses, and more than 16 plank canoes (Grant, 1978b: 510). Twin villages named Mikiw and Kuyamu occupied the banks of Dos Pueblos Creek at its confluence with the Pacific, giving the creek its name. Crespi gives the population of the two villages together at 1,100, with 120 houses and 10 plank canoes (Grant, 1978b: 510).

4.11.2.1.3 Historic Background. The first known European entry into the area was the expedition of Juan Cabrillo who sailed north up the California coast from Mexico in 1542. His two ships reached the Santa Barbara Channel in October 1542 and after several tries, were able to round Point Conception and sail as far north as San Francisco Bay (Chesnut, 1993).

A second Spanish expedition arrived in the area in 1602, which consisted of two ships under the command of Sebastian Vizcaino. His aim was to follow Cabrillo’s route and reassert Spanish claims to the area. Naming local landmarks after saint’s days on which they were discovered, he named the harbor of Santa Barbara on St. Barbara’s feast day (December 4), and Point Conception on the Feast of the Immaculate Conception (December 8). Vizcaino sailed as far north as Monterey Bay, eventually returning to Acapulco.

In the 1760s, the Spanish government decided to establish a series of military establishments called presidios and missions along the California coast between the two great natural harbors of San Diego and San Francisco (Weber, 1982, 1992). These establishments countered against feared occupation of the coast by Russian or English forces.

As a function of this effort by the Spanish government to establish military presence on the West Coast, an expedition left the colony at San Diego in the summer of 1769 under the command of Don Gaspar de Portola, the governor of Baja, California. The objective was to
locate an overland route to Monterey Bay and prospect for presidio locations along the route. Portola’s expedition passed through the area on its return to San Diego (Chesnut, 1993).

Following Portola’s expedition, Spanish visits and activity increased. An expedition led by Juan Bautista de Anza passed through the area in spring of 1776. A presidio was established at Santa Barbara in 1782 to fill the gap between the previously established presidios in Monterey and San Diego. This established a permanent European presence in the area, and was shortly followed by the establishment of the Missions at Santa Barbara in 1786. This mission had a strong effect on the Chumash in the general project area.

It seems certain that a number of the Chumash left for the missions, though chapels were built for those remaining in rancherias in the Goleta area. The Chumash who did move to the missions worked in agriculture or herding, and steps were taken to assimilate them to European styles of life. This also proved to be dangerous to the health of the Chumash populations, as they were exposed to European diseases to which they had no immunity. Chumash populations went into a steep decline.

When Mexico gained its independence from Spain in 1821, Alta California – and the Open Space Plan area – became part of the new country. Approaches to church control changed as government control devolved to Mexico City and to the Mexican territorial and state governors.

It had never been the intention of the Spanish and the successor Mexican government that the missions would remain as permanent entities controlling the economy of the frontier areas (Weber, 1982). With independence, the Mexican government began a process of secularization of mission properties that was concluded in 1833. Missions were turned into parish churches and regional commissions were established to dispose of the properties and resettle the Indians affiliated with the missions. Mexican government policy was to give mission properties and other unclaimed land to prominent citizens who would be required to build homes and facilities and develop the properties. The period of California history known as the Rancho Period began as a class of wealthy landowners known as “rancheros” controlled the state. They built large ranches based on cattle hide and tallow production.

Approximately 40 of these land grants were made in Santa Barbara County during this period (Tompkins, 1976, 1987; Chesnut, 1993; Avina, 1973). The project area was originally located within the Rancho De Los Dos Pueblos Grant. The Grant was made to Nicolas A. Den, a native Irishman, in 1842.

The United States and Mexico went to war in 1846 over the annexation of Texas. With the end of the war in 1848, the Treaty of Guadalupe-Hidalgo (Weber, 1982) ceded California to the United States. The annexation of California dislocated the dominant Hispanic culture due to the change in government control and the influx of large numbers of Anglo-Americans. Land titles were a major source of conflict between the two cultures. In 1851, a land act was passed that required the Mexican and American courts to confirm Spanish land grants. Many of the ranchos
were broken up, as owners were unable to produce sufficient documentation to satisfy the courts.

The Den family claim to Rancho De Los Dos Pueblos was confirmed, and it remained in his control until his death in 1862. Thereafter, it was subdivided into a number of different ranches, two of which were owned by his sons Alphonse and August. Most prominent among these subsequent owners was William W. Hollister, after whom Hollister Avenue is named. The properties passed through several hands through the balance of the 19th Century. In 1919, a retired British army officer, Colin Campbell, purchased the majority of the property near Coal Oil Point to develop a major country estate. Many of the features of this estate developed in the 1920s and 1930s, such as the access road and mansion, are present today. The Devereux Foundation purchased the Campbell Ranch in 1945 and opened the Devereux School.

4.11.2.1.4 Previously Recorded Historical and Archaeological Resources. A file and records search for the project area was conducted at the Central Coastal Information Center (CCIC) of the California Historical Resources Information System. This search showed a total of eight archaeological sites previously recorded in the project area, all prehistoric and no historic sites. There are no sites on the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR) in the project area. This file and records search also showed that three field surveys have been previously conducted in the area (refer to Figure 4.11-1).

Information on the eight archaeological sites is summarized in Table 4.11-1. Site locality data is considered to be confidential in order to protect archaeological resources; therefore, the specific location within the University’s jurisdiction where these sites are located has not been specified herein. Information on each site follows.

<table>
<thead>
<tr>
<th>Site</th>
<th>Size</th>
<th>Depth</th>
<th>Time Period</th>
<th>Site Eligibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA-SBA-51</td>
<td>22,500 m²</td>
<td>90 cm</td>
<td>Prehistoric</td>
<td>Eligible</td>
</tr>
<tr>
<td>CA-SBA-1194</td>
<td>660 m²</td>
<td>Surface</td>
<td>Prehistoric</td>
<td>Not Evaluated</td>
</tr>
<tr>
<td>CA-SBA-1195</td>
<td>3,600 m²</td>
<td>Unknown</td>
<td>Prehistoric</td>
<td>Not Evaluated</td>
</tr>
<tr>
<td>CA-SBA-1327</td>
<td>40,000 m²</td>
<td>Unknown</td>
<td>Prehistoric</td>
<td>Not Evaluated</td>
</tr>
<tr>
<td>CA-SBA-1688</td>
<td>200 m²</td>
<td>Unknown</td>
<td>Prehistoric</td>
<td>Not Evaluated</td>
</tr>
<tr>
<td>CA-SBA-2089</td>
<td>267 m²</td>
<td>Unknown</td>
<td>Prehistoric</td>
<td>Not Evaluated</td>
</tr>
<tr>
<td>CA-SBA-2341</td>
<td>2,700 m²</td>
<td>70 cm</td>
<td>Prehistoric</td>
<td>Not Evaluated</td>
</tr>
<tr>
<td>CA-SBA-2452</td>
<td>19,565 m²</td>
<td>42 cm</td>
<td>Prehistoric</td>
<td>Not Evaluated</td>
</tr>
</tbody>
</table>

**CA-SBA-51.** This site was originally recorded by Rogers in 1925 (Rogers, 1929: 154) and is a large residential shell midden site. When originally recorded, the central part of the site consisted of a 6-foot-high mound. A number of excavations have taken place in the site over the years and
have demonstrated buried features, hearths, food remains, and human burials. The site has suffered much impact from construction, and portions of the mound were “mined” for fill used in road construction. This has resulted in a series of secondary deposits of midden located to the south of the site area. This site, though damaged, still has potential for intact buried deposits. The site was revisited in a survey conducted in 1999 (W&S Consultants, 1999). The 1999 research compiled information from unpublished research conducted by the University field schools on the site in the 1960s and 1970s. This research shows intact deposits to a depth of 90cm in some portions of the site area. This report (W&S Consultants, 1999: 17) evaluates the site as eligible for the CRHR.

**CA-SBA-1194.** This site was recorded in 1980, and consists of a low-density scatter of marine shell with no associated artifacts. This site was revisited in association with a study for the North and West Campus Housing LRDP Amendment (Wallace Roberts & Todd, 1997: 3.10-4) and was assessed as having been adversely impacted by erosion, plowing for weed abatement, and off-road traffic. Examination of the profile of a drainage channel running through the site indicated that there were no buried deposits, though no formal testing has been conducted. The site has not been formally evaluated as eligible for the CRHR.

**CA-SBA-1195.** This site was recorded in 1980, and consists of a low-density scatter of marine shell with no associated artifacts. No test excavations have been conducted at this site, and the depth of its deposits is not known. The site has not been formally evaluated as eligible for the CRHR.

**CA-SBA-1327.** This site was recorded in 1975 and was originally described as a moderate scatter of chipped and ground stone artifacts, animal bone, and marine shell. The surface of the site has been disturbed by grading associated with the construction of the two oil tanks that sit atop the site. Formal testing has not been conducted at the site, but the assessment is that there is a good probability that intact cultural deposits exist beneath the berms and in the less disturbed western portions of the site (Wallace Roberts & Todd, 1997: 3.10-4). This site has not been formally evaluated for eligibility to the CRHR.

**CA-SBA-1688.** This site was recorded in 1980 and was described as a diffuse surface deposit of burned animal bone and marine shell. No artifacts were seen in association with this scatter. No testing has been conducted at this site. This site has not been formally evaluated for eligibility to the CRHR.

**CA-SBA-2089.** This site was recorded in 1987 and was described as a moderate density scatter of marine shell, animal bone, flakes, and sandstone cobbles. A piece of possible human bone was also seen on the site’s surface. No testing has been conducted at this site. This site has not been formally evaluated for eligibility to the CRHR.

**CA-SBA-2341.** This site was recorded in 1990 and was described as a prehistoric midden site containing a scatter of flakes, ground stone tools, bone tools, marine shell, bone, and fire-affected rock in a dark gray loamy soil. Limited testing was conducted on the site and deposits
were seen to a depth of 70cm. The deposits appeared to be in good shape, and intact features were inferred from the large amounts of fire-affected rock observed. A corner-notched projectile point was recovered, but no chronological assignment was made. This site has not been formally evaluated for eligibility to the CRHR.

**CA-SBA-2452.** This site was recorded in 1990. This site was described as a large, low-density scatter of marine shell and chert flakes. Four high-density concentrations of shell and darker soil were observed. Limited auger testing at that time showed that the site had deposits as deep as 14cm. Backhoe trenching was conducted on the site in 1991, and it revealed deposits to a depth of 42cm. This trenching also revealed that the majority of the site consisted of surface scatter, and that intact subsurface deposits existed only in a limited area (exact size not defined) in the southwest portion of the site. This site has not been formally evaluated for eligibility to the CRHR.

### 4.11.2.2 North Campus

This section summarizes the previously recorded archaeological sites and previous surveys by project sub-area within the overall North Campus area. The entire project area has a high potential for the occurrence of archaeological sites.

There are no previously recorded archaeological sites located in the North Parcel area. No previous surveys have been conducted within this sub-area. Prior to the beginning of any undertaking in this area, an archaeological survey would be required.

There are two previously recorded archaeological sites located in South Parcel: CA-SBA-1194 and 1195. The northern edge of site CA-SBA-1327 also extends into the sub-area.

There is one previously recorded archaeological site located in part on the Storke-Whittier Parcel: CA-SBA-51 (also located in part on the West Campus Mesa). This site is eligible for the CRHR.

### 4.11.2.3 West Campus

There is one previously recorded archaeological site located in the West Campus Mesa: CA-SBA-51 (also located in part on the Storke-Whittier Parcel). This site is eligible for the CRHR. As a survey was conducted there in 1999, no further survey work would likely need to be conducted.

There is one previously recorded archaeological site located in the West Campus Bluffs: CA-SBA-2452. Refer to Section 4.11.2.1.4 for more information about this site. This site has not been evaluated for eligibility to the CRHR. In addition, no previous surveys have been conducted within this sub-area.

There are no previously recorded archaeological sites located in the Coal Oil Point area. The only known archaeological resources at Coal Oil Point are secondary deposits (fill) that were
taken from CA-SBA-51. CA-SBA-51-S is not eligible for the CRHR. Refer to Section 4.11.2.1.4 for more information. This prehistoric site has been determined to be eligible for the CRHR, but it has not been added to the registry.

There are four previously recorded archaeological sites located in the COPR area: CA-SBA-1326, 1688, 2089, and 2341. Refer to Section 4.11.2.1.4 for more information about these sites. None of these sites have been evaluated for eligibility to the CRHR and prior to any undertaking in this area, further research, probably archaeological testing, would need to be conducted to make this determination. Resource significance and appropriate mitigation measures could then be determined. In addition, no project-specific surveys have been conducted within this sub-area. Prior to the beginning of any undertaking in this area, an archaeological survey would be required.

4.11.2.3.1 Paleontological Resources in the Project Vicinity. As described in Section 4.2 (Geology and Geological Hazards), marine fossils are present on the project site, preserved in pebble to cobble conglomerates or in rocky intertidal fossil-bearing units, and can be observed along the sea cliffs. These fossils have been dated by radiocarbon and uranium-series dating, suggesting that the terrace formed about 45,000 years ago. Invertebrate paleontological resources are widespread in rock units throughout the County. Vertebrate fossils are rare; however, because the discovery of vertebrate fossils could extend the range, age, habitat, or evolutionary characteristics of vertebrates, they can address important scientific research questions.

4.11.3 Regulatory Framework

4.11.3.1 Federal

The National Historic Preservation Act of 1966 established the NRHP as the official federal list of cultural resources that have been nominated by state offices for their historical significance at the local, state, or national level. Properties listed in the NRHP, or determined eligible for listing, must meet certain criteria for historical significance and possess integrity of form, location, and setting. Significance is determined by four aspects of American history or prehistory recognized by the NRHP criteria:

A) Associated with events that have made a significant contribution to the broad patterns of our history

B) Associated with the lives of persons significant in our past

C) Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; represent a significant and distinguishable entity whose components may lack individual distinction

D) Have yielded, or may be likely to yield, information important in prehistory or history
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Eligible properties meet at least one of the criteria and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character, the degree to which the original fabric has been retained, and the reversibility of changes to the property.

4.11.3.2 State

California Register of Historic Places. State law also protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources in CEQA documents. A cultural resource is an important historical resource if it meets any of the criteria found in Section 15064.5(a) of the CEQA Guidelines. These criteria are nearly identical to those for the NRHP, which are listed above.

The State Historic Preservation Office (SHPO) maintains the CRHR, in accordance with PRC 5020 et seq. Properties listed, or formally designated eligible for listing, on the NRHP are automatically listed on the CRHR, as are state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

Senate Bill 297 (1987). This bill addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the Native American Heritage Commission to resolve disputes regarding the disposition of such remains. It has been incorporated into Section 15064.5(e) of the State CEQA Guidelines.

4.11.3.3 Local

There are no local regulations applicable to cultural resources for the proposed project.

4.11.4 Project Impacts and Mitigation

4.11.4.1 Methodology

Significant effects upon historic structures or features are evaluated by determining the presence or absence of historic status with respect to the feature in question, and then determining the potential for development to affect the structure or feature if it possesses historic status. Implementation of the proposed project would not demolish or modify historic structures.

Only a portion of the North Campus has been subjected to systematic archaeological survey; however, existing surveys have yielded observations of several archaeological sites. The only site formally evaluated has yielded data determined to be of substantial importance in history or prehistory and has also included human remains. This analysis is based on the probability, based on previous studies and excavations, that an archaeological resource or human burial would be
affected by activities that disturb the ground surface or subsurface, including grading or excavation.

Surface examination often cannot reveal whether paleontological resources are present at a specific project location. However, as described above, excavation in nearby areas has occurred and continues to occur. This analysis is based on the probability, based on previous studies of nearby rock units, that paleontological resources could be affected by activities that disturb the ground surface or subsurface, including grading or excavation. For the purposes of this EIR, impacts on paleontological resources are assessed in terms of significance based upon whether these resources meet the definition of a “unique archaeological resource” found in Section 21083.2(g) of CEQA.

4.11.4.2 LRDP Policies

The Coastal Act Element of the LRDP included a range of policies and standards (herein termed LRDP policies) to demonstrate consistency of the LRDP, and projects implemented under the LRDP, with the statutory requirements of Chapter 3 of the Coastal Act (commencing with Section 30200). The following LRDP policies are relevant to Cultural Resources.

30244.1. All available measures shall be explored to avoid development which will have adverse impacts on archaeological resources.

30244.2. The Office of Public Archaeology, Department of Anthropology, and Native Americans will be consulted when development may adversely impact archaeological resources.

30244.3. When development is proposed for areas where archaeological resources are affected, the project will be designed to minimize impacts on such resources.

30244.4. During any grading and other activities that may result in ground disturbance on archaeological sites, a non-University affiliated archaeologist recognized by the SHPO and a Native American representative shall be present.

30244.5. Should archaeological or paleontological resources be disclosed during any planning, pre-construction, or construction phase of the project, all activity which could damage or destroy these resources shall be temporarily suspended until the site has been examined by a non-University archaeologist recognized by the SHPO. Mitigation measures shall be developed and implemented to address the impacts of the project on archaeological resources.

30244.6. Vehicle use, unauthorized collecting of artifacts, or other activities which would destroy or disturb archaeological resources shall continue to be prohibited.

30244.7. When development is proposed inside or within 150 feet of an archaeological resource, the University shall follow the step-by-step procedure for identifying, evaluating and mitigating impacts on archaeological resources identified in the revised Appendix F of the 1990
FEIR, which is included in the Faculty and Family Student Housing, Open Space Plan and LRDP Amendment EIR.

### 4.11.4.3 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact on agricultural resources if it would result in any of the following:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature
- Disturb any human remains, including those interred outside of formal cemeteries

The standards of significance for historical resources are based on Appendix G and Section 15064.5 of the CEQA Guidelines. As currently worded in CEQA Guideline Section 15064.5, historical resources include resources listed in, or determined to be eligible for listing in, the CRHR; resources included in a qualifying local register; and resources that the lead agency determines to meet the criteria for listing in the CRHR. These criteria may apply to any historic built environmental feature, and to historic or prehistoric archaeological sites. Properties or sites that are eligible for inclusion in the CRHR are termed “historical resources.” Under the provisions of CEQA Guideline Section 15064.5(a)(3), generally a lead agency should find that a property is historically significant if it determines that it meets one or more of the criteria for listing on the CRHR, which extend to any building, structure, feature, or site:

A) Associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage

B) Associated with lives of persons important in our past

C) Embody 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

D) Have yielded, or may be likely to yield, information important in prehistory or history

With few exceptions, to qualify as a historic resource a property must be at least 50 years old and also must retain physical integrity and integrity to its period of significance. Although not all buildings that are 50 years old or greater qualify as historic resources, any structure older than 50 years has the potential to be considered as an historic resource.

Archaeological sites may also qualify as historical resources under CEQA Guideline Section 15064.5(a)(3). Archaeological sites most often are assessed relative to CRHR Criterion D (for
potential to yield data important to history or prehistory). An archaeological deposit that has been extensively disturbed and archaeological artifacts found in isolation may not be eligible for listing on the CRHR, because the lack of stratigraphic context may impair the ability of the resource to yield significant data. A resource that does not meet one of the criteria for eligibility to the CRHR is not a historical resource under CEQA, and impacts to such a property are not significant.

“Unique archaeological resources” are defined under CEQA through PRC Section 21083.2(g). A unique archaeological resource implies an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it meets one of the following criteria:

- The archaeological artifact, object, or site contains information needed to answer important scientific questions, and there is a demonstrable public interest in that information.
- The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type.
- The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

For a resource to qualify as a unique archaeological resource, the agency must determine that there is a high probability that the resource meets one of these criteria without merely adding to the current body of knowledge (PRC Section 21083.2(g)). An archaeological artifact, object, or site that does not meet the above criteria is a nonunique archaeological resource (PRC Section 21083.2(h)).

An impact on a nonunique resource is not a significant environmental impact under CEQA (CEQA Guideline Section 15064.5(c)(4)). If an archaeological resource qualifies as a historical resource under CRHR criteria, then the resource is treated as a historical resource for the purposes of CEQA.

Section 15064.5 of the CEQA Guidelines assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under PRC Section 5097.98.

4.11.4.4 Effects Not Found to Be Significant

The Initial Study did not identify any effects not found to be significant related to cultural resources; therefore, all potential cultural resource impacts identified in the Initial Study Checklist included in Appendix G of the CEQA Guidelines are discussed in this EIR.
4.11.4.5 Impacts and Mitigation Measures

Impact 4.11-1. Implementation of the proposed project would not result in the modification or demolition of structures that have been designated as eligible or potentially eligible for the NRHP or CRHR. No impact would result.

No structures on either the North or West Campus would be altered or demolished as a result of the proposed project. (Replacement of the existing conference facility at Coal Oil Point would occur under an existing entitlement that was evaluated in the 1990 LRDP EIR and is discussed as a related project in the cumulative impact discussion below.) Because no historic structure would be demolished as a result of implementation of any element of the proposed project, no impact would occur, and no mitigation would be required. With respect to archaeological site CA-SBA-51, though this resource has been determined to be eligible for listing on the CRHR and thus is a historic resource, it is discussed as an archaeological resource with respect to Impact 4.11-2, which follows.

Impact 4.11-2. Construction activities associated with project implementation could result in damage to or the destruction of archaeological resources. With implementation of relevant mitigation measures, this impact would be reduced to a less-than-significant level.

Amendment of the LRDP to permit residential development on the North Campus, coastal access improvements, and open space management activities, including habitat restoration, could result in damage to or the destruction of known and unknown archaeological resources.

Development of faculty housing would result in grading of approximately 27 acres of land on the North Parcel. Development of the Sierra Madre Family Student Housing complex would result in grading of approximately 13 acres of land (10 acres on the Storke-Whittier Parcel and 3 acres of existing lawn area adjacent to the West Campus Family Student Housing complex). Improvement of approximately 8.18 miles of existing trails could result in grading and/or disturbance of approximately 6.2 acres of ground surface. Development of public parking at up to four locations would result in grading of approximately 0.6 acre of land (total for all four locations, including restroom replacement at Coal Oil Point). Thus, residential development and coastal access improvements could result in grading and/or disturbance of approximately 46.8 acres of land.

Restoration of habitat and management of open space resources could also result in ground disturbance in some locations; however, it is anticipated that such disturbance would generally be limited to small discontinuous areas, would only involve use of hand tools, and would be conducted in accordance with the goals and objectives of the Open Space Plan, which include preservation of cultural and historic resources. Because of the degraded state of the South Parcel, including large areas of exposed soils that are currently subject to erosion, restoration of those areas could include grading to reduce topographic variation, which could involve more substantial ground disturbance.
Thus, site preparation and other ground-disturbing activities associated with residential
development, coastal access improvements, and open space management activities have the
potential to result in the disturbance or destruction of known and unknown archaeological
resources.

As discussed in Section 4.11.2 (Existing Conditions), no previously recorded archaeological sites
are located in the North Parcel area, two previously recorded archaeological sites are located in
South Parcel (CA-SBA-1194 and 1195) and one is located on the perimeter of the South Parcel
(CA-SBA-1327). One previously recorded archaeological site is located in part on the Storke-
Whittier parcel (CA-SBA-51) and in part on the West Campus Mesa, and is eligible for the
CRHR. One previously recorded archaeological site is located in the West Campus Bluffs (CA-
SBA-2452). No recorded archaeological sites are located in the Coal Oil Point area; however,
four previously recorded archaeological sites are located in the COPR area (CA-SBA-1326, 1688,
2089, and 2341). Thus, residential development on the Storke-Whittier Parcel, coastal access
improvements, and open space management actions on the South Parcel, the West Campus
Mesa, West Campus Bluffs, and within the COPR could result in the disturbance or destruction
of known archaeological resources.

Given the number of archaeological sites located within the project area, there is the potential
for additional, undocumented sites to exist. Thus, residential development on either the North
Parcel or the Storke-Whittier Parcel, coastal access improvements, and management of open
space areas, including habitat restoration activities, could also result in the disturbance or
destruction of unknown archaeological resources.

The proposed improvement of trails, closure of existing informal trails, and installation of fences
around sensitive areas would discourage off-trail forays and reduce the level of human and
domestic animal activity across the COPR and the rest of the undeveloped area. This reduction
in activity would reduce the risk of humans disturbing – either inadvertently or intentionally –
deposits associated with the known and unknown archaeological resources.

Although portions of the project area have been previously surveyed, no surveys have been
completed within the past two years on any portion of the site. Natural erosional processes and
human activity both result in changes to surface conditions.

The following Mitigation Measures (MM) would address potentially significant impacts on
cultural resources.

**MM 4.11-2(a).** A University-qualified archaeologist shall complete a Phase I archaeological
survey of all areas of the Faculty Housing, Sierra Madre, and Open Space Plan project sites
where ground disturbance would occur.

**MM 4.11-2(b).** Per LRDP policy 30244.2, the Office of Public Archaeology, Department of
Anthropology, and Native Americans shall be consulted when development may adversely
impact archaeological resources.
**MM 4.11-2(c).** Per LRDP policy 30244.3, when development is proposed for areas where archaeological resources are affected, the project shall be designed to minimize impacts on such resources.

**MM 4.11-2(d).** Per LRDP policy 30244.4, during any grading and other activities that may result in ground disturbance on archaeological sites, a non-University affiliated archaeologist recognized by the SHPO and a Native American representative shall be present.

**MM 4.11-2(e).**

(i) Per LRDP policies 30244.1 and 30244.5, should archaeological or paleontological resources be disclosed during any planning, pre-construction, or construction phase of the project, all activity which could damage or destroy these resources shall be temporarily suspended until the site has been examined by a non-University archaeologist recognized by the SHPO, all available measures shall be explored to avoid development which will have adverse impacts on archaeological resources, and mitigation measures shall be developed and implemented to address the impacts of the project on archaeological resources.

(ii) A qualified, non-University archaeologist shall first determine whether an archaeological resource uncovered during construction is a unique archaeological resource under PRC Section 21083.2(g), and if the archaeological resource is determined to be a unique archaeological resource, the archaeologist shall formulate a mitigation plan in consultation with the campus that satisfies the requirements of Section 21083.2.

(iii) If the archaeologist determines that the archaeological resource is not a unique archaeological resource, the archaeologist may record the site and submit the recordation form to the California Historic Resources Information System Central Coast Information Center. The archaeologist shall prepare a report of the results of any study prepared as part of a mitigation plan, following accepted professional practice. Copies of the report shall be submitted to the University and to the California Historic Resources Information System Central Coast Information Center.

**MM 4.11-2(f).** Per LRDP policy 30244.7, when development that may impact an archaeological resource is proposed inside or within 150 feet of an archaeological resource, the University shall follow the step-by-step procedure for identifying, evaluating, and mitigating impacts on archaeological resources identified in the revised Appendix F of the 1990 LRDP FEIR, which is included in the Faculty and Family Student Housing, Open Space Plan, and LRDP Amendment EIR.

**MM 4.11-2(g).** Each beach access point (stairway, boardwalk, or other access modality) and each trail access point shall have posted signage requesting that users respect the sensitive
resources of the Open Space Plan area, including but not limited to biological, cultural, wetlands, and geological resources, as well as the presence of possible hazards resulting from natural hydrocarbon seeps. Such signage shall not disclose the location of any particular cultural resource in order to prevent vandalism, theft, or other desecration or despoliation of the resource. Such signage shall convey an educational tone in keeping with the mission of the University’s role in the Open Space Plan.

**MM 4.11-2(h).** Per LRDP policy 30244.6, vehicle use, unauthorized collecting of artifacts, or other activities which would destroy or disturb archaeological resources shall continue to be prohibited.

Implementation of MMs 4.11-2(a) through 4.11-2(f) would reduce potential impacts of the project on known resources, as well as any archaeological resources encountered during project development that are unknown at present, by requiring that such resources, if encountered, would be treated, as appropriate, pursuant to Section 21083.2 of CEQA, to ensure that any important scientific information that could be provided by these resources regarding history or prehistory is not lost. In addition, MM 4.11-2(g) would include permanent signage informing users of the presence of sensitive resources, and MM 4.11-2(h) would prohibit unauthorized collecting of artifacts or other activities that would destroy or disturb archaeological resources. With implementation of MMs 4.11-2(a) through 4.11-2(h), the proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to the CEQA Guidelines Section 15064.5, and the impact of the project would be reduced to a less-than-significant level.

**Impact 4.11-3.** Construction activities associated with project implementation could result in damage to or the destruction of paleontological resources. With implementation of relevant mitigation measures, this impact would be reduced to a less-than-significant level.

Amendment of the LRDP to permit residential development on the North Campus, coastal access improvements, and open space management activities, including habitat restoration, could result in damage to or the destruction of unique paleontological resources. No unique geologic features occur within the project area, and thus no such features would be affected by the proposed project.

As discussed above in Impact 4.11-2, residential development and coastal access improvements could result in grading and/or disturbance of approximately 46.8 acres of land. Restoration of habitat and management of open space resources could also result in ground disturbance in some locations; however, it is anticipated that such disturbance would generally be limited to small discontinuous areas, with the exception of the South Parcel, which could require more substantial restoration work, including grading to reduce existing erosional features. Thus, site preparation and other ground-disturbing activities associated with residential development, coastal access improvements, and open space management activities have the potential to result in the disturbance or destruction of paleontological resources.
As described above in Section 4.11.2, rock units underlying the project site have historically yielded paleontological resources. Because paleontological resources often do not exhibit ground surface indicators, the absence of observed paleontological resources on areas of the project site other than the sea cliff faces does not preclude the possibility of their occurrence, as fossils tend to be associated with specific rock units, and ground-disturbing activities associated with implementation of the proposed project could adversely affect these resources. Marine fossils are present on the project site, and these invertebrate resources have been dated and are widespread throughout the County; however, vertebrate fossils are rare, and should they be discovered, they could address important scientific research questions.

As described above, MM 4.11-2(d) would require that ground-disturbing activities be monitored by a qualified, non-University specialist. If paleontological resources should be uncovered during ground-disturbing activities, MM 4.11-2(e) would require cessation of all work that could potentially damage the resources and development and implementation of appropriate treatment measures to address the resource encountered. With implementation of MM 4.11-2(d) and 4.11-2(e), the proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, and this impact would be reduced to a less-than-significant level.

**Impact 4.11-4.** Construction activities associated with project implementation could result in the disturbance of human remains. With implementation of relevant mitigation measures, this impact would be reduced to a less-than-significant level.

Amendment of the LRDP to permit residential development on the North Campus, coastal access improvements, and open space management activities, including habitat restoration, could disturb human remains, including those interred outside of formal cemeteries.

As discussed above in Impact 4.11-2, residential development and coastal access improvements could result in grading and/or disturbance of approximately 46.8 acres of land. Restoration of habitat and management of open space resources could also result in ground disturbance in some locations; however, it is anticipated that such disturbance would generally be limited to small discontinuous areas, with the exception of the South Parcel, which could require more substantial restoration work, including grading to reduce existing erosional features. Thus, site preparation and other ground-disturbing activities associated with residential development, coastal access improvements, and open space management activities have the potential to result in the discovery and/or disturbance of human remains.

No formal cemeteries are known to have occupied the project site, so any human remains encountered would likely come from archaeological or historical archaeological contexts. As described in Section 4.11.2, the presence of human burials in the single archaeological resource that has been evaluated suggests the potential for additional burials to be present in other archaeological contexts on the project site.
Human burials, in addition to being potential archaeological resources, have specific provisions for treatment per Section 5097 of the California Public Resources Code. In accordance with these requirements, MM 4.11-4 requires implementation of the following directive if human remains are discovered on-campus:

**MM 4.11-4.** In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately, the area of the find shall be protected, and the University immediately shall notify the Santa Barbara County Coroner of the find and comply with the provisions of PRC Section 5097 with respect to Native American involvement, burial treatment, and re-burial, if necessary.

As described above, MM 4.11-2(b) would require consultation with the Office of Public Archaeology and Native American groups if development may adversely impact archaeological resources. MM 4.11-2(d) would require that ground-disturbing activities be monitored by a qualified, non-University specialist. If paleontological resources should be uncovered during ground-disturbing activities, MM 4.11-2(e) would require cessation of all work that could potentially damage the archaeological or paleontological resources and development and implementation of appropriate treatment measures to address the resource encountered. With implementation of MM 4.11-2(b), 4.11-2(d), 4.11-2(e), and 4.11-4, the proposed project would employ appropriate procedures if human remains are discovered or disturbed, and the impact of the project would be reduced to a less-than-significant level.

### 4.11.5 Cumulative Impacts

The geographic context for the analysis of hazards and hazardous materials impacts is the County of Santa Barbara, which includes the City of Santa Barbara, the City of Goleta, and UCSB, including all cumulative growth therein, as represented by full implementation of the County of Santa Barbara General Plan, the City of Santa Barbara General Plan, the City of Goleta General Plan, the UCSB Long Range Development Plan, and all approved or potential projects identified in Table 4.1-1.

It is possible that cumulative development throughout the County could result in the adverse modification or destruction of historic buildings, which could contribute to the erosion of the historic and architectural fabric of the area. However, it is anticipated that future development within the County, including the Cities of Goleta and Santa Barbara, that could potentially affect historic resources or structures will be subject to the requirements of CEQA with respect to environmental review of projects and, specifically, conformance with 15064.5 of the CEQA Guidelines, which provides detailed standards governing an EIR’s analysis of archaeological and historic resources. The requirements of PRC Section 5097 would also apply to any project for which a burial, human bone, or suspected human bone are discovered, which essentially outlines provisions for Native American involvement, burial treatment, and re-burial. In addition, there are other local historic protection ordinances or regulations, such as the City of Santa Barbara’s Guidelines for Archaeological Resources and Historical Structures and Sites (January 2002), and/or the design review process that would also apply to new development projects proposed...
in the region. It is anticipated that the effects of cumulative development on historic resources will be mitigated to the extent feasible in accordance with full implementation of these legal Section 4.11 Cultural Resources
requirements. As a result, cumulative impacts on historic resources as a result of future development throughout the County are expected to be less than significant. The proposed project does not include the demotion or alteration of an historic structure eligible or potentially eligible for the NRHP or the CRHR. As a result, the proposed project has no contribution to cumulative impacts to historic structures, and no impact would result.

Development in the County would also require grading and excavation that could potentially affect archaeological or paleontological resources or human remains, which would contribute to the continued loss of these cultural resources, if not protected upon discovery. CEQA requirements for protecting archaeological and paleontological resources and human remains are applicable to development in the County, as are local cultural resource protection ordinances. If cultural resources are protected upon discovery as required by law, cumulative impacts to those resources would be less than significant.

Development of the proposed project could result in the discovery of archaeological or paleontological resources or human remains due to grading and excavation on undeveloped, coastal lands. Therefore, MM 4.11-2(a) through 4.11-2(f) have been developed to characterize the likelihood for the discovery of such resources and formulate a mitigation plan, if necessary. Further, MM 4.11-2(d) requires that a non-University affiliated archaeology recognized by SHPO and a Native American representative be present during any grading or other activities that could result in the disturbance of cultural resources, including archaeological and paleontological resources. MM 4.11-2(e) requires that work be temporarily suspended if cultural resources are discovered until such time as the site is properly examined and mitigation measures have been developed and implemented. In addition, MM 4.11-2(g) would require permanent signage informing users of the presence of sensitive resources, and MM 4.11-2(h) would prohibit unauthorized collecting of artifacts or other activities that would destroy or disturb archaeological resources. These Mitigation Measures will be imposed and enforced throughout construction activities. Therefore, the proposed project’s contribution to cumulative impacts associated with a substantial adverse change in the significance of an archaeological or paleontological resource would not be considered cumulatively considerable, and the impact would be less than significant.

4.11.6 References

The following is a list of references for this subsection. Please refer to Section 9.0 for the master reference list.


Dillon, B. 1990. Archaeological Record Search and Impact Evaluation for the Los Angeles Wastewater Program Management (NOS-NCOS) Project, Los Angeles, California. Prepared for Dr. Janet Fahey, James M. Montgomery, Consulting Engineers, 250 N. Madison Ave., P.O. Box 7009, Pasadena, CA 91109-7009.


W&S Consultants. 1999. Phase I Archaeological Survey of the University West Campus LRDP Housing Amendment Study Area, Santa Barbara County, California. Report Prepared for Office of Budget and Planning, University of California, Santa Barbara.


