4.6 CULTURAL RESOURCES

This section evaluates the proposed project's potential impacts to cultural and paleontological resources. Cultural resources are sites, buildings, structures, objects, and districts over 50 years old that may have traditional or cultural value for the historical significance they possess. Paleontological resources include fossil plants and animals and evidence of past life such as trace fossils and tracks. The information and analysis presented in this section is based on two technical reports prepared for the proposed project. These reports include an Archaeological Assessment Report (August 2009) and a Paleontological Resources Assessment (June 2009) prepared by LSA Associates, Inc. (LSA). These reports are contained in Appendices E and F, respectively.

Scoping Process

The Initial Study/Notice of Preparation (IS/NOP) prepared for the proposed project identified potential impacts related to the significance of archaeological and paleontological resources and the disturbance of any human remains. The proposed project site is currently vacant (with the exception of the existing Library), and there are no existing structures on or adjacent to the proposed project site that are over 50 years of age or considered to be historically significant. Therefore, issues related to historical resources as defined in State California Environmental Quality act (CEQA) Guidelines Section 15064.5 are not included in the detailed analysis presented in this Environmental Impact Report (EIR). Refer to Appendix A, IS/NOP, for additional discussion.

Four comment letters associated with Cultural Resources were received in response to the IS/NOP circulated for the proposed project. The Native American Heritage Commission (NAHC) recommended actions to help the City of Newport Beach (City) adequately assess the project-related impacts on historic and archaeological resources. The California Cultural Resource Preservation Alliance agreed with the IS/NOP's finding that the proposed project has the potential to impact archaeological and paleontological resources and human remains but suggested a minor correction to a reference in the IS/NOP. The Los Angeles faction of the Gabrielino-Tongva Tribe recommended that the City hire Native American monitors with its approval. A resident of the City recommended that the EIR identify archaeological sites on the project site. For copies of the IS/NOP comments, refer to Appendix A of this EIR. The recommendations and concerns raised during the scoping process related to archaeological and paleontological resources are addressed in this EIR section.

4.6.1 Methodology

The existing conditions for cultural resources in the proposed project area were determined through background research, consultation, and field surveys, as described in Section 4.6.2. Background research was conducted to: (1) identify previously recorded or otherwise known cultural resources and cultural resource studies in or adjacent to the project area; and (2) obtain information about the archaeology, ethnography, and history of the project area. Background research consisted of records searches conducted through the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System located at the California State University, Fullerton (February 10, 2009), a search of the Sacred Lands File through the NAHC, and a review of archaeological, ethnographic, and historical literature of the project area and vicinity. A surface archaeological reconnaissance and cultural resources field survey was conducted on site to identify unrecorded cultural resources and assess the potential for subsurface cultural resources.

The existing conditions for paleontological resources in the proposed project area were determined through background research and a field survey, as described in Section 4.6.3. Background research was conducted to: (1) identify previously recorded or otherwise known fossil localities in or adjacent to the project area; and (2) obtain information about the geological setting of the project area and the potential for geological formations underlying the project area for containing fossils. Background research consisted of a fossil locality search at the Natural History Museum of Los Angeles County (LACM) and the University of California Museum of Paleontology at Berkeley (UCMP) and a review of geological and paleontological literature of the project area and vicinity. A surface paleontological resources survey was conducted of the project area to identify fossils and fossiliferous geological formations and sediments.

The pedestrian surveys of the proposed project site were conducted by LSA Paleontologist Steven W. Conkling and LSA Archaeologist Deborah K. B. McLean on March 31, 2009. The surveys were conducted by walking parallel transects spaced approximately 15 feet (ft) apart. The purpose of the surveys was to confirm the accuracy of the archival records searches and geologic mapping and to identify whether any archaeological and/or paleontological resources might be exposed on the surface.

4.6.2 Cultural Resources Existing Environmental Setting

This section describes the baseline conditions and cultural setting for the project site, as determined and developed by a records search at the SCCIC, a literature review, consultation with potentially interested parties, and a field survey.

Records Searches. On February 10, 2009, a records search was conducted at the SCCIC located at California State University, Fullerton. It included a review of all recorded historic and prehistoric archaeological sites within a 1-mile radius of the project area as well as a review of cultural resource reports on file. In addition, the following inventories and maps were examined:

- National Register of Historic Places (National Register)
- California Register of Historic Places (California Register)
- California Historical Landmarks
- California Points of Historical Interest
- California State Historic Resources Inventory
- City of Newport Beach Historical Register
- *Santa Ana, California* 15-minute quadrangle (United States Geological Survey [USGS] 1896, 1901)

None of the inventories identified any sites within the project area. Within the 1-mile radius search area, one site each was identified by the California Points of Historical Interest (the site of the 1953 National Boy Scout Jamboree [present-day Newport Center]) and the California Register. No sites

within the 1-mile radius search area were identified by either California Historical Landmarks or the National Register.

The purpose of the records search is to determine whether any previously recorded archaeological sites are documented within the project area and to determine what types of sites may be expected to occur within the project area based on sites recorded within a 1-mile radius. Also, the general cultural sensitivity of the project area can be determined based on this information.

The records search indicated that within the 1-mile radius, 28 archaeological sites have been recorded, 2 of which are identified as within the project area (CA-ORA-167/1117 and CA-ORA-1461), and 1 that is adjacent to the project (CA-ORA-139). No sites are listed on the Archaeological Determination of Eligibility list (to be included on this list, the formal evaluation of a site for listing on either the California or National Registers must receive State Historic Preservation Officer [SHPO] concurrence). No isolates have been identified within the 1-mile radius of the project area (an "isolate" is defined as up to no more than two isolated artifacts within 50 ft of one another). Two historic cultural resources have been identified within the 1-mile radius. Neither is within the project area. The precise location of cultural resource sites is information that is protected from public disclosure by State law to protect the resources from illegal artifact collecting and vandalism.[1]

Native American Consultation. Native American consultation was conducted by the City, with assistance from LSA. On February 4, 2009, a letter requesting a Sacred Lands File (SLF) search for the project area was sent to the NAHC. The NAHC responded on February 9, 2009, to state that the SLF was negative for the project area and to provide a list of Native American Tribes and representatives that may have information regarding cultural resources that could be impacted by the project. These contacts were:

- Juaneño Band of Mission Indians Acjachemen Nation, David Belardes
- Gabrieleno/Tongva San Gabriel Band of Mission Indians, Anthony Morales
- Gabrielino Tongva Nation, Sam Dunlap
- Juaneño Band of Mission Indians Acjachemen Nation, Anthony Rivera
- Juaneño Band of Mission Indians, Sonia Johnston

In response to this recommendation, the City issued letters by certified mail on February 16, 2009, to all of the Tribal representatives on the NAHC list. The letters described the project and requested information regarding cultural resources that might be impacted. The letter specified that the City would like a reply within 90 days should the Tribes wish to consult. For copies of the NAHC correspondence and letters to the Tribes, please refer to the Archaeological Assessment Report included in Appendix E.

[1] State regulations require that archaeological site location information (maps with plotted site locations, site records, reports, descriptions, etc.) be kept confidential and that this information not be included in copies of reports or plans provided to the general public. Further, cultural resources information is exempt from public disclosure under the Public Records Act, and more specifically, Senate Bill (SB) 922 (Government Code 6254 (r) and 6254.10).

Between March 2 and March 27, 2009, the City participated in several telephone conversations and email exchanges with the Tribal contacts. Responses received from the Tribes (Gabrieleno/Tongva San Gabriel Band of Mission Indians, Gabrielino Tongva Nation, Juaneño Band of Mission Indians Acjachemen Nation, and Juaneño Band of Mission Indians) requested continued consultation and that all construction activities be monitored by a Tribally approved monitor. In addition, the City directed that the IS/NOP for the project be emailed to each entity on the NAHC list on April 1, 2009. A meeting was held on April 16, 2009, between the City and the Juaneño Band of Mission Indians Acjachemen Nation at the Tribe's request to discuss the project. Additional email consultation was provided throughout April 2009, and copies of the archaeological testing report produced by LSA (Strudwick et al. 1996) were distributed.

In summary, all of the Native American groups requested continued involvement in the project consultation process and that all construction activities be monitored by a Tribally-approved monitor.

Subsequent to the consultation process described above, the NAHC sent a letter to the City dated May 4, 2009, acknowledging its receipt of the NOP and recommending that the following six additional parties be contacted:

- Ti'At Society, Cindi Alvitre
- Tongva Ancestral Territorial Tribal Nation, John Tommy Rosas
- Juaneño Band of Mission Indians, Alfred Cruz
- Juaneño Band of Mission Indians, Adolph "Bud" Sepulveda
- Juaneño Band of Mission Indians, Anita Espinoza
- United Coalition to Protect Panhe, Rebecca Robles

The City issued letters by certified mail on June 8, 2009, to the above Tribal representatives, requesting their input with regard to cultural resources that might be impacted by the project. Included in the mailing was the IS/NOP for their review. The exception was John Tommy Rosas who prefers email correspondence. The letter and IS/NOP were emailed to him by LSA on June 10, 2009. LSA followed up on all letters and emails between June 10, 2009, and June 15, 2009. To date, no response has been received from Cindi Alvitre, Alfred Cruz, or Adolph "Bud" Sepulveda. The IS/NOP packet that was sent to Ms. Alvitre was returned as "unclaimed" on June 30, 2009. During the follow-up phone call on June 15, 2009, Ms. Robles stated that she would likely comment; however, no comment has been received to date. Anita Espinoza returned the call on June 18, 2009, to say that she does consider the project area to be sensitive for cultural resources. She would like to be kept informed of any discoveries and recommends monitoring by a Native American and an archaeologist subsequent to any discoveries.

John Tommy Rosas responded by email on June 10, 2009, to confirm that he received the IS/NOP packet and would be commenting. Initial comments from him were received by email on June 26, 2009. In those comments, Mr. Rosas stated that he objects to the project due to the high sensitivity of the area for cultural and other resources. He requested consultation with the City, but agreed that the consultation could be mediated by LSA. The City extended an offer to meet with Mr. Rosas, and he suggested that a format be set up prior to the meeting. Mr. Rosas offered to provide a format, but the format was not received. However, numerous attempts to meet with Mr. Rosas and discuss his

concerns were extended by LSA on behalf of the City during the period between June 26, 2009, and August 12, 2009. Consultation with Mr. Rosas via email and phone is continuing.

In summary, a total of 11 Tribal representatives were contacted by the City, all of which are affiliated with the Gabrielino, Gabrielino Tongva, or Juaneño Indian groups. For additional information regarding the consultation process, please refer to the Archaeological Assessment Report included in Appendix E of this EIR.

Field Survey. On March 31, 2009, LSA archaeologist Deborah McLean completed a survey of the northern and central parcels of the project area. All surveying was done by visually inspecting the ground surface and rodent dirt piles for evidence of cultural remains. No excavation of any type occurred.

The March 31, 2009, survey did not identify any previously unrecorded archaeological sites. The project site contains the previously recorded archaeological sites CA-ORA-167/1117 and CA-ORA-1461. Evidence of these sites was scarce, but present in the form of a light scatter of shell that included pecten (*Argopecten* spp.), Venus clam (*Chione* spp.), and mussel (*Mytilus* spp.). There was also no evidence of archaeological site CA-ORA-139, and its recorded location is completely paved with sidewalk, Avocado Avenue, and additional built environment on the west side of Avocado Avenue. The southern portion of the central parcel revealed only what appears to be a sparse assemblage of small gastropods and pelecypods consistent with the local fauna from Pleistocene terraces, such as that upon which the project area is situated. This fauna is not indicative of human resource gathering.

Precontact with Europeans Setting.

Terminal Pleistocene (1.6 million to 10,000 years before present). The first settlement in Southern California occurred during the Terminal Pleistocene. The Channel Islands were among the first areas to be occupied. Early sites from the San Miguel and Santa Rosa Islands, for example, date to well before 10,000 years ago. Evidence at sites dating to the Terminal Pleistocene and Early Holocene increasingly suggests that the early inhabitants of coastal California relied on marine resources and seeds, rather than acting as big-game hunters like those from the Great Plains.

Early Holocene (10,000 to 6,650 years before present). During the Early Holocene, settlement on the mainland coast was much more common. Groups depended mainly on shellfish and seed plants during most of the Early Holocene. The material culture employed by these hunter-gatherer groups was relatively simple. Overall, the evidence indicates that groups were reasonably sedentary, facing little competition from their neighbors and so exploiting abundant local resources. Based on the frequency of radiocarbon-dated components through time, a number of such groups appeared in coastal Southern California after 8,000 years ago, attesting to the early success of this adaptation.

Middle Holocene (6,650 to 3,350 years before present). During the Middle Holocene, settlement in the region around the project area seems focused on the upper end of Newport Bay as stabilization of sea levels promoted the development of large shellfish populations. The local human populations grew increasingly sedentary, although they moved in small family groups onto the marine terraces southeast of the Bay during the summer to fish, collect shellfish, and gather seeds. In the later part of the Middle Holocene, exploitation of the environment intensified. Groups commonly used mortars and pestles, suggesting that they spent a lot of time processing acorns as part of the subsistence economy.

Late Holocene (3,350 years before present day to 1782). A decrease in settlement density occurred around Newport Bay and along the Newport Coast in the Late Holocene. Settlement was concentrated instead around Huntington Beach and the Bolsa Chica Mesa, perhaps because of changes in the course of the Santa Ana River. Settlement eventually returned to the Newport Bay Area, and populations grew quite large. The vast majority of prehistoric sites and components in Orange County date from the Late Holocene Period. As populations grew, they exploited their environment with increasing intensity. The appearance of technological innovations, such as the shell fishhook, may attest to this intensification. A diversity of site types, both large and small, also proliferated in a range of environments. The Late Holocene archaeological record implies a complex pattern of planned mobility and opportunistic exploitation of local resources.

Ethnographic Setting. Interpretations of the archaeological record of Late Holocene settlement systems and social organizations have typically depended on the current understanding of the native groups who lived in this region at the time of European contact. At the time of European contact, three ethnic groups may have utilized and occupied parts of the project area. Ethnographers have labeled these three groups as the Gabrielino, Juaneño, and Luiseño. They spoke related languages and shared fairly similar cultures. Because of their similarities, they will be discussed together in this brief review.

The exact boundaries between the Gabrielino, Juaneño, and Luiseño are unclear and probably are not necessary for understanding how precontact populations utilized the landscape. Groups faced considerable environmental variability, such as droughts and flooding, in the Late Holocene. In response to such variability, the local groups located their settlements near several habitats in locations that were not likely to be flooded. Groups may have not occupied the Newport Coast permanently. Rather, individual families may have typically come to the Newport Coast region only during the winter months, when other resources were scarce, in order to collect shellfish.

Environmental variability influenced not only site location but also the kinds of social institutions in which the coastal Gabrielino, Juaneño, and Luiseño interacted. A community might contain 50 to 150 people. One or more lineages, each of which was itself composed of several related nuclear families, lived in a typical community. Descent among these lineages was patrilineal, and membership in a lineage typically provided access to land owned by that lineage. Outsiders could only gather resources in the territory of another community with the permission of that community. Trade also provided access to the resources of other groups. This trade often occurred under the auspices of special social institutions. Gabrielino, Juaneño, and Luiseño communities used shell beads as a form of money in order to obtain scarce resources from other communities when they did not have other

goods with which to engage in direct barter. Chiefs controlled ritual exchanges of shell beads; such exchanges maintained relationships with groups in other areas and thus provided access to resources in those areas.

Historic Setting.

Exploration and Colonization. European exploration of California began in 1542 with the voyage of Spanish explorer Juan Rodriguez Cabrillo. Despite the death of Cabrillo during the voyage, his journey led to the colonization of Alta California. To ensure control of Alta California, the Spanish built pueblos, presidios, and missions. Between 1769 and 1822, the Spanish established a chain of 4 presidios, 2 pueblos, and 21 missions.

Cattle Herding. The Spanish Mission period ended when Mexico won its independence from Spain in 1821. The new Mexican government acted quickly to undermine the power and wealth of the California missions. The Mexican Republic passed the Secularization act of 1833, which demoted the missions to parish churches and gave the Mexican governor power to redistribute the vast wealth controlled by the missionaries. The period between the 1830s and the 1840s is known as the golden age of ranching in California because the Mexican governor gave huge land grants during this time. Initially, the settlers used these large land grants for herding cattle. The Mexican governor distributed approximately 700 land grants between 1833 and 1846. The governor granted Rancho San Joaquin to Don José Andres Sepulveda in 1842. This Rancho spanned an area totaling 48,803 acres, covering the foothills of the Santa Ana Mountains and extending south toward Newport Beach and Laguna Canyon.

A series of events ended the era of cattle ranching. The Mexican-American War caused many ranch owners to lose their land. Demand for beef began to decline as early as 1855, due largely to the importation of sheep from New Mexico and cattle from the Mississippi and Missouri Valleys and the development of stock breeding farms. Floods and drought also afflicted California during the 1860s.

Sheep Herding. The early 1860s were a watershed in the history of Southern California. Drought forced many of the landowners who survived the collapse of the cattle market to sell their property; Don José Andres Sepulveda was among those who lost land.

In 1864, Sepulveda sold Rancho San Joaquin to a business partnership consisting of James Irvine I, Llewellyn Bixby, Thomas Flint, and Benjamin Flint. The four men called their partnership Flint, Bixby & Company. The newly formed Rancho (which for a time retained the name Rancho San Joaquin) included 125,000 acres; with James Irvine's financial support, the company was grazing 30,000 sheep on 110,000 acres by 1867. Under James Irvine's management, sheep raising on Rancho San Joaquin remained an important economic activity well into the 1880s.

Intensive Farming and Cattle Herding. In 1876, James Irvine I bought out his partners and became sole owner of Rancho San Joaquin; thereafter, the property was generally known as the

Irvine Ranch. Although Irvine managed to keep his vast landholdings virtually intact, important changes took place on the Ranch. Tenant farming was introduced around 1875 or 1876, and in 1882, Irvine began subdividing 1,440 acres southeast of Tustin and selling the land in 40-acre parcels. In 1892, James Irvine II (also known as James Harvey Irvine, Sr.) inherited the Ranch. 2 years later, in 1894, he incorporated The Irvine Company and became its sole stockholder. Under his direction, the Irvine Ranch continued its transition from sheep ranching to a diversified economy based on cattle ranching, agriculture (including dry farming), and tenant farming.

As the Irvine Ranch expanded, so did the need to ensure that the Ranch had adequate water resources available. A severe drought occurred during 1911 and 1912. The rapid expansion of the agricultural industry raised further concerns about the future availability of water resources. Irvine knew that the groundwater supply was quickly being exhausted. In 1913, Irvine created the Frances Mutual Water Company to ensure a reliable water supply. Starting in the late 1920s, the Frances Mutual Water Company initiated several important projects to stabilize the water supply, including construction of Santiago Reservoir (Irvine Lake) and the High Line Canal. Droughts came again in 1943, forcing Irvine to look outside the Ranch for water supplies. Consequently, he negotiated a right-of-way with the Metropolitan Water District (MWD). By 1956, water from the Colorado River began flowing into the Santiago Reservoir.

Urbanization. Agriculture remained the primary activity on the Irvine Ranch until World War II. Pressure for urbanization emerged in the years following World War II. In 1960, The Irvine Company hired William Pereira and Associates to create a Master Plan for the development of Irvine Ranch. Irvine Ranch is the largest master-planned area in North America. The Irvine Company continues to develop the area today as further projects are completed in the commercial, housing, and transportation industries.

4.6.3 Paleontological Resources Existing Environmental Setting

This section describes the baseline conditions and paleontological setting for the project area, as determined and developed by a fossil locality search at the LACM and UCMP, a literature review, and a field survey.

Locality Search. A paleontological locality search was conducted through geological and paleontological records maintained at LSA. In addition, LSA contacted the LACM and searched the online database of the UCMP[1] for additional locality information. This included a review of the area geology and any known paleontological resources recovered from the surrounding area and from the geologic formations or units that will likely be encountered during excavation activities.

The search of the online database from the UCMP indicates that the UCMP knows of no vertebrate fossils within the project area. However, UCMP does indicate that there are 4 vertebrate localities, 6 invertebrate localities, and 100 microfossil localities within the Monterey Formation within Orange County. Of the 100 microfossil localities, all but 12 are from the vicinity of Newport Bay.

[1] http://bscit.berkeley.edu/ucmp/loc.html.

Field Survey. A pedestrian survey of the proposed project site was conducted by LSA Paleontologist Steven W. Conkling on March 31, 2009. The pedestrian survey confirmed the geology as mapped by Morton and Miller (2006) and Leighton (2008). The surface of the project is composed of weathered Pleistocene Terrace deposits cut into the Monterey Formation bedrock. The observed native sediments were composed of light grey silty sand with cobbles and small boulders. Limited invertebrate fossils from the Pleistocene sediments were observed during the survey.

Geologic Setting. The proposed project site is located at the northern end of the Peninsular Range geomorphic province, a 900-mile-long northwest-southeast-trending structural block that extends from the tip of Baja California to the Transverse Ranges and includes the Los Angeles Basin. The total width of the province is approximately 225 miles, with a maximum landbound width of 65 miles. It contains extensive pre-Cretaceous (> 65 million years ago) igneous and metamorphic rocks covered by limited exposures of post-Cretaceous sedimentary deposits.

Within the project area, Morton and Miller (2006) have mapped the project area as being underlain by middle Pleistocene (413,000 years before the present [ybp]) Old Paralic Deposits and the Middle Miocene (13.5 to 7 million years old) Monterey Formation. Leighton Consulting, Inc. (2008) conducted a due diligence geotechnical exploration for the proposed project. This report also indicates that the project area is covered with Quaternary Terrace deposits cut into the underlying Monterey Formation bedrock. Although not mapped within the project area, it is likely that artificial fill may also be present within the upper few feet of some areas of the project site. All these deposits are described in more detail below. The LACM indicated that Quaternary Terrace deposits and the Monterey Formation may be encountered during excavation of the project.

Monterey Formation. The Monterey Formation is a well-studied rock unit that is found along the west coast of North America. It was first named by Blake (1856) after exposures near Monterey, California, a little over 300 miles to the northwest of the study area. It is famous for its rich petroleum reserves that were formed from abundant organic matter, primarily microscopic diatoms, contained within the sediments. In general, the Monterey Formation is composed primarily of deep marine deposits of diatomite, diatomaceous siltstone, mudstone, dolostone, and chert. The upper section of the marine Monterey Formation is Middle to Late Miocene (Luisian and Mohnian) and possibly older in the lower section (Morton et al., 1974). South of the Orange/ San Diego County line, reports indicate that the basal Monterey consists of conglomerates and coarse-grained sandstones derived from the underlying San Onofre Breccia. Sandstone and siltstone can range from thinly to massively bedded. Some of the shale contains very thin, well-developed bedding that is locally rhythmic.

Locally, along the coastline, the Monterey Formation is approximately 1,200 ft thick, thinning to 300 ft as it moves inland (Smith, 1960). It unconformably overlies the Sespe, Vaqueros, San Onofre Breccia, and Topanga Formations. Locally, however, it has a gradational and interfingering contact with the San Onofre Breccia. It has a gradational contact with the overlying Capistrano Formation east of Oso Creek; elsewhere, it is unconformably overlain by the Niguel Formation, Marine Terrace Deposits, and nonmarine terrace deposits. It is widespread in the southern coastal ranges of California, but in Orange County is exposed only in the southern

portion of the County. It correlates with the parts of the Puente Formation in the central to northern Santa Ana Mountains and Puente Hills of Orange County and the Modelo Formation of Los Angeles County. An arbitrary boundary between the Monterey and correlative members of the Puente have been established. East of the Cristianitos Fault, Oso Creek is the boundary; west of the Cristianitos Fault, a general east-west line from near Lambert Reservoir to the Cristianitos Fault is the boundary.

Paralic Deposits. Paralic deposits are those deposits located in the transition area between the sea and the land and can include a mixture of deposits from subtidal to beach deposits to colluvium and alluvium from the land. Paralic deposits, as described by Morton and Miller (2006), are mostly poorly sorted, moderately permeable, reddish-brown, interfingered strandline, beach, estuarine, and colluvial deposits that locally may include older alluvium. These deposits can be composed of siltstone, sandstone, and conglomerate; however, within the project area, they are mapped as being primarily silty. These deposits rest on the now-emergent wave-cut abrasion platforms preserved by regional uplift. Paralic deposits can essentially be thought of as an interfingering of Pleistocene marine terrace deposits and older alluvium.

Pleistocene Marine Terrace Deposits. Pleistocene (80,000 to 1,230,000 ybp) Marine Terrace Deposits consist of light brown, orange brown, and yellow brown to gray mixtures of sands, gravels, and pebbles with some minor silt. The sand grains tend to be subangular to subrounded, while the gravels and pebbles are generally subrounded to rounded, with occasional angular clasts derived from the underlying formation. Bedding is usually poor; however, lenticular beds and cross-bedding do occur. The deposits tend to be friable to weakly indurated. Sand grains are predominantly quartz and feldspar, while the gravels are quite variable: plutonics, volcanics, metamorphics, and fragments of the underlying, or nearby, bedrock formations.

Older Alluvium. Older alluvium is an alluvial deposit that was deposited during the Pleistocene (1.8 million to 10,000 ybp). It can include deposits such as nonmarine terrace deposits, older alluvial wash, and older alluvial fan deposits. These sediments can also be found at depths below the active stream channels and younger alluvial sediments. These deposits consist of interbedded silt, clayey sand, and conglomeratic coarse-grained sands. Colors can vary from light yellows to browns to reds. The sand grains are generally subangular to subrounded, while the gravels and cobbles are rounded to well-rounded.

Artificial Fill. Artificial fill consists of sediments that have been removed from one location and transported to another by humans. Sometimes the transportation distance can be a few feet to dozens of miles. Depth of artificial fill can vary from a few inches to hundreds of feet; however, based on review of aerial photographs from 1952 and 1972, the artificial fill on site is probably limited to the upper few feet and consists of disturbed sediments moved around as roadways were initially developed or otherwise graded or altered.

Paleontology Setting.

Monterey Formation. Several significant invertebrate and vertebrate localities are recorded from the south County area. These include fossils of crocodilians, fish, shark, ray, whale, dolphin, sea lion, sea cow, desmostylan, bivalves, gastropods, barnacles, bryozoan, and sand dollars. The upper part of this formation contains Late Miocene forms (Luisian and Mohinian), and the lower section contains sandstones with megafossils that suggest slightly older stages (*Pecten crassicardio* and *Vaquerosella* cf. *merriama*). In addition, fossil fish and marine mammal remains have been recovered from this formation on the Irvine coast and in the Laguna Hills area. They also state that a localized limestone deposit in the Aliso Viejo area known as "Pecten Reef" has produced abundant invertebrate and vertebrate fossils. As these sediments have produced significant vertebrate fossils, these sediments have a paleontological sensitivity rating of high.

During the widening of MacArthur Boulevard, located immediately east of the project area, LSA recovered a diverse collection of plants, bony fish, and a sea lion from this unit. In 2006, during construction of Saint Mark Presbyterian Church, located 0.5 mile to the northeast, LSA collected bivalves, gastropods, leaves, petrified wood, and whale.

Older Alluvium. Fossils have been collected in similar deposits from excavations for roads, housing developments, retention basins, and quarries in the Los Angeles Basin and vicinity. Remains of Rancholabrean animals, including elephant, horse, bison, camel, saber tooth cat, deer, and sloth are known from these localities. The potential exists to encounter similar fossils in all Pleistocene (1.8 million to 10,000 years) alluvium, as these sediments have produced significant vertebrate fossils that have a paleontological sensitivity rating of high.

Marine Terrace Deposits. Abundant shallow-water fossils have been discovered within Marine Terrace Deposits. Fossils include both invertebrate and vertebrate fossils such as bivalves, gastropods, echinoderms, sharks, fish, seals, whales, horse, camel, bison, and mastodon. During monitoring for the widening of MacArthur Boulevard, LSA collected gastropods and bivalves from the Marine Terrace Deposits. There are also several vertebrate localities that produced terrestrial mammals, marine mammals, fish, birds, reptiles, and amphibians along MacArthur Boulevard and Palisades Road within marine terrace deposits. The closest are LACM 4254, located immediately south of the southern boundary, where a fossil duck (*Chendytes* sp.) was found, and LACM 4211, located on the corner of Avocado Avenue and Pacific Coast Highway, where fossil croakers (*Genyonemus lineatus* and *Seriphus politus*) have been found. Marine Terrance Deposits are, therefore, considered to have a paleontological sensitivity rating of Very High.

Artificial Fill. Although artificial fill can contain fossils, these fossils have been removed from their original location and are thus out of context. They are not considered to be important for scientific study. Artificial fill, therefore, has a low sensitivity for containing fossils.

4.6.4 Regulatory Setting

This section describes the cultural resource requirements of CEQA, California Health and Safety Code, Public Resources Code (PRC), and the Historic Resources Element and Natural Resources Element of the City's General Plan.

Federal. There are no federal regulations that are applicable to the proposed project.

State of California.

CEQA Requirements. CEQA defines a "historical resource" as a resource that meets one or more of the following criteria: (1) listed in, or determined eligible for listing in, the California Register of Historical Resources (California Register); (2) listed in a local register of historical resources as defined in PRC Section 5020.1(k); (3) identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by a project's Lead Agency (PRC Section 21084.1 and State CEQA Guidelines Section 15064.5(a)). A historical resource consists of:

> "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…. Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" State CEQA Guidelines Section 15064.5(a)(3).

In accordance with State CEQA Guidelines Section 15064.5(b), a substantial adverse change in the significance of a historical resource is a significant effect on the environment.

CEQA requires a Lead Agency to determine whether an archaeological cultural resource meets the definition of a historical resource, a unique archaeological resource, or neither (State CEQA Guidelines Section 15064.5(c)). Prior to considering potential impacts, the Lead Agency must determine whether an archaeological cultural resource meets the definition of a historical resource in State CEQA Guidelines Section 15064.5(c)(1). If the archaeological cultural resource meets the definition of a historical resource, it is treated like any other type of historical resource in accordance with State CEQA Guidelines Section 15126.4. If the archaeological cultural resource does not meet the definition of a historical resource, then the Lead Agency determines whether it meets the definition of a unique archaeological resource as defined in CEQA Section 21083.2(g). In practice, however, most archaeological sites that meet the definition of a unique archaeological resource will also meet the definition of a historical resource. Should the archaeological cultural resource meet the definition of a unique archaeological resource, it must be treated in accordance with CEQA Section 21083.2. If the archaeological cultural resource does not meet the definition of a historical resource or an archaeological resource, the effects to the resource are not considered significant effects on the environment (State CEQA Guidelines Section 15064.5(c)(4)).

CEQA also requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (State CEQA Guidelines Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (California Code of Regulations [CCR] Title 14(3) Section 15126.4 (a)(1)). California PRC Section 5097.5 also applies to paleontological resources (see below).

California Health and Safety Code Section 7050.5. California Health and Safety Code (HSC) Section 7050.5 states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the Coroner must notify the NAHC within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

PRC Section 5097.5. PRC Section 5097.5 provides for the protection of cultural and paleontological resources and prohibits the removal, destruction, injury, or defacement of archaeological and paleontological features on any lands under the jurisdiction of State or local authorities.

Senate Bill 18 Tribal Consultation. California Government Code Section 65352.3 (adopted pursuant to the requirements of Senate Bill [SB] 18) requires local governments to contact, refer plans to, and consult with tribal organizations prior to making a decision to adopt or amend a General or Specific Plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction and are identified, upon request, by the NAHC. As noted in the California Office of Planning and Research's *Tribal Consultation Guidelines* (2005), "The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

California Register of Historical Resources (PRC Section 5020 et seq.) 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 State CEQA Guidelines. These criteria are nearly identical to those for the National Register, which are listed above.

The SHPO maintains the California Register. Properties listed, or formally designated eligible for listing, on the National Register are nominated to the California Register and then selected to be listed on the California Register, as are State Landmarks and Points of Interest.

City of Newport Beach.

General Plan. The Historic Element in the City's General Plan addresses the protection and sustainability of the City's historic and paleontological resources. Goals and policies presented within the Historic Element are intended to recognize, maintain, and protect the community's unique historical, cultural, and archaeological sites and structures. Goals and policies related to cultural resources presented in the Historic Element include:

- **Goal HR 1:** Recognize and protect historically significant landmarks, sites, and structures.
- **Policy HR1.5, Historical Elements within New Projects:** Require that proposed development that is located on a historical site or structure incorporate a physical link to the past within the site or structural design, if preservation or adaptive reuse is not a feasible option. For example, incorporate historical photographs or artifacts within the proposed project or preserve the location and structures of existing pathways, gathering places, seating areas, rail lines, roadways, or viewing vantage points within the proposed site design. (Imp 29.2)
- **Goal HR 2:** Identification and protection of important archaeological and paleontological resources within the City.
- **Policy HR 2.1, New Development activities:** Require that, in accordance with CEQA, new development protect and preserve paleontological and archaeological resources from destruction, and avoid and mitigate impacts to such resources. Through planning policies and permit conditions, ensure the preservation of significant archaeological and paleontological resources and require that the impact caused by any development be mitigated in accordance with CEQA (Imp 11.1).
- **Policy HR 2.2, Grading and Excavation activities:** Maintain sources of information regarding paleontological and archaeological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve paleontological or archaeological findings. Require a qualified paleontologist/archaeologist to monitor all grading and/or excavation where there is a potential to affect cultural, archaeological, or paleontological resources. If these resources are found, the applicant shall implement the recommendations of the paleontologist/archaeologist, subject to the approval of the City Planning Department (Imp 11.1).
- **HR 2.3, Cultural Organizations:** Notify cultural organizations, including Native American organizations, of proposed developments that have the potential to adversely impact cultural resources. Allow representatives of such groups to monitor grading and/or excavation of development sites. (Imp 11.1)
- **HR 2.4, Paleontological or Archaeological Materials:** Require new development to donate scientifically valuable paleontological or archaeological materials to a responsible public or private institution with a suitable repository,

located within Newport Beach, or Orange County, whenever possible (Imp. 11.1).

In addition, the City's Natural Resources Element also provides for the protection of cultural resources with the following Goal and Policies:

- **Goal NR 18:** Protection and preservation of important paleontological and archaeological resources.
- **Policy NR 18.1 New Development:** Require new development to protect and preserve paleontological and archaeological resources from destruction, and avoid and minimize impacts to such resources in accordance with the requirements of CEQA. Through planning policies and permit conditions, ensure the preservation of significant archaeological and paleontological resources and require that the impact caused by any development be mitigated in accordance with CEQA (Imp 7.1).
- **Policy NR 18.2, Maintenance of Database Information:** Prepare and maintain sources of information regarding paleontological or archaeological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve paleontological and archaeological findings (Imp 10.1).
- **Policy NR 18.4, Donation of Materials:** Require new development, where on-site preservation and avoidance are not feasible, to donate scientifically valuable paleontological or archaeological materials to a responsible public or private institution with a suitable repository, located within Newport Beach or Orange County, whenever possible (Imp 11.1).

Newport Beach City Council Policy Manual. The Newport Beach City Council Manual identifies policies applicable to cultural resources. These policies are discussed below.

Places of Historical and Architectural Significance (K-2). This regulation establishes City Council authority to designate any building, object, structure, monument, or collection having importance to the history or architecture of the City and provides procedures for listing. Accordingly, the City Clerk is required to maintain the City of Newport Beach Register of Historical Property. The City Council may at any time repeal, revise, or modify any such designation upon reconsideration of the historical or architectural importance of the structure.

Paleontological Guidelines (K-4). Policy K-4 applies to paleontological resources. Under this policy, the City is required to prepare and maintain sources of information regarding paleontological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve paleontological findings. If determined necessary by the Planning Director, it is the responsibility of a developer to examine the proposed site in order to determine the existence and extent of paleontological resources. Qualified individuals are to prepare and submit a written report describing the findings and making recommendations for further action. Based on the report and

recommendations, the City is required to ensure that the findings or sites are recorded, preserved, and protected.

Archaeological Guidelines (K-5). The policies set forth within these guidelines are used to guide the development or redevelopment of land within the City. The City is required, through its planning policies and permit conditions, to ensure the preservation of significant archaeological resources and require that the impact caused by any development be mitigated in accordance with CEQA. The City is to prepare and maintain sources of information regarding archaeological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve archaeological findings.

If determined necessary by the Planning Director, it is the responsibility of the developer to examine the site to determine the existence and extent of archaeological resources. Qualified observers are to prepare and submit a written report describing the findings and making recommendations for further action, which may include monitoring. Based on the report and recommendations, the City is required to ensure that the findings or sites are recorded, preserved, and protected.

4.6.5 Thresholds of Significance

The following thresholds of significance criteria are based on Appendix G of the State CEQA Guidelines for cultural resources.

Threshold 4.6.1: Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5? "Historical resources" are defined as buildings, structures, districts, sites, or objects that are eligible for the California Register of Historic Resources (CRHR) (State CEQA Guidelines Section 15064.5[a][3]).

Threshold 4.6.2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5?

Threshold 4.6.3: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Threshold 4.6.4: Would the project disturb any human remains, including those interred outside of formal cemeteries?

The IS/NOP, included as Appendix A, substantiates that impacts associated with Threshold 4.6.1 would be less than significant; therefore, Threshold 4.6.1 will not be addressed in the following analysis.

4.6.6 Project Impacts

Threshold 4.6.2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to State CEQA Guidelines Section 15064.5?

Less than Significant with Mitigation. The proposed project site is considered to be sensitive for archaeological resources. Archival research indicated that two archaeological sites, CA-ORA-167/1117 and CA-ORA-1461, are located within the project site boundaries, and a field survey confirmed that evidence of both sites is present. Both sites were evaluated prior to the current project and determined not to be eligible for listing in the California Register. One additional site, CA-ORA-139, was identified in the archival research as being immediately adjacent to the project site. During the field survey there was no evidence of this site, as it appears to be completely destroyed by development of adjacent infrastructure (e.g., streets, sidewalks). During monitoring for the MacArthur Boulevard Widening Project, a Native American burial was discovered on the proposed project site. It was reburied off site by the Native Americans involved with that project.

With the presence of sites CA-ORA-167/1117 and CA-ORA-1461, one of which produced a human burial, and the presence of 28 other previously recorded sites within the vicinity, the project area in general is considered sensitive for cultural resource sites, and the portion of the project area that contains site CA-ORA-1461, the site that produced the human burial, is considered highly sensitive.

The project includes walking paths in the vicinity of the known archaeological sites, grading, and other ground disturbance required for project construction. These project activities have the potential to disturb or otherwise impact known and unknown archaeological resources. Therefore, mitigation is required to reduce and/or avoid potentially significant impacts to known and unknown archaeological resources.

Mitigation Measure 4.6.1 requires the City to retain an archaeological monitor and a Native American monitor to be present at the pregrade conference to explain the mitigation measures and also to be present at the project site during all ground-disturbing activities until marine terrace deposits are encountered to minimize potential impacts to unknown resources. Mitigation Measure 4.6.2 requires the City to prepare a Monitoring Plan prior to commencement of any grading activities. In the event that historical, archaeological, or human remains are found during excavation or grading, Mitigation Measures 4.6.2 requires immediate implementation of those procedures developed as part of the Monitoring Plan including, but not limited to, the cessation of all work in the immediate vicinity of the resources until such time as the resources can be evaluated by an archaeologist or other appropriate individual. Mitigation Measure 4.6.3 requires that grading and excavation in the vicinity of CA-ORA-1461 be avoided. Mitigation Measure 4.6.3 also requires that CA-ORA-1461 be capped with culturally sterile soils to protect the site in place. Under PRC Section 21083.2(b)(3 and 4), capping a site and constructing a park that incorporates the archaeological site is considered a way to avoid a significant impact and protect the site in place. With implementation of Mitigation Measure 4.6.3, which is consistent with the provisions of PRC Section 21083.2(b)(3 and 4), the potential impact of the proposed project on a unique archaeological resource or a significant historical resource as defined by CEQA would be reduce to below a level of significance. Implementation of Mitigation Measures 4.6.1 through 4.6.3 would reduce project impacts to below a level of significance, and no additional mitigation is required.

In addition to construction and operation of the Civic Center and the park on the proposed project site, the project also includes reuse of the existing City Hall structures, located at 3300 Newport Boulevard, with public facilities uses. No demolition, grading, or construction is proposed on the existing City Hall site. Therefore, no adverse change in the significance of a known or unknown archaeological resource would result from project implementation, and no mitigation is required.

Threshold 4.6.3: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant with Mitigation. The project site is located on sediments mapped as interbedded middle to late Pleistocene alluvium and nearshore marine deposits, as well as the middle Miocene Monterey Formation. There are no known localities on the project site but, based on the locality search and field survey conducted for the proposed project, sensitive sediments that may contain fossil remains do exist within the project areas, and there is the potential to encounter paleontological resources during all ground-disturbing activities for the proposed project. Mitigation is required to reduce potential adverse impacts to unknown (buried) paleontological resources.

Mitigation Measure 4.6.4 requires the City to retain a qualified paleontologist to prepare a standard Paleontological Resources Impact Mitigation Program (PRIMP). This program would include excavation monitoring and specimen recovery, including screen washing, preparation, identification, and curation of collected specimens into a museum repository. Based on the significance of any recovered specimens, the qualified paleontologist may set up conditions that would allow for monitoring to be scaled back to part-time as the project progresses. However, if significant fossils begin to be recovered after monitoring has been scaled back, conditions should also be specified that would require increased monitoring as necessary. A final report would provide details of monitoring and curation methods, fossil identification, and discussion, cataloging, and repository arrangements. Implementation of Mitigation Measure 4.6.4 would reduce potential impacts to unknown paleontological resources to less than significant, and no additional mitigation is required.

As stated above, the proposed project includes reuse of the existing City Hall structures, located at 3300 Newport Boulevard, with public facilities uses. No demolition, grading, or construction is proposed on the existing City Hall site. Therefore, no adverse change in the significance of a known or unknown paleontological resource would result from project implementation, and no mitigation is required.

Threshold 4.6.4: Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant with Mitigation. As stated above, the proposed project site is considered to be sensitive for archaeological remains and was the site of a human burial that was removed and reburied off site. The City has met with Juaneño Tribal representatives of the group that was present as Native American monitors during road widening of MacArthur Boulevard and with the Juaneño Tribal group designated as the MLD for the MacArthur Boulevard Project concerning measures to be taken if Native American human remains are encountered. The City and Tribal representatives agree

that since the sites would be avoided by construction activities, it is highly unlikely that any human remains would be encountered.

Although no additional human remains are known to be on site or are anticipated to be discovered, precautionary mitigation is required. Mitigation Measure 4.6.5 requires compliance with HSC ~~4~~7050.5 in the unlikely event that human remains are encountered during project grading. Upon discovery of the remains, the County Coroner would be notified immediately, and no further disturbance would occur until the County Coroner makes a determination of origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be Native American, the County Coroner would notify the NAHC, which will determine and notify the MLD. With permission from the City, the MLD would complete inspection within 48 hours of notification by the NAHC. Implementation of Mitigation Measure 4.6.4 reduces potential impacts related to the discovery of human remains on the proposed project site to a less than significant level, and no additional mitigation is required.

As stated above, the proposed project includes reuse of the existing City Hall structures, located at 3300 Newport Boulevard, with government/commercial office uses. No demolition, grading, or construction is proposed on the existing City Hall. Therefore, no human remains, including those interred outside of formal cemeteries, would be impacted or disturbed by project implementation, and no mitigation is required.

4.6.7 Cumulative Impacts

Less than Significant with Mitigation. The cumulative study area for cultural and paleontological resources is the geographical area of the City of Newport Beach, which is the geographical area covered by the City's General Plan, including all goals and policies included therein. Future development in the City could include excavation and grading that could potentially impact archaeological and paleontological resources and human remains. The cumulative effect of the proposed project is the continued loss of these resources. The proposed project, in conjunction with other development in the City, has the potential to cumulatively impact archaeological and paleontological resources; however, it should be noted that each development proposal received by the City undergoes environmental review pursuant to CEQA. If there is a potential for significant impacts to archaeological or paleontological resources, an investigation would be required to determine the nature and extent of the resources and identify appropriate mitigation measures. If subsurface cultural resources are assessed and/or protected as they are discovered, impacts to these resources would be less than significant. In addition, the City's General Plan policies would be implemented as appropriate to reduce the effects of additional development within the City.

Mitigation Measures 4.6.1 through 4.6.5 would be implemented to reduce potential project impacts by ensuring avoidance, evaluation, and, as applicable, scientific recovery and study of any resources encountered. Therefore, with implementation of Mitigation Measures 4.6.1 through 4.6.5, the project's contribution to the cumulative destruction of known and unknown cultural resources throughout the City would be reduced to below a level of significance. The project's contribution to cumulative impacts to cultural resources in the City would not be cumulatively considerable nor significant under CEQA, and no mitigation is required.

In addition, the reuse of the existing City Hall structures, located at 3300 Newport Boulevard, with public facilities uses would not contribute to cumulative impacts related to archaeological or paleontological resources or known or unknown buried human remains. No mitigation is required.

4.6.8 Level of Significance before Mitigation

The proposed project would not have a significant impact on known historical resources, paleontological resources, or human remains on or near the proposed project. Prior to mitigation, the project has the potential to result in the following impacts: (1) a substantial adverse impact to the significance of unknown (buried) prehistoric or historical archaeological sites within the project site; (2) a substantial adverse impact to the significance of a known archaeological resource, (3) a substantial adverse impact to the significance of buried paleontological resources within the project site; and (4) disturbance of unknown (buried) human remains interred outside of formal cemeteries.

4.6.9 Mitigation Measures

Mitigation Measure 4.6.1 **Archaeological and Native American Monitors.** Prior to commencement of any grading activity on site, the City shall retain an archaeological monitor and a Native American monitor to be selected by the City after consultation with interested Tribal and Native American representatives. Both monitors shall be present at the pregrade conference in order to explain the cultural mitigation measures associated with the project. Both monitors shall be present on site during all ground-disturbing activities (to implement the project Monitoring Plan) until marine terrace deposits are encountered. Once marine terrace deposits are encountered, archaeological and Native American monitoring is no longer necessary, as the marine deposits are several hundred thousand years old, significantly predating human settlement in this area.

Mitigation Measure 4.6.2 **Archaeological Monitoring Plan and Accidental Discovery.** Prior to commencement of any grading activity on site, the City shall prepare a Monitoring Plan. The Monitoring Plan shall be prepared by a qualified archaeologist and shall be reviewed by the City of Newport Beach Director of Planning. The Monitoring Plan should include at a minimum: (1) a list of personnel involved in the monitoring activities; (2) a description of how the monitoring shall occur; (3) a description of frequency of monitoring (e.g., full-time, part-time, spot checking); (4) a description of what resources may be encountered; (5) a description of circumstances that would result in the halting of work at the project site (e.g., what is considered a "significant" archaeological site); (6) a description of procedures for halting work on site and notification procedures; and (7) a description of monitoring reporting procedures. If any significant historical resources, archaeological resources, or human remains are found during monitoring, work should stop within the immediate

vicinity (precise area to be determined by the archaeologist in the field) of the resource until such time as the resource can be evaluated by an archaeologist and any other appropriate individuals. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. To the extent feasible, project activities shall avoid these deposits. Where avoidance is not feasible, the archaeological deposits shall be evaluated for their eligibility for listing in the California Register of Historic Places. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, adverse effects on the deposits must be avoided, or such effects must be mitigated. Mitigation can include, but is not necessarily limited to: excavation of the deposit in accordance with a data recovery plan (see California Code of Regulations Title 4(3) Section 5126.4(b)(3)(C)) and standard archaeological field methods and procedures; laboratory and technical analyses of recovered archaeological materials; production of a report detailing the methods, findings, and significance of the archaeological site and associated materials; curation of archaeological materials at an appropriate facility for future research and/or display; an interpretive display of recovered archaeological materials at a local school, museum, or library; and public lectures at local schools and/or historical societies on the findings and significance of the site and recovered archaeological materials.

It shall be the responsibility of the City Department of Public Works to verify that the Monitoring Plan is implemented during project grading and construction. Upon completion of all monitoring/ mitigation activities, the consulting archaeologist shall submit a monitoring report to the City of Newport Beach Director of Planning and to the South Central Coastal Information Center summarizing all monitoring/mitigation activities and confirming that all recommended mitigation measures have been met. The monitoring report shall be prepared consistent with the guidelines of the Office of Historic Preservation's *Archaeological Resources Management Reports (ARMR): Recommended Contents and Format*. The City of Newport Beach Director of Planning or designee shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of findings and recommendations.

Mitigation Measure 4.6.3 **Archaeological Site Avoidance.** Grading and excavation in the vicinity of existing archaeological sites CA-ORA-167/1117 and CA-ORA-1461 shall be avoided. To achieve level surfaces for proposed project paths, clean (culturally sterile) soils shall be used to cap and protect the sites. Capping shall be conducted consistent with the provisions of Public Resources Code (PRC) Section 21083.2(b)(3 and 4). Prior to commencement of grading activities, the City of Newport Beach Director of Public Works shall verify that project

grading plans show avoidance of existing cultural sites. The Director of Public Works shall also verify that grading plans show that the known cultural sites shall be capped with a minimum of 12 inches of culturally sterile soils from a known source prior to commencement of any grading activity within 25 feet of these sites. The boundaries of the site shall be identified by a qualified archaeologist to ensure the entire site has been capped. Precise archaeological site information is protected from public disclosure by State law. The grading plan shall be clearly marked to indicate that any cultural resources information on those plans is not for public distribution.

Mitigation Measure 4.6.4 **Paleontological Resources Impact Mitigation Program**. Prior to commencement of any grading activity on site, the Director of Planning, or designee, shall verify that a paleontologist, who is listed on the County of Orange list of certified paleontologists, has been retained and will be on site during all rough grading and other significant ground-disturbing activities in paleontologically sensitive sediments. The sensitive sediments that have been identified within the project include the Middle Pleistocene marine and terrestrial sediments as well as middle Miocene Monterey formation sediments. A paleontologist will not be required on site if excavation is only occurring in artificial fill.

The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP should be consistent with the guidelines of the Society of Vertebrate Paleontologists (SVP) (1995) and should include but not be limited to the following:

- Attendance at the pregrade conference in order to explain the mitigation measures associated with the project.
- During construction excavation, a qualified vertebrate paleontological monitor shall initially be present on a full-time basis whenever excavation will occur within the sediments that have a High paleontological sensitivity rating and on a spot-check basis in sediments that have a Low sensitivity rating. Based on the significance of any recovered specimens, the qualified paleontologist may set up conditions that will allow for monitoring to be scaled back to part-time as the project progresses. However, if significant fossils begin to be recovered after monitoring has been scaled back, conditions shall also be specified that would allow increased monitoring as necessary. The monitor shall be equipped to salvage fossils and/or matrix samples as they are unearthed in order to avoid construction delays. The monitor shall be empowered to temporarily halt or divert equipment in the area of the find in order to allow removal of abundant or large specimens.

- The underlying sediments may contain abundant fossil remains that can only be recovered by a screening and picking matrix; therefore, these sediments shall be occasionally be spot-screened through one-eighth to one-twentieth-inch mesh screens to determine whether microfossils exist. If microfossils are encountered, additional sediment samples (up to 6,000 pounds) shall be collected and processed through one-twentieth-inch mesh screens to recover additional fossils. Processing of large bulk samples is best accomplished at a designated location within the project that will be accessible throughout the project duration but will also be away from any proposed cut or fill areas. Processing is usually completed concurrently with construction, with the intent to have all processing completed before, or just after, project completion. A small corner of a staging or equipment parking area is an ideal location. If water is not available, the location should be accessible for a water truck to occasionally fill containers with water.
- Preparation of recovered specimens to a point of identification and permanent preservation. This includes the washing and picking of mass samples to recover small invertebrate and vertebrate fossils and the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and the storage cost for the developer.
- Identification and curation of specimens into a museum repository with permanent, retrievable storage, such as the Natural History Museum of Los Angeles County (LACM).
- Preparation of a report of findings with an appended, itemized inventory of specimens. When submitted to the City of Newport Beach Director of Planning or designee, the report and inventory would signify completion of the program to mitigate impacts to paleontological resources.

Mitigation Measure 4.6.5

Human Remains. Consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e), if human remains are encountered, work within 25 feet of the discovery shall be redirected and the County Coroner notified immediately. State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). With the permission of the City of Newport Beach, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and

nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City of Newport Beach shall consult with the MLD as identified by the NAHC to develop an agreement for the treatment and disposition of the remains.

Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report should be submitted to the City of Newport Beach Director of Planning and the South Central Coastal Information Center. The City of Newport Beach Director of Planning, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of findings and recommendations.

4.6.10 Level of Significance after Mitigation

Mitigation Measures 4.6.1 through 4.6.5 would reduce potential impacts to archaeological resources, paleontological resources, and human remains to a less than significant level. No significant unavoidable project or cumulative impacts to cultural resources are anticipated with implementation of these measures.