



Appendix D

Cultural and Paleontological Resources Assessment



CULTURAL AND PALEONTOLOGICAL RESOURCES ASSESSMENT FOR THE PALMYRA CEMETERY PROJECT, CITY OF ORANGE, ORANGE COUNTY, CALIFORNIA

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Cogstone Project Number: 5161

Type of Study: Cultural and Paleontological Resources Assessment

Sites: none

USGS 7.5' Quadrangle: Orange (1981)

Area: 5.92 acres

Key Words: survey negative for archaeological and paleontological resources, City of Orange, former YMCA building, Gabrielino-Tongva territory, Holocene to late Pleistocene young alluvial fan deposits

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SUMMARY OF FINDINGS

The purpose of this study is to conduct a cultural and paleontological resources assessment for the Palmyra Cemetery Project (Project), located east of the 55 Freeway and south of East Chapman Avenue in the City of Orange, Orange County, California. Most of the Project Area was used as landfill from 1953 to 1956. Fill will be placed within the Project Area within the previous landfill footprint so that excavation will not extend deeper than two feet above the landfill to ensure these deposits are not disturbed. Much of the Project Area will be covered by up to two feet of imported fill. As the current YMCA building was built on top of the landfill no structural changes are planned.

PALEONTOLOGICAL RESOURCES

The Project surface is mapped as late Pleistocene to Holocene (less than 126,000 years old) young alluvial fan deposits. The record search revealed no fossil localities from within the Project or the immediate vicinity; however, localities are recorded near the Project from sediments similar to those found within the study area. There are 13 localities recorded from within 10 miles of the Project. Extinct megafauna identified from these sites include Harlan's ground sloth (†*Paramylodon harlani*), Columbian mammoth (†*Mammuthus columbi*), saber-toothed cat (†*Smilodon fatalis*), western horse (†*Equus occidentalis*), California tapir (†*Tapirus californicus*), yesterday's camel (†*Camelops hesternus*), and bison (†*Bison antiquus*).

Late Pleistocene to Holocene young alluvial fan sediments less than eight feet below the modern surface are assigned a low potential for fossils (PFYC 2) due to the lack of fossils in these deposits. More than eight feet below the modern surface these sediments are assigned a moderate potential for fossils (PFYC 3) due to similar deposits producing fossils at that depth near to the study area. At present, due to the previous development of the Project Area, grading impacts to the late Pleistocene sediments will be low to very low. Because there is a low potential for impacts to the late Pleistocene sediments, no mitigation measures are currently recommended.

If unanticipated discoveries of paleontological resources occur during construction, all work within 25 feet of the discovery should be halted until the find has been evaluated by a qualified paleontologist.

CULTURAL RESOURCES

Cogstone requested a search of the California Historic Resources Information System (CHRIS) from the South Central Coastal Information Center (SCCIC) on January 8, 2021 that included the entire proposed Project Area as well as a one-half mile radius. The SCCIC completed the request on January 28, 2021. Results of the record search indicate that three previous studies have been completed within the Project Area and an additional 12 studies have been completed within the one-half mile search radius. The records search also determined that eight cultural resources are located within the one-half mile search radius but none are located within the Project Area.

Cogstone submitted an Assembly Bill 52 (AB52) and Sacred Lands File search request to the Native American Heritage Commission (NAHC) on January 27, 2021. The NAHC responded on February 8, 2021 with a negative SLF search. The NAHC recommended that 17 representatives from local Native American tribal organizations be contacted for further information regarding the Project vicinity. The City of Orange is conducting consultations to meet the requirements of AB 52.

An intensive archaeological and paleontological resources survey of the entire 5.92-acre Project Area was completed on February 4, 2021. No archaeological or paleontological resources were observed.

Based on the results of the pedestrian survey and the cultural records search, the Project Area has low sensitivity for prehistoric cultural resources. Analysis of these data sources and historical United States Geological Survey (USGS) aerial photographs indicates that the Project Area also has low sensitivity for buried historical archaeological features such as foundations or trash pits. No further work is recommended for the proposed Project.

One built environment resource, a historic age building, is located within the Project Area and was thoroughly documented during Cogstone's 2021 built environment survey. Department of Parks and Recreation 523 forms were prepared for this resource. Due to a lack of significance and notable architectural alterations, this building is recommended not eligible for listing at the local, state, or national level. Demolition and renovations of the existing structure does not require any mitigation due to lack of significance. **(Note: Following the documentation and evaluation of this resource, on December 3, 2021, this building was destroyed as the result of a major fire. Only the building's concrete foundation survived.)**

In the event of an unanticipated discovery, all work must be suspended within 50 feet of the find until a qualified archaeologist evaluates it. In the unlikely event that human remains are encountered during project development, all work must cease near the find immediately. In accordance with California Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods. Work may not resume in the vicinity of the find until all requirements of the health and safety code have been met.

INTRODUCTION

PURPOSE OF STUDY

This study was conducted to determine the potential impacts to cultural and paleontological resources during the Palmyra Cemetery Project (Project), located east of the 55 Freeway and south of East Chapman Avenue in the City of Orange (City; Figure 1), Orange County, California. The City of Orange is the lead agency for the Project under the California Quality Act (CEQA).

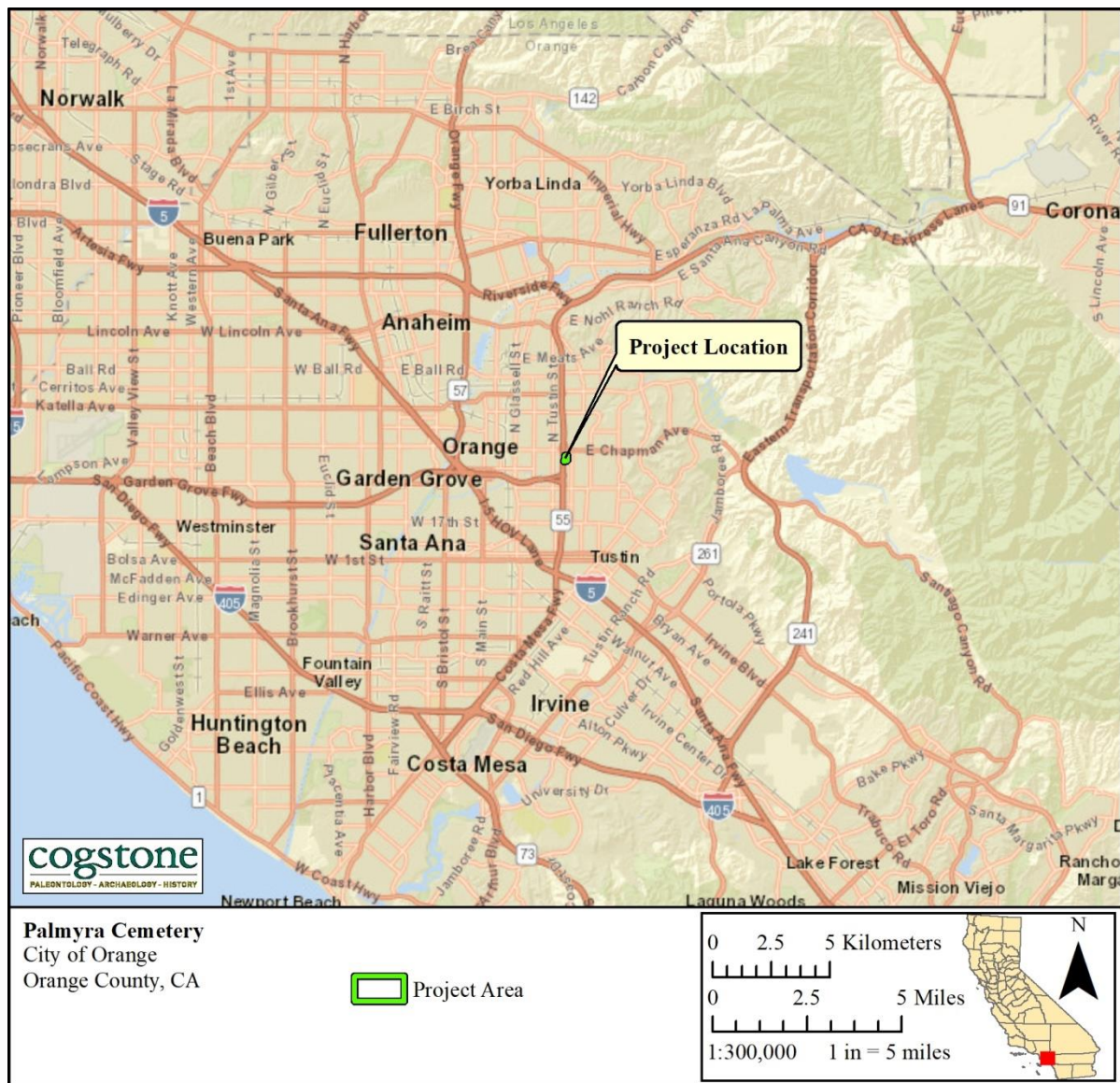


Figure 1. Project vicinity map

PROJECT LOCATION AND DESCRIPTION

The Project Area is located on 5.92 acres east of California State Route 55 and south of East Chapman Avenue in the City of Orange, Orange County, California. Specifically, it is located in Section 33 of Township 4 South, Range 9 West on the Orange USGS 7.5-minute topographic quadrangle map, San Bernardino Baseline and Meridian (Figures 2 and 3).

Most of the Project Area was used as a landfill from 1953 to 1956 (Figure 4). Fill will be placed within the Project Area within the previous landfill footprint so that excavation will not extend deeper than two feet above the landfill to ensure these deposits are not disturbed. Much of the Project Area will be covered by up to two feet of imported fill. As the current YMCA building was built on top of the landfill no structural changes are planned.

Excavations in the northern portion of the Project Area may encounter intact native sediments. Expected maximum depth of excavation below current ground level is 2.5 feet.

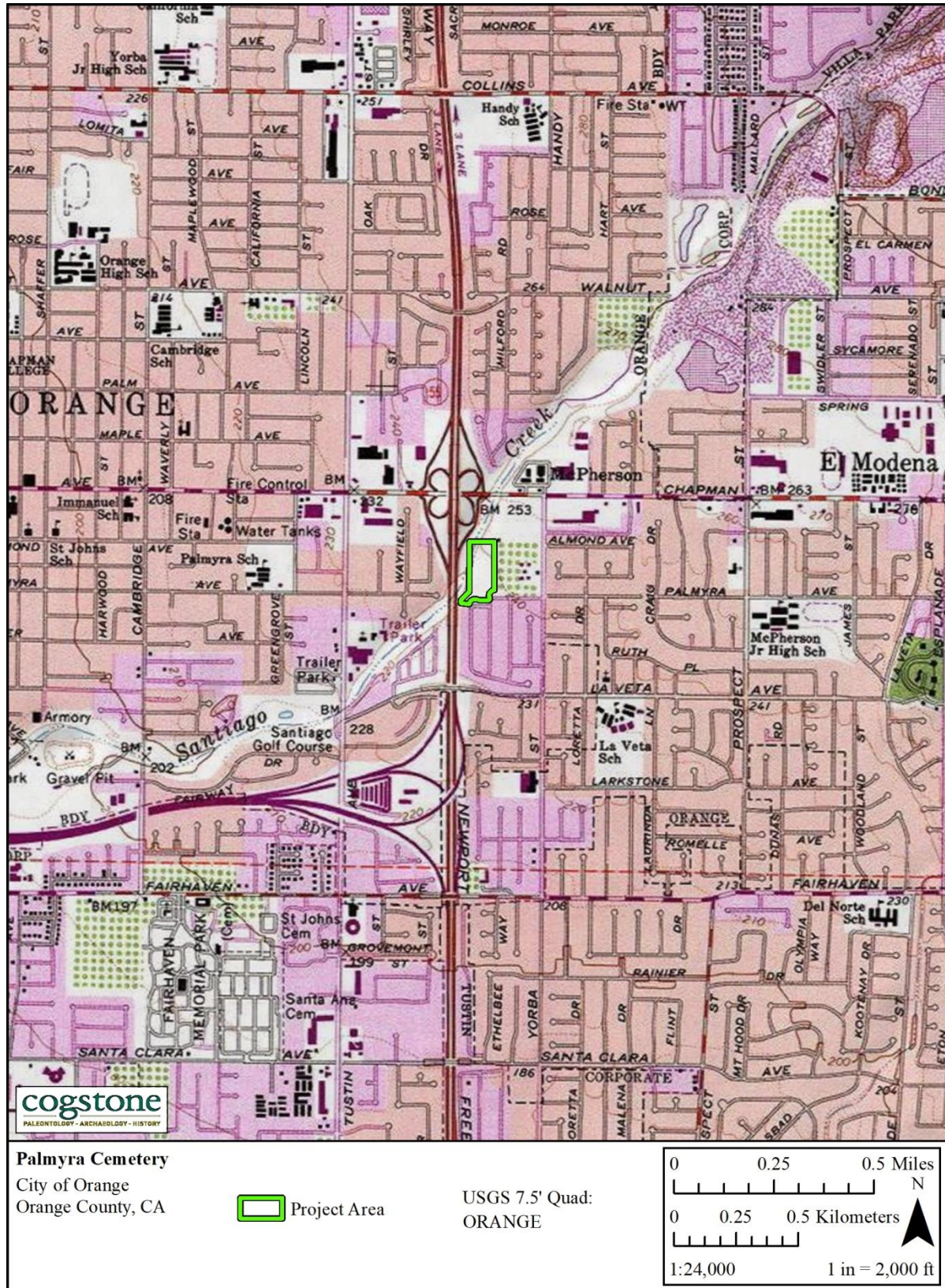


Figure 2. Project location map

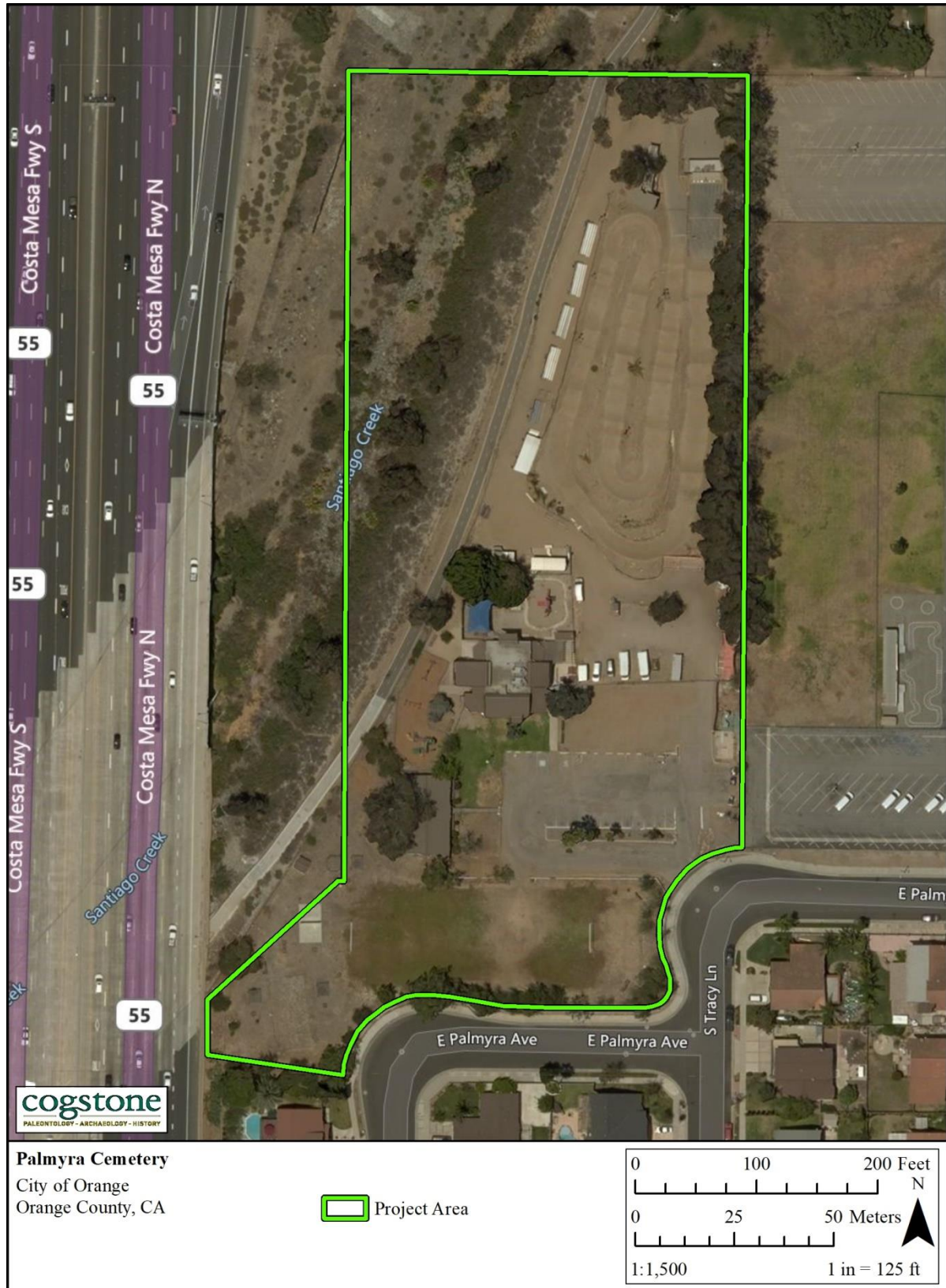


Figure 3. Project aerial map

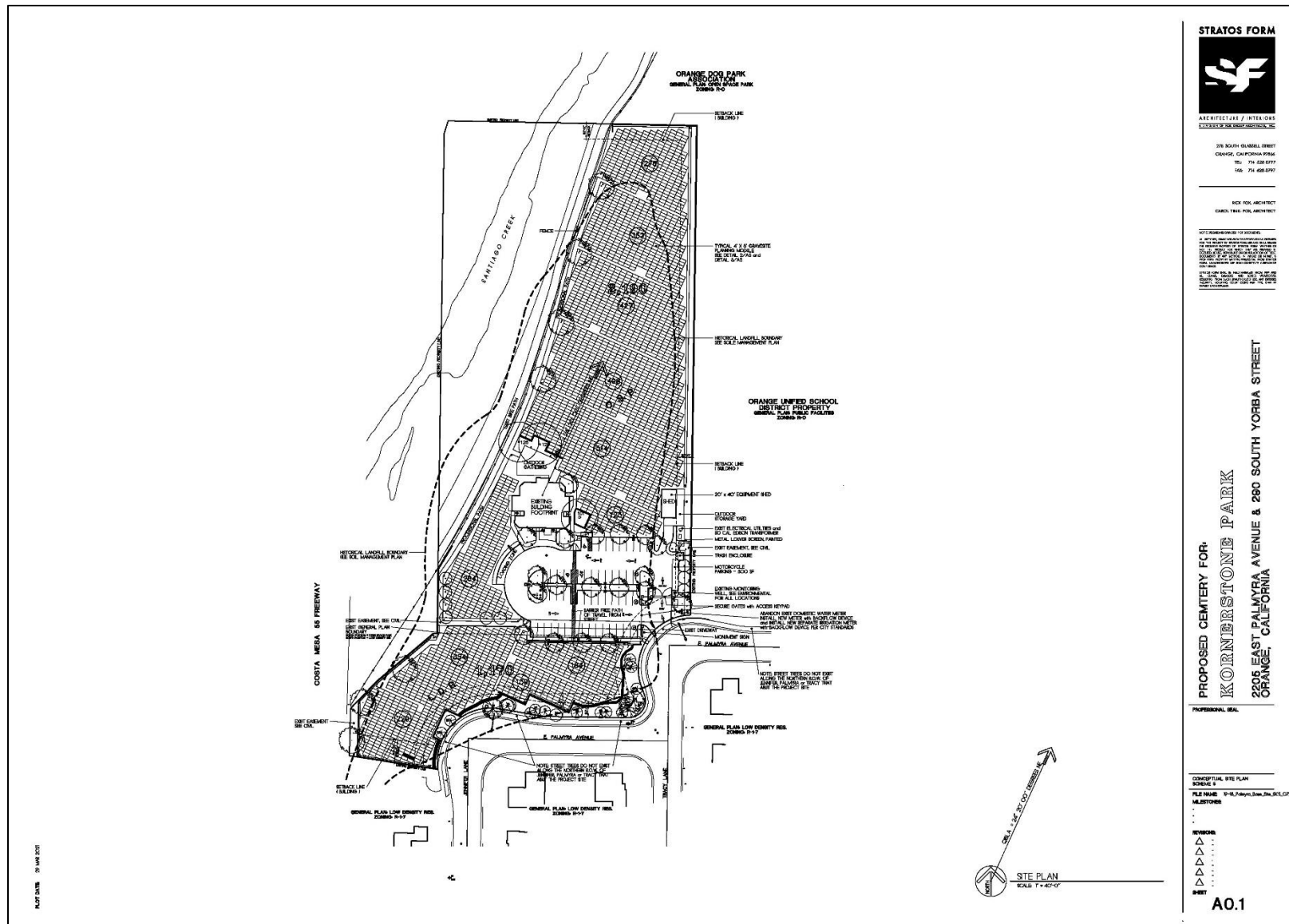


Figure 4. Map showing landfill boundary (dashed black line)

PROJECT PERSONNEL

Cogstone Resource Management, Inc. (Cogstone) carried out this assessment and drafted this report. Brief resumes of key project personnel are in Appendix A.

Molly Valasik provided QA/QC for the Project. Ms. Valasik has an M.A. in Anthropology from Kent State University in Ohio and over 12 years of experience in southern California archaeology.

Eric Scott provided QA/QC of the paleontology and geology sections of this report. Eric has an M.A. in Anthropology, with an emphasis in biological paleoanthropology, from the University of California, Los Angeles (UCLA), and more than 37 years of experience in California paleontology.

John Gust, RPA, served as the Task Manager and Principal Investigator for Archaeology for the Project, and reviewed this report. Dr. Gust has a Ph.D. in Anthropology from the University of California (UC), Riverside, and over 9 years of experience in archaeology.

Kim Scott served as the Principal Investigator for Paleontology for the Project and wrote the geological and paleontological portions of this report. Kim has an M.S. in Biology with apaleontology emphasis from California State University (CSU), San Bernardino, a B.S. in Geology with paleontology emphasis from UCLA, and over 24 years of experience in California paleontology and geology.

Shannon Lopez conducted the built environment survey, evaluation of historic resources, and co-authored this report. Ms. Lopez holds an M.A. in History from CSU Fullerton, and has three years of experience in history and architectural history.

Sandy Duarte conducted the field survey, and co-authored this report. Mrs. Duarte holds a B.A. in Anthropology from UC Santa Barbara, and more than 15 years of experience in California archaeology.

Kelly Vreeland assisted with the geological and paleontological portions of this report. Ms Vreeland has an M.S. and B.S. in Geology, with an emphasis in paleontology, from CSU Fullerton, as well as 10 years of experience in California paleontology and geology.

Logan Freeberg prepared the Geographic Information System (GIS) maps throughout this report. Mr. Freeberg has a B.A. in Anthropology from UC Santa Barbara and a GIS certification from CSU Fullerton and over 15 years of experience in California archaeology.

REGULATORY ENVIRONMENT

STATE LAWS AND REGULATIONS

CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA states that: It is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required are intended to assist public agencies in systematically identifying both the significant effects of proposed project and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.

CEQA declares that it is state policy to: “take all action necessary to provide the people of this state with...historic environmental qualities.” It further states that public or private projects financed or approved by the state are subject to environmental review by the state. All such projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental effects of a proposed project. In the event that a project is determined to have a potential significant environmental effect, the act requires that alternative plans and mitigation measures be considered.

TRIBAL CULTURAL RESOURCES

As of 2015, CEQA established that “[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (Pub. Resources Code, § 21084.2). In order to be considered a “tribal cultural resource,” a resource must be either:

- (1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or
- (2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource.

To help determine whether a project may have such an effect, the lead agency must consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code §20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources.

PUBLIC RESOURCES CODE

Section 5097.5: No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands (lands under state, county, city, district or public authority jurisdiction, or the jurisdiction of a public corporation), except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this section, “public lands” means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The California Register of Historical Resources (CRHR) is a listing of all properties considered to be significant historical resources in the state. The California Register includes all properties listed or determined eligible for listing on the National Register, including properties evaluated under Section 106, and State Historical Landmarks No. 770 and above. The California Register statute specifically provides that historical resources listed, determined eligible for listing on the California Register by the State Historical Resources Commission, or resources that meet the California Register criteria are resources which must be given consideration under CEQA (see above). Other resources, such as resources listed on local registers of historic resources or in local surveys, may be listed if they are determined by the State Historic Resources Commission to be significant in accordance with criteria and procedures to be adopted by the Commission and are nominated; their listing in the California Register is not automatic.

Resources eligible for listing include buildings, sites, structures, objects, or historic districts that retain historical integrity and are historically significant at the local, state or national level under one or more of the following four criteria:

- 1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
- 2) It is associated with the lives of persons important to local, California, or national history;
- 3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
- 4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource’s physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource’s period of significance.

Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register, if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.

NATIVE AMERICAN HUMAN REMAINS

Sites that may contain human remains important to Native Americans must be identified and treated in a sensitive manner, consistent with state law (i.e., Health and Safety Code §7050.5 and Public Resources Code §5097.98), as reviewed below:

In the event that human remains are encountered during project development and in accordance with the Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods.

CALIFORNIA ADMINISTRATIVE CODE, TITLE 14, SECTION 4307

This section states that “No person shall remove, injure, deface or destroy any object of paleontological, archeological or historical interest or value.”

BACKGROUND

The geologic, paleontological, and environmental sections below provide information on the environmental factors that affect archaeological and paleontological resources, while the prehistoric and historical settings provide information on the history of land use in the general Project region.

GEOLOGICAL SETTING

The Project lies in the broad coastal plain of Orange County, California named the Tustin Plain. The Tustin Plain is bounded by the Santa Ana Mountains to the east, the Puente and Coyote Hills to the north, the Pacific Ocean to the west, and the San Joaquin Hills to the south. Orange County is part of the coastal section of the Peninsular Range Geomorphic Province, which is characterized by elongated northwest-trending mountain ridges separated by sediment-floored valleys. Faults branching off from the San Andreas Fault to the east create the local mountains and hills. The Peninsular Ranges Geomorphic Province is located in the southwestern corner of California and is bounded by the Transverse Ranges Geomorphic Province to the north and the Colorado Desert Geomorphic Province to the east (Wagner 2002).

STRATIGRAPHY

The Project is mapped as late Pleistocene to Holocene (less than 126,000 years old) young alluvial fan deposits (Morton and Miller 2006). Although not appearing on Morton and Miller's (2006) geological map, modern artificial fill is also common in previously developed areas.

ARTIFICIAL FILL, MODERN

In California, most of the artificial fill is less than 100 years old and is associated with construction activities. The Project Area has been previously developed and likely contains various amounts of artificial fill placed during prior development.

YOUNG ALLUVIAL FAN DEPOSITS, LATE PLEISTOCENE TO HOLOCENE

Late Pleistocene to Holocene alluvial fan flood plain deposits consist of unconsolidated to moderately consolidated, poorly sorted, permeable clays to sands. Deposits are poorly consolidated and may be capped by poorly to moderately developed soils. These sediments were deposited by streams and rivers on canyon floors and in the flat flood plains of the area (Morton and Miller 2006).

PALEONTOLOGICAL SETTING

In general, the entire western margin of North America is rich with marine fossils. This is because the coastline has been tectonically active for millions of years, creating numerous marine basins that received large amounts of sediment from the adjacent continental land mass. Each such basin possesses a sequence of stacked sediments and fossils that records the history of the basin. A typical basin proceeded through several stages including rifting, deepening, and filling with sediment. Some basins filled with enough sediment to form shallow terrestrial plains that accumulated river, lake, and alluvial fan deposits. Although some fossilization occurs in lakes and rivers, very little occurs in other environments. This makes terrestrial fossils, and especially vertebrates, rare when compared to marine fossils.

The southern California coastal region is important in geologic and paleontological studies of western North America because the stratigraphic sequence of its sediments is very complete; there are only a few gaps in a nearly continuous sequence of sedimentary deposits from the late Cretaceous (~70 million years ago) through the present.

In southern California, marine deposits of late Cretaceous age (~70 - ~65 million years ago) near the coast predominantly yield fossil mollusks, with vertebrate remains discovered only infrequently. Fishes and marine reptiles are better known from more inland Cretaceous age deposits, such as the Moreno Formation in the Coalinga area. Although some dinosaurs and small mammals are known from California formations, they are extremely rare. Most of California was under water during the Cretaceous, so any terrestrial animal or plant would have had to have been washed out to sea to be preserved in our fossil record.

The record of Paleocene (~65 - ~55 million years ago) life in the region is primarily that of invertebrates and the occasional shark and bony fish. The mass extinction at the end of the Cretaceous killed all dinosaurs except for birds, all marine reptiles except for turtles, and the marine cephalopods known as ammonites. This left major ecological niches that mammals would come to dominate in the subsequent 65 million years, but during the Paleocene, mammals were still small and had not colonized the oceans yet.

Early Californian coastal deposits of Eocene (~55 - ~34 million years ago) and Oligocene (~34 - ~23 million years ago) age have yielded abundant invertebrate assemblages with infrequent vertebrate fossils. If these were to produce vertebrate fossils, they would most likely be of sharks, bony fishes, marine turtles, birds, early cetaceans, and the occasional terrestrial mammal that had been washed out to sea.

It is not until the Miocene (~23 - ~5 million years ago) that marine deposits in the coastal zone began to preserve diverse marine vertebrate assemblages in addition to abundant assemblages of fossil invertebrates. These vertebrate assemblages include sharks, bony fishes, turtles, birds, sea cows, sea lions, walruses, dolphins, and whales.

During the Pliocene Epoch (~5 - ~2 million years ago) coastal California began to emerge progressively from the sea, and most deposits of this age represent relatively shallow, near shore marine environments. More modern-appearing groups of animals are thus present in deposits of this age. The mollusks are increasingly represented by living genera, and even by some living species. The cetaceans and pinnipeds of Pliocene age usually are members of living families and genera. As most of these deposits were still marine, fossils of terrestrial animals continued to be rare.

In general, although the California coastal region is not known for a wealth of Miocene and Pliocene marine vertebrate fossils, there have been enough specimens found to indicate the high potential for significant new discoveries in any rocks of this age in the area. Among the fossil marine mammal specimens that have been reported in the literature there are a relatively high percentage of holotype specimens that have been used to describe new species.

As the ocean continued to recede (or the land to rise), coastal California changed from shallow marine to terrestrial by the Pleistocene Epoch (~2.6 million – ~11, 000 years ago). The developing terrestrial landscape had a climate that was moister than the present, with free flowing streams and relatively abundant standing water. Numerous water sources provided many opportunities for fossilization, giving us a fairly complete view of Pleistocene life. An increase in water also allowed the vegetation to flourish and would have resembled the flora that is now found near Monterey, California. Megafauna present in the region included ground sloths, mammoth, mastodon, horse, camel, bison, antelope, peccary, wolf, and saber-toothed cat. Small animals were abundant and included most of the same species found in the same areas today.

ENVIRONMENTAL SETTING

The City of Orange is situated approximately 30 miles southeast of Los Angeles and 14 miles east of the Pacific Ocean. The Santa Ana River flows south-southwest through the City. Santiago Creek borders the City on the southern end and merges into the Santa Ana River in Santa Ana, prior to it flowing into the Pacific Ocean. The Santa Ana Mountains, a north-south trending range, and the Cleveland National Forest lie to the east.

The current Mediterranean-like climate is characterized by warm, dry summers and cool, moist winters, with rainfall predominantly falling between November and May. Mild breezes reach the area from the Pacific Ocean, located west of the Project Area.

Prior to development, the native vegetation of the Project Area consisted of California coastal sage scrub. Typical species include California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis* var. *consanguinea*), California buckwheat (*Eriogonum fasciculatum*), lemonade berry (*Rhus integrifolia*), poison oak (*Toxicodendron diversiloba*), purple sage (*Salvia leucophylla*), and black sage (*Salvia mellifera*; Ornduff et al. 2003). Additional common species include brittlebush (*Encelia californica*), chamise (*Adenostoma fasciculatum*), white sage (*Salvia apiana*), Our Lord's candle (*Hesperoyucca whipplei*), and prickly pear cactus (*Opuntia*; Hall 2007).

Modern vegetation in this portion of Orange County includes grasslands and California coastal sage scrub with non-native species mixed in. Grasses such as slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), and giant reed (*Arundo donax*); shrubs and trees including

blackwood acacia (*Acacia melanoxylon*), saltcedar (*Tamarix ramosissima*), eucalyptus (*Eucalyptus* spp.), and Brazilian pepper (*Schinus terebinthifolius*) are common (Cal-IPC 2006). Large native land mammals of the region included mule deer (*Odocoileus hemionus*), bighorn sheep (¹‡*Ovis canadensis*), tule elk (‡*Cervus canadensis nannodes*), pronghorn (‡*Antilocapra americana*), bison (‡*Bison bison*), bobcat (‡*Lynx rufus*), mountain lion (‡*Felis concolor*), jaguar (‡*Panthera onca*), coyote (*Canis latrans*), grey wolf (‡*Canis lupus*), black and grizzly bears (‡*Ursus americanus*, ‡*Ursus arctos*). Smaller native fauna included rabbits (‡*Lepus californicus*, *Sylvilagus audubonii*, ‡*Sylvilagus bachmani*), desert tortoise (‡*Gopherus agassizii*), and numerous other species (California Department of Fish and Game 2020). In recent history, urban development has driven most animals from the area, although mule deer, bobcat, and coyotes still occur in the surrounding hills.

PREHISTORIC SETTING

Approaches to prehistoric frameworks have changed over the past half century from being based on material attributes to radiocarbon chronologies to association with cultural traditions. A large part of what was previously referred to as the Millingstone Period is now called the Topanga pattern of the Encinitas Tradition. The latest cultural revisions for the Project Area define traits for time phases of the Topanga pattern of the Encinitas Tradition applicable to coastal Los Angeles and Orange counties (Sutton and Gardner 2010; Table 1). This pattern is replaced in the Project Area by the Angeles pattern of the Del Rey Tradition later in time (Sutton 2010).

Topanga Pattern groups were relatively small and highly mobile. Sites tend to be along the coast in wetlands, bays, coastal plains, near-coastal valleys, marine terraces and mountains. The Topanga toolkit is dominated by manos and metates with projectile points scarce (Sutton and Gardner 2010: 9).

In Topanga Phase I other typical characteristics were a few mortars and pestles, abundant core tools (scraper planes, choppers, and hammerstones), relatively few large, leaf-shaped projectile points, cogged stones, and early discoidals (Table 1). Secondary inhumation under cairns was the common mortuary practice. In Orange County as many as 600 flexed burials were present at one site and dated 6,435 calibrated radiocarbon years before present (Sutton and Gardner 2010: 9, 13).

In Topanga Phase II, flexed burials and secondary burial under cairns continued. Adoption of the mortar and pestle is a marker of this phase. Other typical artifacts include manos, metates, scrapers, core tools, discoidals, charmstones, cogged stones, and an increase in the number of projectile points. In Orange County stabilization of sea level during this time period resulted in

¹ ‡ - indicates that the species has been extirpated from Southern California.

increased use of estuary, near shore and local terrestrial food sources (Sutton and Gardner 2010: 14-16).

Table 1. Culture Change Chronology

Pattern	Phase	Dates (BP)	Material Traits	Other Traits
Encinitas	Topanga I	8,500 to 5,000	Abundant manos and metates, many core tools and scrapers, few but large points, charmstones, cogged stones, early discoidals, bone gorge fishhooks, faunal remains rare; <i>Olivella</i> spire/end lopped beads appear	Estuary/lagoon shellfish and sharks/rays common, hunting important, secondary burials under metate cairns (some with long bones only), some extended inhumations, no cremations
	Topanga II	5,000 to 3,500	Abundant but decreasing manos and metates, adoption of mortars and pestles, smaller points, cogged stones, late discoidals, fewer scraper planes and core tools, some stone balls and charmstones; inhumations common; <i>Olivella</i> Grooved Rectangular beads introduced	Estuary/lagoon shellfish and sharks/rays common, addition of acorns, reburial of long bones only, addition of flexed inhumations (some beneath metate cairns), cremations rare
Angeles	Angeles I	3,500 to 2,600	Appearance of Elko dart points and an increase in the overall number of projectile points from Encinitas components; beginning of large-scale trade in small steatite artifacts (effigies, pipes, and beads) and <i>Olivella</i> shell beads; appearance of single-piece shell fishhooks and bone harpoon points; Coso obsidian becomes important; appearance of donut stones; appearance of <i>Mytilus</i> beads	Apparent population increase; fewer and larger sites along the coast; collector strategy; less overall dependence on shellfish but fishing and terrestrial hunting more important; appearance of flexed and extended inhumations without cairns, cremations uncommon
	Angeles II	2,600 to 1,600	Continuation of basic Angeles I material culture with the addition of mortuary features containing broken tools and fragmented cremated human bone; fishhooks become more common	Shellfish change to mudflat species, more emphasis on fish, birds and mammals, continuation of basic Angeles I settlement and subsistence systems; appearance of a new funerary complex
	Angeles III	1,600 to 1,250	Appearance of bow and arrow technology (e.g., Marymount or Rose Spring points); changes in <i>Olivella</i> beads; asphaltum becomes important; reduction in obsidian use; Obsidian Butte obsidian largely replaces Coso	Larger seasonal villages; flexed primary inhumations but no extended inhumations and an increase in cremations; appearance of obsidian grave goods
	Angeles IV	1,250 to 800	Cottonwood points appear; some imported pottery appears; birdstone	Change in settlement pattern to fewer but larger permanent villages; flexed primary

Pattern	Phase	Dates (BP)	Material Traits	Other Traits
			effigies at the beginning of the phase and “spike” effigies dropped by the end of the phase; possible appearance of ceramic pipes, <i>Mytilus</i> shell disks	inhumations continue, cremations uncommon
	Angeles V	800 to 450	Trade of steatite artifacts from the southern Channel Islands becomes more intensive and extensive, with the addition or increase in more and larger artifacts, such as vessels and comals; larger and more elaborate effigies; portable mortars and pestles	Strengthening of ties, especially trade, with southern Channel Islands; expansion into the northern Santa Ana Mountains and San Joaquin Hills
	Angeles VI	450 to 150	Addition of Euroamerican material culture (e.g., glass beads and metal tools), locally made pottery, metal needle-drilled <i>Olivella</i> beads	Change of settlement pattern, movement close to missions and ranches; use of domesticated species obtained from Euroamericans; flexed primary inhumations continue; apparent adoption of Chingichngish religion

The Angeles pattern generally is restricted to the mainland and appears to have been less technologically conservative and more ecologically diverse, with a largely terrestrial focus and greater emphases on hunting and nearshore fishing. In Angeles Phase I Elko points for atlatls or darts appear, small steatite objects such as pipes and effigies are found, shell beads and ornaments increase, fishing technologies increase including bone harpoons/fishhooks and shell fishhooks, donut stones appear, and hafted micro blades for cutting/graving wood or stone appear. In addition, several Encinitas traits, such as discoidals, cogged stones, plummet-like charm stones and cairn burials virtually disappear from the record. Mortuary practices changed to consist of mostly flexed primary inhumations, with extended inhumations becoming less common. Settlement patterns made a shift from general use sites being common to habitation areas separate from functional work areas. Subsistence shifted from mostly collecting to increased hunting and fishing.

The Angeles Phase II is identified primarily by the appearance of a new funerary complex, with other characteristics similar to Angeles I. The complex features killed (broken) artifacts plus highly fragmented cremated human bones and a variety of faunal remains. In addition to the cremains, the other materials are also often burned. None of the burning was performed in the burial feature.

The Angeles Phase III is the beginning of what has been known as the Late Period and is marked by several changes from Angeles I and II. These include the appearance of small projectile

points, steatite shaft straighteners and increased use of asphaltum, all reflecting adoption of bow and arrow technology, obsidian sources changed from mostly Coso to Obsidian Butte, and shell beads from Gulf of California species began to appear. Subsistence practices continued as before and the geographic extent of the Angeles Pattern increased (Sutton 2010).

Angeles Phase IV is marked by new material items including Cottonwood points for arrows, *Olivella* cupped beads and *Mytilus* shell disks, birdstones (zoomorphic effigies with magico-religious properties) and trade items from the Southwest including pottery. It appears that populations increased and that there was a change in the settlement pattern to fewer but larger permanent villages. Presence and utility of steatite vessels may have impeded the diffusion of pottery into the Los Angeles Basin. The settlement pattern altered to one of fewer and larger permanent villages. Smaller special-purpose sites continued to be used.

Angeles V components contain more and larger steatite artifacts, including larger vessels, more elaborate effigies and comals. Settlement locations shifted from woodland to open grasslands. The exploitation of marine resources seems to have declined and use of small seeds increased. Inhumations contained grave goods while cremations did not.

The Angeles Phase VI reflects the post-contact (i.e., post-A.D. 1542) period. One of the first changes after contact was undoubtedly population loss due to disease, coupled with resulting social and political disruption. Angeles VI material culture is essentially Angeles V augmented by a number of Euroamerican tools and materials, including glass beads and metal tools such as knives and needles (used in bead manufacture). The frequency of Euroamerican material culture increased through time until it constituted the vast majority of materials used. Locally produced brownware pottery appears along with metal needle-drilled *Olivella* disk beads.

The subsistence system was based primarily on terrestrial hunting and gathering, although nearshore fish and shellfish played important roles. Sea mammals, especially whales (likely from beached carcasses), were prized. In addition, a number of European plant and animal domesticates were obtained and exploited (Sutton 2010).

ETHNOGRAPHY

GABRIELINO-TONGVA

The Project Area is located within the traditional territory of the Gabrielino (Tongva) who were semi-sedentary hunters and gatherers (Figure 5). The Gabrielino speak a language that is part of the Takic language family. Their territory encompassed a vast area stretching from Topanga Canyon in the northwest, to the base of Mount Wilson in the north, to San Bernardino in the east, Aliso Creek in the southeast and the Southern Channel Islands, in all an area of more than 2,500 square miles (Bean and Smith 1978; McCawley 1996). At European contact, the tribe consisted

of more than 5,000 people living in various settlements throughout the area. Some of the villages could be quite large, housing up to 150 people.

The Gabrielino are considered to have been one of the wealthiest tribes and to have greatly influenced tribes they traded with (Kroeber 1976:621). Houses were domed, circular structures thatched with tule or similar materials (Bean and Smith 1978:542). The best known artifacts were made of steatite and were highly prized. Many common everyday items were decorated with inlaid shell or carvings reflecting an elaborately developed artisanship (Bean and Smith 1978:542).

The main food zones utilized were marine, woodland and grassland (Bean and Smith 1978). Plant foods were, by far, the greatest part of the traditional diet at contact. Acorns were the most important single food source. Villages were located near water sources necessary for the leaching of acorns, which was a daily occurrence. Grass seeds were the next most abundant plant food used along with chia. Seeds were parched, ground, and cooked as mush in various combinations according to taste and availability. Greens and fruits were eaten raw or cooked or sometimes dried for storage. Bulbs, roots, and tubers were dug in the spring and summer and usually eaten fresh. Mushrooms and tree fungus were prized as delicacies. Various teas were made from flowers, fruits, stems, and roots for medicinal cures as well as beverages (Bean and Smith 1978:542).

The principal game animals were deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, antelope, quail, dove, ducks, and other birds. Most predators were avoided as food, as were tree squirrels and most reptiles. Trout and other fish were caught in the streams, while salmon were available when they ran in the larger creeks. Marine foods were extensively utilized. Sea mammals, fish, and crustaceans were hunted and gathered from both the shoreline and the open ocean, using reed and dugout canoes. Shellfish were the most common resource, including abalone, turban, mussels, clams, scallops, bubble shells, and others (Bean and Smith 1978:542).

The closest known major ethnohistoric village to the Project Area is Pasbenga located approximately 4.4 miles to the southwest (McCawley 1996). However, smaller villages and seasonal camps may have been present closer to the Project Area.

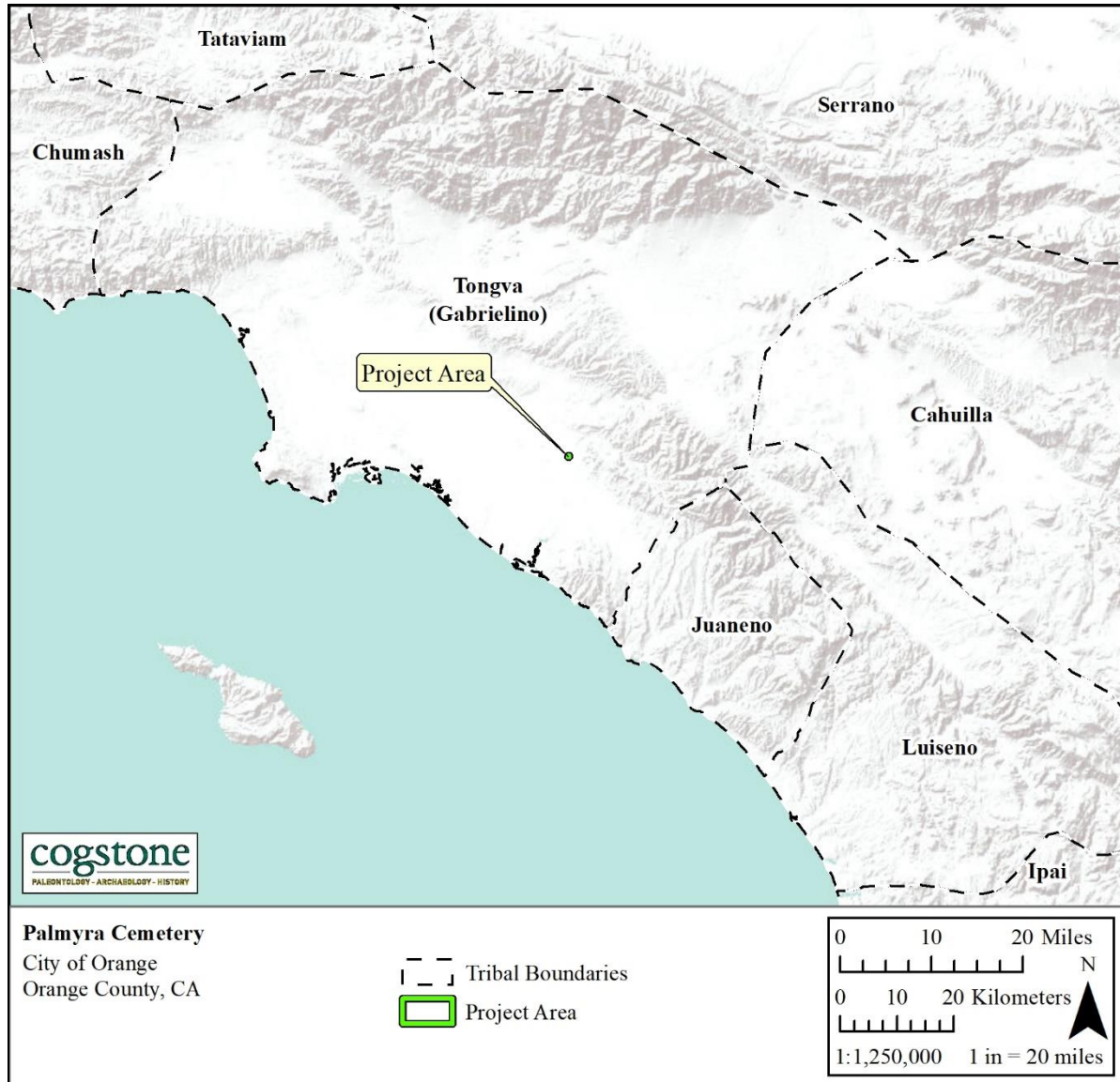


Figure 5. Native American traditional tribal territories

HISTORIC SETTING

SPANISH PERIOD (1769-1821)

The earliest explorations of California began in the San Diego area in 1542, when Juan Rodríguez Cabrillo and his party landed near Point Loma. Cabrillo had been tasked by the Spanish monarch with exploration of the western United States interior. Interaction with the Kumeyaay was initiated, but intensive exploration and colonization of California by Spain did not happen until the 1700s.

In 1769, the Spanish developed plans to build four presidios (forts), and three towns along the California coastline stretching from San Diego northward to Monterey. The town sites,

established between 1777 and 1797, included present-day Los Angeles, San Jose and a small town near Santa Cruz named Branciforte; the presidios were established at San Diego, Santa Barbara, Monterey and San Francisco. Under Spain, the borderlands were colonized as defenses against the intrusion of the English, French, Dutch, and Russians, with the Manila trade an important item for protection in California. They were held by two typical institutions: the mission and the presidio (Bolton 1913, 1921, 1930 as cited in Aviña 1976).

Mission San Diego Alcalá was founded in 1769, the first of 21 Franciscan missions built along the coast on the El Camino Real between San Diego and Sonoma. Other missions in Southern California include Mission San Gabriel and Mission San Juan Capistrano, each located in their namesake cities that grew up around the missions. The goals of the missions were tri-fold: they established a Spanish presence on the west coast, provided a way to Christianize native peoples, and served to exploit native population as laborers. The mission system severely disrupted Native socio-political structure, especially those living in close proximity

Arrival of the Franciscan missionaries during the Spanish period resulted in far-reaching alterations in Native American lifeways. These shifts included high mortality rates and social changes due to the introduction of European diseases and customs (e.g., European farming methods) (Dobyns 1983; Walker and Hudson 1989).

The Native population decreased as a consequence of a series of epidemics, and as neophytes were converted to Christianity and forced to work for the mission, their traditional lifestyle was severely altered.

MEXICAN PERIOD (1821-1847)

After Mexico gained independence from Spain in 1821, the Mission lands were secularized under the Secularization Act of 1833, but much of the land was transferred to political appointees. A series of large land grants that transferred Mission properties to private ownership were awarded by the Governors of California—Juan B. Alvarado, Manuel Micheltorena and Pío Pico—between 1840 and 1846 (Ohles 1997; Cowan 1977). Ranches and farms were established throughout the Southern California region during this period.

The 63,414-acre Rancho Santiago de Santa Ana was granted to José Antonio Yorba and Juan Pablo Peralto by Spanish Alta California Governor José Joaquín de Arrillaga in 1810 (Figure 6). This was one of six Ranchos granted to the extended Yorba family. The others were Rancho Cañon de Santa Ana, Rancho Lomas de Santiago, Rancho La Sierra, Rancho El Rincon, and Rancho Las Bolsas. Juan Pablo Peralta, Antonio Yorba, and Bernardo Yorba and his heirs received a patent for the rancho from the US Government in 1883.

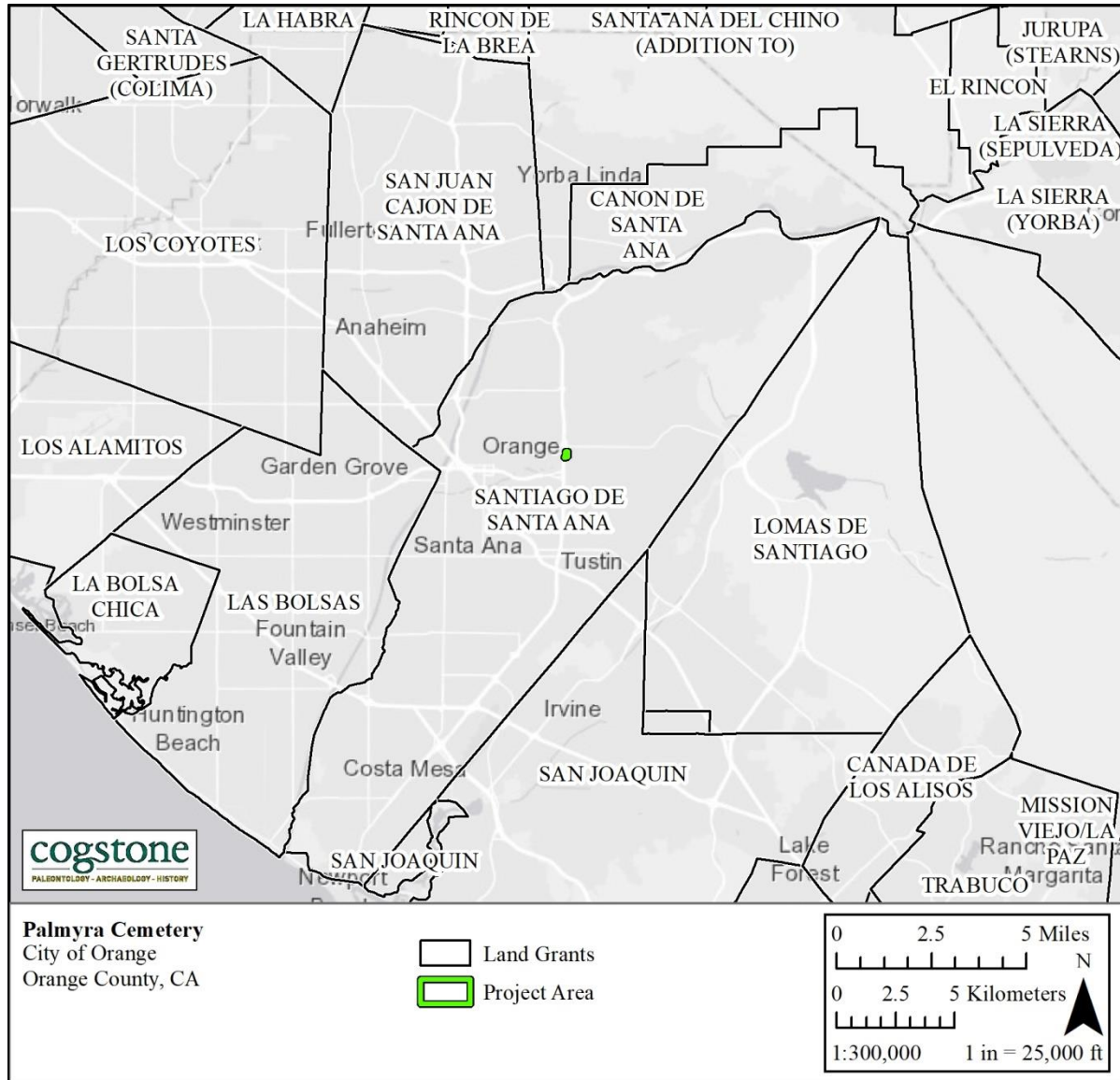


Figure 6. Land grants map

CITY OF ORANGE

The City of Orange was initially founded in 1871 after attorneys Alfred Chapman and Andrew Glassell acquired 1,385 acres of land from the Rancho Santiago de Santa Ana as payment for accrued legal fees in 1869. Chapman and Glassell designed the town with a 40-acre central town site surrounded by 10-acre farm lots (Taylor 2018). The town was initially founded as “Richland,” but in 1873 was changed to Orange following the rejection of an application for a post office as Washington D.C. notified the community that there was already a Richland, California near Sacramento (Brigandi 2011).

From its establishing years up until the 1950s, Orange prospered as an agricultural community with grapes and grain as the biggest cash crops during the 1870s. After much experimentation,

oranges, apricots, and walnuts emerged as the most successful tree crops. In the late 1880s, a mysterious blight ravaged the region's vineyards (now commonly known as the Anaheim Vine Disease). The damage was so severe that the grape industry never recovered and by 1910, grapes were no longer grown in the Orange area as a commercial crop (Brigandi 2011).

In 1880, the Southern Pacific Railroad built a depot (now demolished) at what is now "West Orange." In 1887, the Santa Fe Railroad also extended its line into Orange. Until the stations' closure in 1918, the railroad allowed for long distance shipment of fresh fruit and provided new markets for Orange's local growers. The subsequent increase in visitors as the result of the railroad also led to the "boom of the '80s" in Southern California, including Orange, which experienced an increase in its residential population (City of Orange Public Library n.d.).

On April 6, 1888, the City of Orange was incorporated with William Blansdale serving at its first mayor; the population at the time was 600 residents. In 1889, the southern half of Los Angeles County broke away to form Orange County, with the county seat falling to Santa Ana. By the end of the 1880s local farmers were planting orange trees and by 1920 oranges had become the predominant crop (City of Orange Public Library n.d.).

The City, like the rest of the United States, suffered an economic decline as a result of the Great Depression which lasted until the outbreak of the Second World War. During the war, the 30th Field Artillery Battalion was stationed in Orange while the battalions troops trained in the Borrego Desert. Following the end of World War II, many service men returned to Orange with their families, which launched the second and largest population boom in the county's history. Between 1950 and 1960, the City's population increased from 10,000 to over 26,000, then to over 77,000 by 1970. As of 2020, the population of Orange was 139,484 (City of Orange Public Library n.d.).

PROJECT AREA HISTORY

The earliest USGS topographic quadrangle map (*Anaheim*; 1896; 1:62,500) shows East Chapman Avenue and South Yorba Street in their current locations and configurations but the Project Area has not been developed. Santiago Creek is present flowing north/south through the western section of the Project Area. The Project Area remains undeveloped in the 1902 USGS *Corona* (1:125,000) topographic quadrangle map, but it and the area adjacent to the east is labeled "McPherson." The 1942 *Anaheim* (1:62,500) USGS topographic quadrangle map shows that the entire Project Area and adjacent areas have been developed into orchards after 1902. State Route 55, Costa Mesa Freeway, is present at the west boundary of the Project Area by 1964 (*Orange*; 1:24,000).

The earliest USDA historical aerial photograph of the Project Area is from 1939 (Framefinder 1939) and shows the entire Project Area within a large orchard. A segment of Santiago Creek flows north/south through the western portion of the Project Area. The 1946 USDA historic

aerial photograph shows that the orchards within the boundaries of the Project Area have been removed and the Project Area is left empty. The 1972 USDA (NETROnline 2021) historic aerial photograph shows two rectangular gabled roof structures within the southern portion of the Project Area and the 1974 historic aerial photograph (USGS 1974) shows the Young Men's Christian Association (YMCA) building in its current location. A paved parking area is visible to the east of the YMCA building in the 1980 USDA historic aerial photograph and the two additional buildings first seen in the 1972 photograph have been connected and appear as a single building. A dirt BMX bicycle course is also present in the 1980 photograph. USDA historic aerial photographs from 2014 and 2016 (NETROnline 2021) indicate that the ca. 1972 building was removed in the time between these two images. The multi-purpose Santiago Creek Trail is first visible in the 2016 photograph (NETROnline 2021).

YMCA

The modern-style, irregularly-shaped YMCA building currently located within the Project Area dates to 1974 and was designed by Leason Pomeroy Inc. (LPA). LPA was founded in 1964 in the City of Orange by Leason Pomeroy (Figure 7), a native of the City's Old Towne neighborhood. LPA is now one of California's largest architectural firms. Pomeroy managed the design of the YMCA building and many other projects inside and outside Orange County including the Thomas F. Riley Terminal at John Wayne Airport, Orange County. Cogstone evaluated the YMCA building as part of this assessment.



Figure 7. Leason Pomeroy. Photo taken by Mike Escobedo 2009.

RECORDS SEARCH

PALEONTOLOGICAL RECORD SEARCH

The following are confidential museum records. As such no maps of the localities are provided unless the locality may be impacted by the project. Cogstone requested a records search from the Natural History Museum of Los Angeles County, Department of Vertebrate Paleontology (LACM) that covered the Project area as well as a one mile radius (Bell 2021; Appendix B). Additional records from the University of California Museum of Paleontology database (UCMP 2021) and the PaleoBiology Database (PBDB 2021), and print sources were also searched for fossil records. Additionally, print resources including published material (Jefferson 1991a, 1991b) and previous nearby record searches were checked for fossil localities as well.

PALEONTOLOGICAL RECORDS SEARCH RESULTS

No fossils are known from within sediments of similar age as those of the Project or within one mile of the Project Area. There are 13 localities recorded from within 10 miles from the Project. Extinct megafauna from these localities include Harlan's ground sloth (†*Paramylodon harlani*), Columbian mammoth (†*Mammuthus columbi*), saber-toothed cat (†*Smilodon fatalis*), western horse (†*Equus occidentalis*), California tapir (†*Tapirus californicus*), yesterday's camel (†*Camelops hesternus*), and bison (†*Bison antiquus*) (Table 2). All of the fossils were recorded from a minimum of five feet deep, in deposits mapped as late Pleistocene at the surface, while sediments with a Holocene component produced fossils starting at 11 feet deep.

MODERN RECORDS

A burn test was performed on the specimens reported by Bell (2021; Appendix B). Both the sheep (*Ovis* sp.) recovered from Rio Vista Avenue south of Lincoln Avenue in Anaheim (LACM 1652) and the horse (*Equus* sp.) from Fletcher Avenue east of Glassell Street in Orange between 8 feet and 10 feet deep (LACM 4943; Bell 2020) proved to be modern. As such both specimens are removed from consideration.

Table 2. Fossil localities near to the Project Area

† = the taxon is extinct, although there may be living relatives in same genus or family

Common Name	Taxon	Depth below original surface	Formation mapped at surface	Age/ dates	Locality	Location	Reference
horse	<i>Equus</i> sp.	8-10 feet	Quaternary young alluvial fan	modern	LACM 4943	Fletcher Avenue east of Glassell Street, Orange	Bell 2020
sheep	<i>Ovis</i> sp.	unknown	Quaternary young alluvial fan	modern	LACM 1652	Rio Vista Avenue south of Lincoln Avenue, Anaheim	Bell 2021
invertebrates, reptiles, birds, rodents, horses, deer	unlisted	4 – 8 feet	peat	late Holocene	LACM 4018	Intersection of Warner Avenue and Golden West Street, Huntington Beach	Bell 2021
plants	unlisted	unknown	Terrace deposits		LACM 3524	North of Malvern Avenue and approximately 0.5 miles west of Gilbert Street, Fullerton	Bell 2021
invertebrates	unlisted						
fish	Chondrichthyes						
invertebrates	unlisted	unknown	Palos Verdes Sand	Pleistocene	LACM IP 4695	Bristol Street and Paularino Avenue	Bell 2021
invertebrates, fish, birds,	unlisted	30 feet	Palos Verdes Sand	Pleistocene	LACM 4219	Southwest end of the Newport Freeway between Santa Isabel Avenue and 23 rd Street.	Bell 2021
plant	Plantae	7 feet 9 inches	Quaternary very old alluvial fan	Pleistocene	2011SRW0728.1	SR 57 NB between Imperial Highway or Greenbrier Lane, Brea	Gust and Richards 2012
bivalve	Pelecypoda						
bony fish	Teleostei						
snake	Ophidia						
cottontail rabbit	<i>Sylvilagus</i> sp.						
rodent	Cricetinae						
rodent	Rodentia						
vertebrate	Vertebrata						
rattlesnake	<i>Crotalus</i> sp.	21 – 38 feet	Quaternary very old alluvial fan	Pleistocene	2011JLM0721.1	SR 57 NB between Imperial Highway or Greenbrier Lane, Brea	Gust and Richards 2012
bird	Passeriformes (sparrow-sized species)						
rodent	Rodentia						
vertebrate	Vertebrata						
cottontail rabbit	<i>Sylvilagus</i> sp. aff. <i>S. audubonii</i>	24 feet - 25.66 feet	Quaternary very old alluvial fan	Pleistocene	2011KMS0520.2	SR 57 NB west of Mystic Avenue, Fullerton	Gust and Richards 2012
rodent	Rodentia						
herbivore (large)	herbivore						

Common Name	Taxon	Depth below original surface	Formation mapped at surface	Age/ dates	Locality	Location	Reference
vertebrate	vertebrata						
cottontail rabbit	<i>Sylvilagus</i> sp. aff. <i>S. audubonii</i>	10.32 feet - 8.5 feet	Quaternary very old alluvial fan	Pleistocene	2011KMS0520.1	SR 57 NB west of Deerpark Drive or Devonshire Avenue, Fullerton	Gust and Richards 2012
rodent	Rodentia						
vertebrate	Vertebrata						
rodent	Rodentia	5 feet	Quaternary very old alluvial fan	Pleistocene	2011JLM1209.1	SR 57 NB west of Deerpark Drive, Fullerton	Gust and Richards 2012
vertebrate	Vertebrata						
plant	Plantae	4'2"-5'6"	Quaternary very old alluvial fan	Pleistocene	2011JLM1209.2	SR 57 NB west of Deerpark Drive or Devonshire Avenue, Fullerton	Gust and Richards 2012
carnivore	Carnivora	4 feet	Quaternary very old alluvial fan	Pleistocene	2011JLM1209.3	SR 57 NB west of Deerpark Drive or between Bedford Drive or Braeburn Avenue, Fullerton	Gust and Richards 2012
vertebrate	Vertebrata						
Harlan's ground sloth	† <i>Paramylodon harlani</i>	12-20 feet	Quaternary old alluvium	late Pleistocene	OCPC, no number as yet	North of Jamboree and Michelson, Irvine	Scott et al. 2007
ground sloth	† <i>Paramylodon</i> sp.						
sabre-toothed cat	† <i>Smilodon fatalis</i>						
carnivore?	Carnivora?						
western horse?	† <i>Equus occidentalis?</i>						
yesterday's camel	† <i>Camelops hesternus</i>						
ancient bison	† <i>Bison antiquus</i>						
bison	† <i>Bison</i> sp.						
Columbian mammoth	† <i>Mammuthus columbi</i>						
rabbit?	Leporidae?						
Botta's pocket gopher	<i>Thomomys bottae</i>						
gopher	Geomyidae						
squirrel	Sciuridae						
rodent	Rodentia						
mammal	Mammalia						
black vulture	† <i>Coragyps occidentalis</i>						
bird	Aves						
rattlesnake	<i>Crotalus</i> sp.						
pine snake	<i>Pituophis melanoleucus</i>						

Common Name	Taxon	Depth below original surface	Formation mapped at surface	Age/ dates	Locality	Location	Reference
snakes	Serpentes						
alligator lizard	<i>Elegaria</i> sp.						
oak	<i>Quercus</i> sp.						
ground sloth	† <i>Paramylodon</i> sp.	unknown	Quaternary old alluvium	late Pleistocene, Rancholabrean	LACM 1068	East of MacArthur Boulevard and north of what is now Bison Avenue, Irvine	McLeod 2018
tapir	† <i>Tapirus californicus</i>						
horse	† <i>Equus</i> sp.						
yesterday's camel	† <i>Camelops</i> sp.						
deer	<i>Odocoileus</i> sp.						
bison	† <i>Bison</i> sp.						
rabbit	<i>Sylvilagus</i> sp.						
mammal	Mammalia	unknown	Quaternary alluvium	Quaternary	LACM 1069	South side of University Drive east of MacArthur Boulevard	McLeod 2018
even-toed ungulate	Artiodactyla	unknown	Quaternary alluvium	Quaternary	LACM 3978	Adjacent to the southeastern side of the intersection of University Drive and MacArthur Boulevard	McLeod 2018
turkey	<i>Meleagris</i> sp.						
ground sloth	† <i>Mylodontidae</i>	shallow but unknown	Quaternary old alluvium	Pleistocene	LACM 7713	Southwest side Highway (Hwy) 133 or Hwy 405 interchange, Irvine	McLeod 2015
pocket gopher	<i>Thomomys</i> sp.	25 feet	Quaternary alluvium	Quaternary	LACM 7867	Southeast of Highway 133 or Interstate 5 interchange, C & 5th on El Toro base, Irvine	McLeod 2015

CALIFORNIA HISTORIC RESOURCES INFORMATION SYSTEM

Cogstone requested a search of the California Historic Resources Information System (CHRIS) from the South Central Coastal Information Center (SCCIC) on January 8, 2021 that included the entire proposed Project Area as well as a one-half mile radius. The SCCIC completed the request on January 28, 2021. Results of the record search indicate that three previous studies have been completed within the Project Area and an addition 12 studies have been completed within the one-half mile search radius (Table 3).

Table 3. Previous Cultural Resource Studies within One-Half Mile of Project Area

Report No. (OR-)	Author(s)	Title	Year	Distance from PA (in miles)
00778	Drover, Christopher E.	Archaeological Reconnaissance of the Santiago Creek Specific Plan Property	1976	0-0.5
00801	Langenwalter, Paul E. and James Brock	Phase II Archaeological Studies Prado Basin and the Lower Santa Ana River	1985	Within-0.5
02196	Huey, Gene	Historic Property Survey Report for Route 55 Improvements from Route 22 to 17th Street in the City of Tustin, Orange County	1992	0-0.5
02253	Duke, Curt	Cultural Resource Assessment for AT&T Fixed Wireless Services Facility Number Oc_067_a, County of Orange, California	2001	0.25-0.5
02559	Padon, Beth	Revised Archaeological Resource Assessment at the Chapman/Tustin Intersection, City of Orange, Orange County	2003	0.-0.5
02732	Padon, Beth and Ves Snelson	Archaeological Resource Assessment at the Chapman/Tustin Intersection, City of Orange, Orange County	2002	0-0.5
03114	Card, Les	Initial Study/Environmental Assessment Route 55 Measure M Improvements from Route 22 to Route 91	1993	Within-0.5
03115	Casen, George and Gene Huey	Historic Property Survey Report for Route 55 Measure M Improvements from Route 22 to Route 91 in the Cities of Orange, Anaheim, and Santa Ana and the County of Orange, Orange County, California	1993	0-0.5
03287	Mason, Roger D.	Historic Property Survey Report for Tustin Branch Trail Network, City of Orange, Orange County, California	2002	Within-0.5
03371	Ritchie, Michael	Determination of Effect State Route 22/West Orange County Connection	2000	0-0.5
03455	Bonner, Wayne H. and Sarah A. Williams	Cultural Resource Records Search Results and Site Visit for Royal Street Communications, LLC Telecommunications Facility Candidate La0641b (Storage West) 681 South Tustin Street #301, Orange, Orange County, California	2006	0.25-0.5
03890	Slauson, Dana	Historic Property Survey Report and Historic Property Survey Report - Reduced Build Alternative Addendum	2000	0-0.5

Report No. (OR-)	Author(s)	Title	Year	Distance from PA (in miles)
03939	Wlodarski, Robert	Record Search and Field Reconnaissance for the Proposed AT&T Wireless Telecommunications Site OR0187 (Tustin Inn Colo), located at 639 South Tustin Street, Orange, Orange County, California 92866	2010	0.25-0.5
03953	Billat, Lorna	Courtyard Office RT, CA-ORC4050A, Collocation Submission Packet	2010	0.25-0.5
04129	Bonner, Wayne	Cultural Resource Records Search and Site Visit Results for Tower Co Candidate CA2367 (22/55), 639 South Tustin Street, Orange, Orange County, California	2010	0.25-0.5

The records search also determined that eight cultural resources are located within the one-half mile search radius but none are located within the Project Area (Table 4). These include two prehistoric isolates and six historic built environment resources. None of these resources have been assigned trinomial numbers.

Table 4. Cultural Resources within One-Half Mile of Project Area

Primary No. (P-30-)	Resource Type	Resource Description	Year Recorded	Distance from Project Area
100403	Prehistoric Isolate	Secondary flake fragment	2006	0.25-0.5 mile
100404	Prehistoric Isolate	Primary flake fragment	2006	0.25-0.5 mile
100405	Historic Built Environment Resource	Concrete piers	2006	0.25-0.5 mile
162159	Historic Built Environment Resource	Single Family Home. Strong House	1993	0-0.25 mile
162160	Historic Built Environment Resource	Single Family Home. Otto L. Ahlefeld House	1993	0-0.25 mile
162161	Historic Built Environment Resource	Single Family Home. Krueger House	1993	0-0.5 mile
162162	Historic Built Environment Resource	Single Family Home. Carl G. Ahlefeld House	1993	0-0.25 mile
177045	Historic Built Environment Resource	1 to 3 story commercial building. Courtyard Office RT	2010	0.25-0.5 mile

OTHER CULTURAL RESOURCES SOURCES

In addition to the SCCIC records search a variety of sources were consulted in January 2021 to obtain information regarding the cultural context of the Project Area (Table 5). Sources included the National Register of Historic Places (NRHP), the CRHR, California Built Environment Resource Directory (BERD), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). Specific information about the Project Area, obtained from historic-era maps and aerial photographs, is presented in the Project Area History section.

Table 5. Additional Sources Consulted

Source	Results
National Register of Historic Places (NRHP; 1979-2002 & supplements)	Negative
Historic USGS Topographic Maps	Per the earliest USGS topographic quadrangle map, in 1896 (<i>Anaheim</i> ; 62,500) the Project Area (PA) is undeveloped. However, the nearby streets that are now East Chapman Ave. and South Yorba St. are present in their current location and configuration. The Santiago Creek is present flowing north/south through the western section of the PA. The PA remains undeveloped in the 1902 <i>Corona</i> (125,000) topographic quadrangle map, however, the PA and the eastern area adjacent to the PA is labeled “McPherson.” The PA remains undeveloped until ca. 1942 when the <i>Anaheim</i> (62,500) USGS topographic quadrangle map shows that the entire PA and adjacent areas have been developed into orchards. State Route 55, Costa Mesa Freeway, is present at the west boundary of the PA by 1964 (<i>Orange</i> ; 24,000). By 1964, the orchard has been cleared from the southwest corner of the PA.

Source	Results
Historic US Department of Agriculture Aerial Photographs	The earliest USDA historical aerial photograph of the PA is from 1939 and shows the entire PA within a large orchard. A segment of Santiago Creek flows north/south through the western portion of the PA. The 1946 USDA historic aerial photograph shows that the orchards within the boundaries of the PA have been removed and the PA is left empty. The 1972 USDA historic aerial photograph shows two rectangular gabled roof structures are present within the southern portion of the PA. In the 1974 USGS historic aerial photograph the YMCA building is present in its current location. A paved parking area is visible to the east of the YMCA building in the 1980 USDA historic aerial photograph and the two additional buildings first seen in the 1972 photograph have been connected and appear as a single building. A dirt BMX bicycle course is present in the 1980 photograph. USDA historic aerial photographs from 2014 and 2016 indicate that the ca. 1972 building was removed in the time between these two images. The multi-purpose Santiago Creek Trail is first visible in the 2016 photograph.
California Register of Historical Resources (CRHR; 1992-2014)	Negative
Built Environment Resource Directory (BERD)	Negative
California Historical Landmarks (CHL; 1995 & supplements to 2014)	Negative
California Points of Historical Interest (CPHI; 1992 to 2014)	Negative
Local historical Societies	Requests for information were sent to the Orange County Archives and the Orange Community Historical Society on January 11, 2021. On April 7, 2021, an email response was received from Roger Fitschen of the Orange Community Historical Society (see below for additional information). On February 4, 2021 an email response was received from Assistant Archivist Chris Jepsen of the Orange County Archives. Mr. Jepsen provided background information regarding previous use of the property, a 1913 Orange Road District plat map, and a Los Angeles Times article announcing the construction of the YMCA building with the PA.
Bureau of Land Management (BLM) General Land Office Records	Positive; See Table 6.

ORANGE COMMUNITY HISTORICAL SOCIETY

On April 7, 2021, Orange Community Historical Society board member Roger Fitschen replied to Cogstone's request for information regarding the Project via email. Mr. Fitschen stated that, "Our organization has no further information on that location other than there had been trash dump near there, on the land south of Chapman Avenue in the 1940's to the early 1950s." The land was later used for little league baseball until the appearance of ground subsidence resulted in it no longer being used for kids' sports.

BLM LAND PATENTS

A land patent was granted for the area including the Project Area in 1883 (BLM 2021; Table 6). Additional information is provided in the Historic Setting section.

Table 6. BLM Land Patents

Name	Year	Accession Number	Type	T; R; Section
Juan Pablo Peralta, Antonio Yorba, Bernardo Yorba, and Heirs of Bernardo Yorba	1883	CACAAA 084587	Mexican land grant recognized under the Act to Settle Private Land Claims in California of 1851 (09 Stat. 631).	T:4S, R:9W, Section 33 as part of a patent totaling 63,414 acres.

NATIVE AMERICAN CONSULTATION

Cogstone requested a Sacred Lands File (SLF) search from the Native American Heritage Commission (NAHC) on January 27, 2021. The NAHC responded on February 8, 2021 with a negative SLF search result (Appendix C). The NAHC recommended that 17 Native American tribal organizations and individuals be contacted for further information regarding the Project vicinity. The City of Orange is conducting consultations to meet the requirements of Assembly Bill 52 (AB52).

SURVEY

METHODS

The survey stage is important in a Project's environmental assessment phase to verify the exact location of each identified cultural resource, the condition or integrity of the resource, and the proximity of the resource to areas of cultural resources sensitivity. All undeveloped ground surface areas within the ground disturbance portion of the Project Area were examined. Existing ground disturbances (e.g., cutbanks, ditches, animal burrows, etc.) were visually inspected. Photographs of the Project Area, including ground surface visibility and items of interest, were taken with a digital camera.

For paleontological resources, the purpose is to confirm that field observations conform to the geological maps of the Project Area. Sediments are assessed for their potential to contain fossils. Additionally, if there are known paleontological resources the survey will verify the exact location of those resources, the condition or integrity of each resource, and the proximity of the resource to the Project Area.

For cultural resources, the purpose is to verify the exact location of each identified resource, the condition or integrity of the resource, and the proximity of the resource to areas of cultural resources sensitivity, if any. The surveyor searched for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), or historic-era debris (e.g., metal, glass, ceramics).

ARCHAEOLOGICAL/PALEONTOLOGICAL RESOURCES SURVEY RESULTS

Cogstone archaeologist and cross-trained paleontologist Sandy Duarte surveyed the Project Area on February 4, 2021. Ground visibility within the Project Area was very poor (less than 5 percent) due to hardscaping and landscaping (Figure 8). Where not landscaped, much of the area was covered in grass, weeds, wild tobacco, eucalyptus trees, pepper trees and California fan palm trees (Figure 9). The pedestrian survey consisted of one to three meter wide transects where not landscaped or hardscaped. Sediments exposed consisted of young alluvial deposits consisting of silt and sand with gravel, consistent with geologic mapping by Morton and Miller (2006) (Figure 10). No archaeological or paleontological resources were observed within the Project Area during the survey.



Figure 8. Northeast corner of Project Area. View West



Figure 9. Overview of Project Area. View northeast.



Figure 10. Exposed alluvial deposit at north end of Project Area

HISTORIC BUILT ENVIRONMENT SURVEY RESULTS

On February 4, 2021, Cogstone Architectural Historian Shannon Lopez surveyed the Project Area. Ms. Lopez photo-documented one historic-aged building (the YMCA building) located within the Project Area. The exterior of the building has undergone notable changes within the last (approximately) 10 years and currently stands vacant. **(Note: Following the documentation and evaluation of this resource, on December 3, 2021, this building was destroyed as the result of a major fire. Only the building's concrete foundation survived (Figure 17).**

HISTORIC CONTEXT

The historic context of the YMCA building is *Recreational Development* (1974-1976).

On April 27, 1974, an article in the Los Angeles Times (L.A. Times) announced the “Y to Dedicate New \$175,000 Youth Center” in the City of Orange (Unknown 1974); a USDA historic aerial photograph from 1974 shows the building in its current location that same year. Funding for the building was acquired through the donations of various businesses and individuals. The building was consistently used as a YMCA building until its closure in ca. 2019.

YMCA BUILDING

Built in 1974, this one-story, Modern-style building has an irregular footprint and roof style. The building is set on a concrete foundation raised approximately one to two feet above ground level (depending on elevation). The core of the building is rectangular with a flat roof; shed roofs of varying sizes, covered in composition shingles, project from all four elevations. The exterior of the building is clad in vertically oriented compressed wood board siding. All of the fenestration openings are boarded up by plywood. The main entrance is located at the east façade and is accessible via an ADA compliant concrete and wood plank ramp. A long rectangular concession opening covered with a plywood fold-out door is located at the northern half of the east façade. This area is covered by a wood frame pergola supported by four steel poles. A small rectangular-shaped cinderblock shed is attached to the north elevation of the pergola. A pedestrian door (boarded up behind plywood) is in a recessed area at the southern half of the west elevation. At the center of this elevation are three fixed rectangular windows. At the south elevation, under the low hanging eaves of the projecting shed roof, are three rectangular windows (all covered by plywood) (Figures 11 to 16).

The cinderblock shed's roof is slightly sloped with exposed wood eaves (the roofing material could not be determined at time of survey). The shed's only fenestration opening is a large steel roll-up door which occupies the majority of the south façade.



Figure 11. South elevation (right) and east façade (left), view northwest



Figure 12. East façade, facing west



Figure 13. Exterior shed north of the main building's east façade



Figure 14. North elevation, facing southwest



Figure 15. West elevation, facing east



Figure 16. South elevation, facing northeast



Figure 17. “Orange city firefighters spray water on a fire burning a structure and trees at 2241 E. Palmyra Avenue, the site of the old YMCA building, early Friday afternoon, December 3, 2021, in Orange. Firefighters battled previous fires at the same location in October and November.” (Photo by Mark Rightmire, *Orange County Register/SCNG*, 2021)

HISTORIC RESOURCE EVALUATION

YMCA BUILDING

This building does not appear to be associated with events that have made a significant contribution to the broad patterns of National, State, or local history, therefore, this building is recommended not eligible for listing under CRHR Criterion 1 or NRHP Criterion A. This building does not appear to be associated with the lives of persons significant in our past, therefore, this building is recommended not eligible for listing under CRHR Criterion 2 or NRHP Criterion B. This building is associated with renowned local architect Leason Pomeroy who is responsible for the design of this building, however this building is not an exemplary representation of his work; therefore, this building is recommended not eligible for listing under CRHR Criterion 3 or NRHP Criterion C. This building has not, nor is likely to yield information important in history or prehistory and, therefore, this building is recommended not eligible for listing under CRHR Criterion 4 or NRHP Criterion D.

Integrity: This building retains its integrity of Location, Design, Feeling, and Association. There is notable alteration to the building's integrity of Setting due to surrounding development such as residential development to the south/southeast and the construction of educational facilities immediately to the east. There is also loss of integrity of Materials and Workmanship with the installation of the compressed wood board siding. However, at the time of survey, it is not clear if the original exterior wall materials are covered over by the replacement material or were completely removed.

IMPACT ANALYSIS

PALEONTOLOGICAL SENSITIVITY

A multilevel ranking system was developed by professional resource managers within the Bureau of Land Management (BLM) as a practical tool to assess the sensitivity of sediments for fossils. The Potential Fossil Yield Classification (PFYC) system (BLM 2016; Appendix D) has a multi-level scale based on demonstrated yield of fossils. The PFYC system provides additional guidance regarding assessment and management for different fossil yield rankings.

Fossil resources occur in geologic units (e.g., formations or members). The probability for finding significant fossils in a Project Area can be broadly predicted from previous records of fossils recovered from the geologic units present in and/or adjacent to the study area. The geological setting and the number of known fossil localities help determine the paleontological sensitivity according to PFYC criteria

All alluvial deposits may increase or decrease in fossiliferous potential depending on how coarse the sediments are. Sediments that are close to their basement rock source are typically coarse; those farther from the basement rock source are finer. The chance of fossils being preserved greatly increases once the average size of the sediment particles is reduced to 5 mm or less in diameter. Moreover, fossil preservation also greatly increases with rapid burial in flood-plains, rivers, lakes, oceans, etc. Remains left on the ground surface become weathered by the sun or consumed by scavengers and bacterial activity, usually within 20 years or less. So the sands, silts, and clays of flood-plains, rivers, lakes, and oceans are the most likely sediments to contain fossils.

Using the PFYC system, geologic units are classified according to the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts within the known extent of the geological unit. Although significant localities may occasionally occur in a geologic unit, a few widely scattered important fossils or localities do not necessarily indicate a higher PFYC value; instead, the relative abundance of localities is intended to be the major determinant for the value assignment.

The Project is mapped entirely as late Pleistocene to Holocene young alluvial fan deposits. A records search revealed that all of the fossils previously recovered within a ten mile radius were mostly recovered from more than five feet deep in deposits mapped as Pleistocene at the surface. Sediments with a Holocene component such as those of the study area produced fossils starting at eight feet deep. As such, the project sediments less than eight feet below the modern surface are assigned a low potential for fossils (PFYC 2) due to the lack of fossils in these deposits.

Sediments more than eight feet below the modern surface are assigned a moderate potential for fossils (PFYC 3) due to similar deposits producing fossils at that depth near to the study area.

CULTURAL SENSITIVITY

Based on the results of the pedestrian survey and the cultural records search, the use of much of the Project Area as a landfill, and the negative sacred lands file search, the Project Area has low sensitivity for prehistoric cultural resources. Analysis of these data sources and historical USDA aerial photographs indicate that the Project Area also has low sensitivity for buried historical archaeological features such as foundations or trash pits excluding the known landfill. Fill will be placed within the Project Area within the previous landfill footprint so that excavation will not extend deeper than two feet above the landfill to ensure these deposits are not disturbed.

CONCLUSIONS AND RECOMMENDATIONS

PALEONTOLOGICAL RESOURCES

The Project is mapped entirely as late Pleistocene to Holocene young alluvial fan deposits. The record search revealed no fossil localities from within the Project or the immediate vicinity; however, paleontological localities are recorded near the Project from sediments similar to those found within the study area.

Late Pleistocene to Holocene young alluvial fan sediments less than eight feet below the modern surface are assigned a low potential for fossils (PFYC 2) due to the likely lack of fossils in these deposits. More than eight feet below the modern surface these sediments are assigned a moderate potential for fossils (PFYC 3) due to similar deposits having produced fossils at that depth near to the study area.

Due to the previous development of the Project Area, grading impacts to the late Pleistocene sediments will be low to very low. Because there is a low potential for impacts to the late Pleistocene sediments, no mitigation measures are currently recommended. No mitigation is required for any excavation into the young alluvial fan deposits and artificial fill. No further paleontological resources work is recommended for the proposed Project.

If unanticipated discoveries of paleontological resources occur during construction, all work within 25 feet of the discovery should be halted until the find has been evaluated by a qualified paleontologist.

CULTURAL RESOURCES

No further cultural resources work is recommended for the proposed Project.

One built environment resource is located within the Project Area. One historic age building was thoroughly documented during Cogstone's 2021 built environment survey and one set of Department of Parks and Recreation 523 forms were prepared (Appendix E). Due to a lack of significance and notable architectural alterations, this building is recommended not eligible for listing at the local, state, or national level. Demolition and renovations of the existing structure does not require any mitigation due to lack of significance. **(Note: Following the documentation and evaluation of this resource, on December 3, 2021, this building was destroyed as the result of a major fire. Only the building's concrete foundation survived (see Figure 17)).**

In the event of an unanticipated discovery, all work must be suspended within 50 feet of the find until a qualified archaeologist evaluates it. In the unlikely event that human remains are encountered during project development, all work must cease near the find immediately.

In accordance with California Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods. Work may not resume in the vicinity of the find until all requirements of the health and safety code have been met.

REFERENCES CITED

Aviña, Rose Hollenbaugh

1976 *Spanish and Mexican Land Grants in California*. Arno Press, New York.

Bean, L. J., and C. R. Smith

1978 Gabrielino. In *Handbook of North American Indians*, Volume 8. *California*, volume edited by Robert F. Heizer, pp. 538-549 (W. T. Sturtevant, general editor). Smithsonian Institution, Washington, D.C.

Bell, Alyssa (Natural History Museum of Los Angeles County)

2020 Paleontological resources for the Well 28 project, City of Orange, Orange County, CA.

2021 Paleontological resources for the Palmyra Cemetery Project, City of Orange, Orange County, CA. See Appendix D.

BLM (Bureau of Land Management)

2016 *Potential Fossil Yield Classification (PFYC) System*. <https://www.blm.gov/policy/im-2016-124>, accessed December 2021.

2021 General Land Office Records, Land Patents. <https://glorerecords.blm.gov/search/default.aspx?searchTabIndex=0&searchByTypeIndex=0>, accessed April 2021.

Brigandi, Phil

2011 *A Brief History of Orange California: Plaza City*. The History Press, Charleston.

California Department of Fish and Game

2020 California Listing of Managed Species. <https://wildlife.ca.gov/Conservation/Mammals>, accessed June 2020.

Cal-IPC

2006 California Invasive Plant Inventory, Cal-IPC Publication 2006-02. Berkeley, CA: The California Invasive Plant Council. <https://www.cal-ipc.org/docs/ip/inventory/pdf/Inventory2006.pdf>, accessed June 2020.

City of Orange Public Library

n.d. "History of Orange." <https://www.cityoforange.org/411/History-of-Orange>, accessed September 2, 2020.

Cowan, Robert G.

1977 *Ranchos of California: A List of Spanish Concessions, 1775-1882 and Mexican Grants, 1822-1846*. Historical Society of Southern California.

Dobyns, Henry F.

1983 *Their Number Become Thinned: Native American Population Dynamics in Eastern North America*. University of Tennessee, Knoxville.

FrameFinder

- 1939 Flight C_5925, Frame 142. https://mil.library.ucsb.edu/ap_indexes/FrameFinder/, accessed January 4, 2021.

Gust, S., and C. Richards

- 2012 *Paleontological Monitoring Report for the SR-57 Northbound Widening Project, Cities of Fullerton or Brea, Orange County, California*. 12ORA57 (PM 18.4/20.9), EA 12-0F0324; 29p. On file with Caltrans District 12 or Cogstone, Orange.

Hall, C. A. Jr.

- 2007 Western Transverse Ranges. In *Introduction to the Geology of Southern California and Its Native Plants* (pp. 233-279). University of California Press, Berkeley.

Jefferson, G. T.

- 1991a A Catalogue of late Quaternary Vertebrates from California: Part one, nonmarine lower vertebrate and avian taxa. Natural History Museum of Los Angeles, Technical Report #5.
1991b A Catalogue of Late Quaternary Vertebrates from California-- Part Two, Mammals: Natural History Museum of Los Angeles County Technical Report No. 7.

Kroeber, A. L.

- 1976 *Handbook of Indians of California*. Reprint of 1925 original edition, Dover Publications, New York.

McCawley, William

- 1996 *First Angelinos: the Gabrielino Indians of Los Angeles*. Malki Museum Press/Ballena Press, Banning, California.

McLeod, S. A. (Natural History Museum of Los Angeles County Department of Vertebrate Paleontology)

- 2015 Vertebrate Paleontology Records Check for paleontological resources for the proposed Jeffery Open Space Trail Project, Cogstone Project # 3142, in the City of Irvine, Orange County, project area. On file at Cogstone, Orange, California.
2018 Vertebrate Paleontology Records Check for paleontological resources for the proposed City of Irvine General Plan Update, Phase 2, Project, Cogstone Project # 4339, in the City of Irvine, Orange County, project area. On file at Cogstone, Orange, California.

Morton, D. M., and F. K. Miller

- 2006 Geology map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California; Geology and description of map units, version 1.0. Digital preparation by Cossette, P. M. and K. R. Bovard. USGS Open File Report 2006-1217, scale 1:100,000.
https://ngmdb.usgs.gov/Prodesc/proddesc_78686.htm, accessed December 17, 2020.

NETROnline

- 1946 *Historic Aerials*. <https://www.historicaerials.com/viewer#>, accessed January 4, 2021.

- 1952 *Historic Aerials*. <https://www.historicaerials.com/viewer#>, accessed January 4, 2021.
 1963 *Historic Aerials*. <https://www.historicaerials.com/viewer#>, accessed January 4, 2021.
 1972 *Historic Aerials*. <https://www.historicaerials.com/viewer#>, accessed January 4, 2021.
 1980 *Historic Aerials*. <https://www.historicaerials.com/viewer#>, accessed January 4, 2021.
 2014 *Historic Aerials*. <https://www.historicaerials.com/viewer#>, accessed January 4, 2021.
 2016 *Historic Aerials*. <https://www.historicaerials.com/viewer#>, accessed January 4, 2021.

Ohles, Wallace V.

- 1997 *Mission San Miguel Property and Padres*. The Friends of the Adobes, Inc., San Miguel, California.

Ornduff, R., P. M. Faber, and T. Keeler-Wolf

- 2003 *Introduction to California Plant Life, Revised Edition*. California Natural History Guides, Volume 69. University of California Press, Berkeley.

PBDB

- 2021 Records Search of the Paleobiology Database. Accessed January 7, 2021.

Scott, K., C. Richards, and S. Gust

- 2007 *Paleontological and Archaeological Assessment and Monitoring Report for Central Park West, Irvine, California*. On file with Cogstone, Orange, California.

Sutton, M.

- 2010 The Del Rey Tradition and its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly* 44(2):1-54.

Sutton, M., and J. Gardner

- 2010 Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly* 42(4):1-64.

Taylor, Lisa

- 2018 "Orange Old Towne Historic District and Plaza."
<https://www.preserveorangecounty.org/places/2018/10/4/orange-plaza-historic-district>,
 accessed September 2, 2020.

UCMP

- 2021 Records search of the University of California, Berkeley paleontology database.
 Accessed online January 7, 2021.

Unknown

- 1974 "Y to Dedicate New \$175,000 Youth Center." *Los Angeles Times*. Article published April 27, 1974. Article provided by the Orange County Archives.

USGS (United States Geological Survey)

- 1896 *Anaheim*. U.S. Geological Survey [map]. 1:62,500. Topographic Quadrangle Map. Reston, Virginia.

- 1902 *Corona*. U.S. Geological Survey [map]. 1:125,000. Topographic Quadrangle Map. Reston, Virginia.
- 1942 *Anaheim*. U.S. Geological Survey [map]. 1:62,5000. Topographic Quadrangle Map. Reston, Virginia.
- 1964 *Orange*. U.S. Geological Survey [map]. 1:24,000. Topographic Quadrangle Map. Reston, Virginia.
- 1974 Historic Aerial. <https://livingatlas.arcgis.com/topoexplorer/index.html>, accessed January 4, 2021.

Wagner, D. L.

- 2002 California Geomorphic Provinces. California Geologic Survey Note 36. <https://www.conservation.ca.gov/cgs/Documents/Publications/CGS-Notes/CGS-Note-36.pdf>

Walker, Phillip L., and Travis Hudson

- 1989 *Chumash Healing: Changing Health and Medical Practices in an American Indian Society*. Malki Museum Press, Banning, California.

APPENDIX A. QUALIFICATIONS

EDUCATION

2009 M.A., Anthropology, Kent State University, Kent, Ohio
2006 B.A., Anthropology, Ohio State University, Columbus, Ohio

SUMMARY QUALIFICATIONS

Ms. Valasik is a Registered Professional Archaeologist (RPA) with more than 11 years of experience. She is a skilled professional who is well-versed in the compliance procedures of CEQA and Section 106 of the NHPA and regularly prepares cultural resources assessment reports for a variety of federal, state, and local agencies throughout California. Ms. Valasik has managed a variety of projects at Cogstone in the water, transportation, energy, development, and federal sectors. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. She is accepted as a principal investigator for prehistoric archaeology by the State Office of Historic Preservation's Information Centers.

SELECTED EXPERIENCE

Brea 265 Specific Plan, City of Brea, Orange County, CA. The objective of this study was to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the proposed Specific Plan. This study provided environmental documentation as required by CEQA. A Paleontological Resource Impact Mitigation Program and full-time monitoring was recommended. Due to the high sensitivity for subsurface archaeological resources, a cultural resources mitigation plan and monitoring was also recommended. Sub to Placeworks. Project Manager and Principal Investigator for Archaeology. 2018-2019

1874 Alisos Avenue Project, City of Laguna Beach, Orange County, CA. The purpose of this study was to determine whether the construction of a building site for a single-family residence had the potential to impact cultural or paleontological resources. Cogstone conducted record searches, a Sacred Lands File Search, background research, a pedestrian survey, and produced an assessment. Principal Investigator for Archaeology. 2019

Irvine General Plan Update, Phase II, City of Irvine, Orange County, CA. Cogstone conducted a study to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of Irvine to support the Phase II update of the City's General Plan. A general analysis of impacts of future projects within the City of Irvine that may adversely affect paleontological, archaeological, or historic resources was provided along with mitigation recommendations. Sub to Placeworks. Principal Archaeologist. 2018-2019

River Street Marketplace, City of San Juan Capistrano, Orange County, CA. Cogstone conducted record searches, literature studies, and intensive pedestrian surveys to determine the potential effects to cultural and paleontological resources resulting from the construction of 64,900 square feet of proposed commercial and office space. The proposed project consisted of five buildings and was located on a 5.6-acre property occupied by the Ito Nursery which has been in operation since 1970. Sub to Placeworks. Principal Investigator for Archaeology. 2018

Agora Town Center Mixed-Use EIR, City of Laguna Niguel, Orange County, CA. Cogstone conducted due diligence review of the previous environmental document. Prepared updated cultural and paleontological sections, including updated records search. The project also involved preparation of a new Tribal cultural resources section and assisting the City of Laguna Niguel with combined SB 18/AB52 consultation and outreach. Sub to PlaceWorks. Principal Investigator. 2016

EDUCATION

1990 M.A., Anthropology (Biological), University of California, Los Angeles
1985 B.A., Anthropology (Physical), California State University, Northridge

SUMMARY OF QUALIFICATIONS

Mr. Scott is a professional vertebrate paleontologist with over four decades of experience in paleontological mitigation, fieldwork, curation, and research. He is emeritus paleontology curator at the San Bernardino County Museum, an adjunct instructor at California State University, San Bernardino, and a research associate of the Natural History Museum of Los Angeles County and the La Brea Tar Pits and Museum. He is a 30+ year member of the Society of Vertebrate Paleontology, an international society of professional scientists where he currently serves on the Government Affairs Committee, and also holds membership in the Geological Society of America and other professional societies. Mr. Scott currently serves as an editor for the Journal of Vertebrate Paleontology. He has published over 40 research articles in professional scientific journals.

SELECTED PROJECTS

Purple Line Extension (Westside Subway), Section 1, Metropolitan Transit Authority (METRO), Los Angeles, CA. The project involves construction of seven stations from the existing Purple Line at Wilshire/Western Avenue along Wilshire Boulevard to the Veterans Administration Hospital in Westwood for 8.6 miles. Supervises paleontological monitoring, fossil recovery, and fossil preparation in the lab. Contributes to monthly reporting. Sub to JV West. Paleontologist. 2017-ongoing

Irvine General Plan Update - Phase II, City of Irvine, Orange County, CA. Cogstone conducted a study to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of Irvine to support the Phase II update of the City's General Plan. A general analysis of impacts of future projects within the City of Irvine that may adversely affect paleontological, archaeological, or historic resources was provided along with mitigation recommendations. Sub to PlaceWorks. Paleontology QA/QC. 2018-2019

Victorville Fleet Service Center Project, City of Victorville, San Bernardino County, CA. Cogstone was retained by the County of San Bernardino Department of Public Works to provide paleontological monitoring and mitigation during excavation conducted in conjunction with construction of the 4.8-acre project. Upon completion of monitoring, a Paleontological Resources Monitoring Compliance Report was submitted. Principal Investigator for Paleontology. 2018

SR 14 / Avenue N Operational Interchange Improvements Project, Caltrans District 7, City of Palmdale, Los Angeles County, CA. The purpose of this study was to identify and evaluate paleontological resources during the proposed upgrades and improvements to transportation facilities. Cogstone conducted a ground-truthing survey and requested a record search from the Natural History Museum of Los Angeles County. Online records from the University of California Museum of Paleontology database and the Paleobiology Database were searched for fossil records as well as print sources. Ultimately, a combined Paleontological Identification and Evaluation Report (PIR/PER) was submitted and accepted with minimal comments. Sub to ECORP Consulting. Principal Investigator for Paleontology. 2018

I-10/Grove Avenue Corridor Project, Caltrans District 8, City of Ontario, San Bernardino County, CA. Cogstone produced a combined Paleontological Identification and Evaluation Report (PIR/PER) and Paleontological Mitigation Plan (PMP) to assess and plan for the potential for impacting fossil resources during proposed improvements to Grove Avenue south of Interstate 10. The proposed improvements included the widening of Grove Avenue from a four-lane roadway to a six-lane roadway from 4th Street to State Street/Airport Drive. The City of Ontario acted as the lead agency under CEQA and NEPA. Sub to Parsons. Paleontology QA/QC. 2017

JOHN GUST

Task Manager and Principal Investigator for Archaeology

EDUCATION

2016 Ph.D., Anthropology, University of California, Riverside (UCR)
2011 M.A., Anthropology, UCR
2007 M.A., Applied Geography, University of Colorado, Colorado Springs (UCCS)
2002 B.A., Anthropology, minor in Geography/Environmental Studies, UCCS

SUMMARY OF QUALIFICATIONS

Dr. Gust is a Registered Professional Archaeologist (RPA) with over 9 years of experience in field archaeology. He meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* and his field expertise includes pedestrian surveys, excavation monitoring, resource recording, and historic artifact analysis. Dr. Gust has managed cultural assessments for over 20 cellular tower projects and multiple assessments for construction of commercial and residential structures. He has also managed cultural resources monitoring projects for both public and private sector clients. Dr. Gust is a member of the Society for California Archaeology, Society for American Archaeology, and the American Anthropological Association.

SELECTED EXPERIENCE

Long Beach Municipal Urban Stormwater Treatment (MUST) Project, Los Angeles County, CA. In 2017, Cogstone prepared a cultural and paleontological resources assessment for the proposed construction of a stormwater facility. The project intended to improve the water quality of existing urban runoff to the Los Angeles River, and ultimately to the Long Beach Harbor. Services included pedestrian surveys, records searches, background research, built environment assessment, Native American consultation, and reporting. In 2020, Cogstone produced a Paleontological Resources Management Plan to propose effective mitigation of potential impacts to paleontological resources resulting from proposed construction of MUST and its associated Wetlands project. Sub to Michael Baker. Principal Investigator for Archaeology. 2020

Santiago Canyon Estates Fuel Mod Project, unincorporated Orange County, CA. Cogstone conducted a cultural resources assessment to determine the potential for surface cultural resources for compliance with Orange County Fire Authority's Precise Fuel Modification Plan for zones of the Santiago Canyon Estates Community. Services included a cultural resources records search, Sacred Lands File search from the Native American Heritage Commission, and a reconnaissance survey. Sub to Fire Safe Council East Orange County Canyons. Principal Investigator for Archaeology. 2020

OC-44 Pipeline Rehabilitation Project, City of Newport Beach, Orange County, CA. Cogstone conducted cultural resources monitoring during ground-disturbing activities following their 2014 Cultural Resource Assessment of the APE pursuant to the involvement of land managed by United States Army Corps of Engineers (Section 404 of the Clean Water Act), California Department of Fish and Wildlife, and California Coastal Commission (CCC). Although no cultural resources were identified within the APE, cultural resources and Native American monitoring were required as was stipulated in the Conditions of Approval by the CCC, as detailed in the Archaeological Construction Monitoring Treatment Plan for the project. Sub to Michael Baker. Supervisor. 2019-2020

Euclid Fueling Station Project, City of Santa Ana, Orange County, CA. Cogstone conducted a cultural resources assessment to determine the potential impacts to cultural and paleontological resources during the construction of a convenience store, associated parking, gas station, and underground fuel storage tank. The assessment was conducted to meet the requirements of CEQA with the City of Santa Ana acting as lead agency. Cogstone conducted record searches, a Sacred Lands File Search, an intensive pedestrian survey, gave mitigation recommendations, and produced a report. Sub to Sagecrest Planning + Environmental. Principal Investigator for Archaeology. 2019

KIM SCOTT
Principal Investigator for Paleontology

EDUCATION

2013 M. S., Biology with Paleontology Emphasis, California State University, San Bernardino
2000 B. S., Geology, University of California, Los Angeles

SUMMARY QUALIFICATIONS

Ms. Scott has more than 20 years of experience in California as a paleontologist and sedimentary geologist and 17 years with Cogstone. She has written over 100 paleontological assessments, paleontological mitigation plans, and monitoring compliance reports to all agency requirements. She has experience with street, roadway, interchange, bridge, and grade separation projects. She has managed multiple projects and prepared technical reports with Caltrans/FHWA/FTA/FRA as the lead agency and is knowledgeable of the processes and procedures required to obtain NEPA, NHPA Section 106 and CEQA environmental approvals. Ms. Scott meets the qualifications outlined in Attachment 1 to Caltrans Section 106 Programmatic Agreement with the FHWA, and Chapter 1, Volume 8, on paleontology of the Caltrans Standard Environmental Reference (SER). Ms. Scott serves as company safety officer and is the author of the company safety and paleontology manuals. She is a Member of the Society of Vertebrate Paleontology and the Pacific Section of the Society of Economic Paleontologists and Mineralogists.

SELECTED PROJECTS

City of Irvine General Plan update, Orange County, CA. The project assessed the City of Irvine for paleontologically sensitive sediments as well as previously recorded fossil localities. Prepared a Cultural and Paleontological Assessment. Sub to PlaceWorks. Principal Paleontologist. 2019

City of Lake Forest General Plan update, Orange County, CA. The project assessed the City of Lake Forest for paleontologically sensitive sediments as well as previously recorded fossil localities. Prepared a Cultural and Paleontological Assessment. Sub to De Novo Planning Group. Principal Paleontologist. 2019

I-405 from SR-73 to I-605 Improvements Project, Caltrans District 12, Orange and Los Angeles counties, CA (EA 0H100). The project is to improve 16 miles of Interstate 405 (I-405) by adding General Purpose lanes (GP) and a tolled Express Lane in each direction as well as other improvements to ramps and bridges. Prepared a Paleontological Mitigation and Monitoring Plan (PMMP). Currently supervising paleontological monitoring. Sub to OC405 Partners Joint Venture. Principal Paleontologist. 2017 to present

Purple Line Extension (Westside Subway), Los Angeles County Metropolitan Transportation Authority, Los Angeles County, CA. The project involves extension of the subway in Westwood for 9 miles. Currently supervising paleontological monitoring and fossil recovery of excavations and fossil preparation in the lab. Ms. Scott is also serving as the paleontological consultant for the construction management team's design-build of three stations. Sub to WEST (Stantec/Jacobs JV). Paleontology Director and co-author. 2014-present

State Route 57 Northbound Widening Project, Caltrans District 12/ Orange County Transportation Authority (OCTA), City of Anaheim, Orange County, CA. Caltrans is widening State Route 57 between Orangewood and Katella Avenues. Paleontological Identification Report (PM 11.5/12.5; EA 0M9700). Under contract to WSP. Principal Paleontologist and report author. 2017.

Interstate 605 and Katella Interchange Improvement Project, Caltrans District 12/ Orange County Transportation Authority (OCTA), City of Anaheim, Orange County, CA. Caltrans is updating the southbound onramp to the interchange at Katella Avenue. Combined Paleontological Identification and Evaluation Report (PM 1.1/1.6; EA 0K8700). Under contract to Michael Baker International. Principal Paleontologist and report author. 2017

SHANNON LOPEZ
Architectural Historian

EDUCATION

2018 M.A., History (with an emphasis in architecture), California State University, Fullerton
2012 B.A., History, Minor in Asian-Pacific Studies, California State University, Dominguez Hills

SUMMARY QUALIFICATIONS

Ms. Lopez is a qualified historian and she meets the *Secretary of the Interior's Standards and Guidelines for Architectural History*. Ms. Lopez is experienced in architectural history research and surveys along with photo documentation and recording of built environment resources for local and federal projects. She has extensive knowledge with Native American consultation, consultation with city and county historical societies, and analysis of primary and secondary sources. Additionally, she is an approved Reader at the Huntington Library by the Los Angeles Office of Historic Resources.

SELECTED EXPERIENCE

Irvine General Plan Update, Phase II, City of Irvine, Orange County, CA. Cogstone conducted a study to review and summarize available information regarding known paleontological, archaeological, and historical resources within the boundaries of the City of Irvine to support the Phase II update of the City's General Plan. A general analysis of impacts of future projects within the City of Irvine that may adversely affect paleontological, archaeological, or historic resources was provided along with mitigation recommendations. Sub to Placeworks. Architectural Historian. 2018-2019

2525 N. Main, City of Santa Ana, Orange County, CA. The project proposed demolition of existing buildings and the construction of a five-story multi-family residential apartment complex. Cogstone conducted a cultural and historic resources records search, a field visit to known historic homes and Santiago Park, evaluation of the historic resources, and produced a built environment report. Conducted research, evaluation and co-author. Architectural Historian. 2018

Purple Line Extension (Westside Subway) Crack Propagation Reassessment, City of Beverly Hills, Los Angeles County, CA. On behalf of METRO, Cogstone was approved to reassess the exterior façade of the old Porsche building located on Wilshire Boulevard. The purpose of this reassessment was to document and compare the cracks of the current building during construction of the underground subway with those recorded in a pre-construction survey. Architectural Monitor and Author. 2018

Desert Sage Wellness Center, City of Hemet, Riverside County, CA. Cogstone completed a National Register of Historic Places eligibility re-evaluation for a proposed historical ranching line camp on behalf of the California Area Office Indian Health Service. This study was performed pursuant to Section 110 of the National Historic Preservation Act. Services included an archaeological and architectural pedestrian survey, records search, update to DPR forms, public outreach, additional research, and reported updates to SHPO. Architectural Historian. 2018

3800 W. 6th Street Mixed-Used Development, Koreatown, Los Angeles County, CA. The project proposed to construct a 21-story mixed-use development with two levels of underground parking. Cogstone conducted a paleontological and cultural resources assessment. Tasks included records search, built environment survey, resource recording and technical report. Conducted built environment survey, recoded building, and conducted view shed impact analysis. Architectural Historian. 2018

Accelerated Charter Elementary School, Los Angeles Unified School District, City of Los Angeles, Los Angeles County, CA. The project involved the construction of a new facility on a 2.3-acre site in South Central Los Angeles. Cogstone conducted paleontological and cultural resources monitoring. Five new archaeological sites were defined and updated one building record. Updated building DPR. Sub to Gafon. Assistant Architectural Historian. 2017

EDUCATION

2018 Geographic Information Systems (GIS) Certificate, California State University, Fullerton
2003 B.A., Anthropology, University of California, Santa Barbara

SUMMARY OF QUALIFICATIONS

Mr. Freeberg has over 15 years of experience in cultural resource management and has extensive experience in field surveying, data recovery, monitoring, and excavation of archaeological and paleontological resources associated with land development projects in the private and public sectors. He has conducted all phases of archaeological work, including fieldwork, laboratory analysis, research, and reporting. Mr. Freeberg also has a strong grounding in conventional field and laboratory methods and is skilled in the use of ArcGIS.

SELECTED PROJECTS

Bell Gardens Water Reservoir Project, City of Bell Gardens, Los Angeles County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources during improvements which included a new two-million-gallon reservoir, booster pump station, well to be drilled, and other components. Services included record searches, Sacred Lands File search from the Native American Heritage Commission, and an intensive pedestrian survey of the 1.7-acre project area. Sub to Infrastructure Engineers. GIS Supervisor. 2019-2020

Santiago Canyon Estates Fuel Mod Project, unincorporated Orange County, CA. Cogstone conducted a cultural resources assessment to determine the potential for surface cultural resources for compliance with Orange County Fire Authority's Precise Fuel Modification Plan for zones of the Santiago Canyon Estates Community. Services included a cultural resources records search, Sacred Lands File search from the Native American Heritage Commission, and a reconnaissance survey. Sub to Fire Safe Council East Orange County Canyons. GIS Supervisor. 2020

State Route 108/Highway 49 and Mackey Ranch Road Intersection Improvements Project, Caltrans District 10, Tuolumne County, CA. The Chicken Ranch Rancheria of Me-Wuk Indians of California (Tribe), in partnership with the California Department of Transportation (Caltrans), proposed to replace an intersection and convert to a roundabout designed to accommodate forecasted future traffic volumes and provide an alternative access route to the Chicken Ranch Rancheria. Cogstone completed an intensive-level pedestrian survey, CHRIS records search, sacred lands file search from the NAHC, Native American consultation, consulted with local history societies and preservation groups, and produced a Historical Resources Compliance Report (HRCR) and Archaeological Survey Report (ASR). Sub to Foothill Associates. GIS Supervisor. 2019-2020

Dogwood Road Project, City of El Centro, Imperial County, CA. Cogstone conducted a cultural resources assessment to determine the potential effects to cultural resources resulting from the construction of United States Department of Agriculture (USDA) Part 70-B RD Funding assisted housing on a 2.2-acre parcel. Cogstone conducted a record search, pedestrian survey, and determined that no further cultural resources work was necessary. The assessment provided environmental documentation as required by Section 106 of the National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA). The City of El Centro acted as the lead agency. Sub to Partner Science & Engineering, Inc. GIS Supervisor. 2019-2020

Laguna Creek Trail and Bruceville Road Project, Caltrans District 3, City of Elk Grove, Sacramento County, CA. The City of Elk Grove, in cooperation with Caltrans, proposed multiple trail extensions and gap closures in effort to provide connecting links that would ultimately provide trail users with access to a vast system of trails, with connections to parks, schools, community centers, commercial retail and office areas, and transit facilities. Cogstone conducted pedestrian surveys, records search, and prepared an Archaeological Survey Report (ASR) and a Historic Property Survey Report (HPSR). Sub to Helix Environmental. GIS Supervisor. 2019-2020

EDUCATION

2010 B.S., Geology with paleontology emphasis, California State University, Fullerton
2014 M.S., Geology with a paleontology emphasis, California State University, Fullerton

SUMMARY QUALIFICATIONS

Ms. Vreeland is a Paleontologist with over 10 years of experience in paleontology and geology. Her field and laboratory experience includes fieldwork, fossil preparation and curation, and research projects throughout California and Nevada, as well as conducting fieldwork and surficial geologic mapping in Montana.

SELECTED PROJECTS

South Campus Student Housing Project, City of Sacramento, Sacramento County, CA. Work on this project included preparation of the Paleontological Resources Monitoring and Mitigation Plan as well as developing and conducting the Workers Environmental Awareness Program (WEAP) training for the South Campus Student Housing Project in Sacramento. This involved the construction and operation of student housing facilities for upper-division university students adjacent to the California State University, Sacramento campus. 2020

Alameda Corridor East Grade Separation Projects, various cities, Los Angeles County, CA. Tasks included on-call paleontological resource monitoring for various railway grade separation projects and preparation of Paleontological Mitigation Plans. 2019-2020

American Kings Solar Project, Kings County, CA. This project involved a Paleontological Analysis for the proposed construction, operation, maintenance, and decommissioning of an up to 128-megawatt alternating current photovoltaic solar power-generating facility. 2019

Camino Del Norte Improvements Project, City of Lake Elsinore, Riverside County, CA. The project consisted of extending the alignment of Camino del Norte to join with the intersection of Franklin Street/Grunder Drive and Canyon View Drive and Canyon Estates Drive in Lake Elsinore. Work conducted included preparing the Paleontological Resources Impact Mitigation Program, paleontological resource monitoring, and preparation of the final monitoring report for the project. 2019

High Desert Gateway West Project, City of Hesperia, San Bernardino County, CA. The project included construction of nine retail buildings totaling 126,763 square feet and 939 vehicle parking spaces, including 11 Americans with Disabilities Act-accessible stalls. Work conducted included preparation of the Paleontological Resources Technical Letter Report for the project, paleontological resource monitoring, and a final paleontological monitoring report. 2019

I-15/Railroad Canyon Road Project, Cities of Wildomar and Lake Elsinore, Riverside County, CA. The project involved reconstructing the northbound diagonal ramps to a hook configuration at Grape Street, maintaining a diamond configuration for the southbound ramps at Railroad Canyon Road, widening the southbound entrance ramp to two lanes at Railroad Canyon Road merging to a single lane as it connects with the planned auxiliary lane to southbound I-15, and constructing an acceleration lane at the entrance ramps and a deceleration lane at the exit ramps. Responsibilities included preparation of the Paleontological Mitigation Plan for the project, paleontological resources monitoring, and preparation of a final monitoring report. 2019

La Pata Avenue Road Extension Project, City of San Juan Capistrano, Orange County, CA. This project consisted of a massive undertaking to extend La Pata Avenue and Camino del Rio in San Juan Capistrano, and involved the removal of 14.8 million cubic yards of earth material. Responsibilities included paleontological resource monitoring; fossil salvage, preparation, and identification; and preparation of a final monitoring report. 2015-2016

EDUCATION

2002 B.A., Cultural Anthropology, University of California, Santa Barbara

TRAINING AND CERTIFICATIONS

HAZWOPER Certified - Certified American Red Cross CPR; Certified American Red Cross Standard First Aid; Applied Archaeology of Southern California, USDA Forest Service, San Bernardino National Forest Railroad Security Certified.

SUMMARY OF QUALIFICATIONS

Ms. Duarte is a paleontologist and archaeologist with over 15 years of experience in paleontological and archaeological monitoring, surveying, and excavation in southern California. Duarte has experience with Native American consultation as required by Section 106 of the National Historic Preservation Act (NHPA) and under Senate Bill 18 for the protection and management of cultural resources. Ms. Duarte previously worked for the U.S. Forest Service in the Biology, Timber, and Geology Department as an archaeologist, including serving as a trained wild-land firefighter to preserve archaeological sites during forest fires. Additional skills include paleontological identification, fossil preparation, artifact identification and preparation, and final report preparation.

SELECTED PROJECTS

Bell Gardens Water Reservoir Project, City of Bell Gardens, Los Angeles County, CA. Cogstone conducted a cultural and paleontological resources assessment to determine the potential impacts to cultural and paleontological resources during improvements which included a new two-million-gallon reservoir, booster pump station, well to be drilled, and other components. Services included record searches, Sacred Lands File search from the Native American Heritage Commission, and an intensive pedestrian survey of the 1.7-acre project area. Sub to Infrastructure Engineers. Archaeologist/Co-Author. 2019-2020

OC-44 Pipeline Rehabilitation Project, City of Newport Beach, Orange County, CA. Cogstone conducted cultural resources monitoring during ground-disturbing activities following a Cultural Resource Assessment of the APE in 2014 by Cogstone pursuant to the involvement of land managed by United States Army Corps of Engineers (Section 404 of the Clean Water Act), California Department of Fish and Wildlife, and California Coastal Commission (CCC). Although no cultural resources were identified within the APE, cultural resources and Native American monitoring were required as was stipulated in the Conditions of Approval by the CCC, as detailed in the Archaeological Construction Monitoring Treatment Plan for the project. Sub to Michael Baker. Archaeologist. 2019-2020

Santiago Canyon Estates Fuel Mod Project, unincorporated Orange County, CA. Cogstone conducted a cultural resources assessment to determine the potential for surface cultural resources for compliance with Orange County Fire Authority's Precise Fuel Modification Plan for zones of the Santiago Canyon Estates Community. Services included a cultural resources records search, Sacred Lands File search from the Native American Heritage Commission, and a reconnaissance survey. Sub to Fire Safe Council East Orange County Canyons. Archaeologist/Co-Author. 2020

Rockcroft Parcels, City of Malibu, Los Angeles County, CA. This study was conducted to determine the potential impacts to cultural resources during the proposed construction of a single residence. Cogstone assessed two parcels; conducted a record search, Sacred Lands File search, pedestrian survey; and produced a cultural resources assessment. The assessment complied with the requirements of CEQA and included all information required by the City of Malibu Archaeology Guidelines. Sub to Advance Construction. Archaeologist and Report Author. 2020

APPENDIX B. PALEONTOLOGICAL RECORD SEARCH



Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007
tel 213.763.DINO
www.nhm.org

Research & Collections

e-mail: paleorecords@nhm.org

January 15, 2021

Cogstone Resource Management

Attn: Logan Freeberg

re: Paleontological resources for the Palmyra Cemetery Project (Cogstone #5161)

Dear Logan:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Palmyra Cemetery project area as outlined on the portion of the Orange USGS topographic quadrangle map that you sent to me via e-mail on January 8, 2020. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County.

Locality Number	Location	Formation	Taxa	Depth
LACM VP 3524	North of Malvern Ave & ~1/2 mile west of Gilbert St; Fullerton	Terrace deposits (silty sandstone)	Plants; Invertebrates; Fish (Chondrichthyes); rodents (Rodentia); horse family (Equidae); deer (Cervidae)	unknown
LACM VP 4018	SE corner of Warner Ave & Goldenwest St	peat bog		4-8 feet bgs
LACM IP 4695	Bristol St. and Paularino Ave.	Palos Verdes Sand	Invertebrates	unknown
LACM VP 7867	former El Toro Marine Base	Unknown formation (Pleistocene)	Rodent (rodentia)	25 ft bgs
LCAM VP 4219	SW end of the Newport Fwy between Santa Isabel Ave & 23rd St	Palos Verdes Sand (coarse poorly sorted friable sand)	Invertebrates, fish, birds	30 ft bgs

VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface

This records search covers only the records of the Natural History Museum of Los Angeles County (“NHMLA”). It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,

A handwritten signature in black ink that reads "Alyssa Bell". The signature is written in a cursive, flowing style.

Alyssa Bell, Ph.D.
Natural History Museum of Los Angeles County

enclosure: invoice

APPENDIX C. NATIVE AMERICAN CONSULTATION

Local Government Tribal Consultation List Request

Native American Heritage Commission

1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahe@nahe.ca.gov

Type of List Requested

☒ **CEQA Tribal Consultation List (AB 52) – Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2**

☐ **General Plan (SB 18) – Per Government Code § 65352.3.**

Local Action Type:

☐ General Plan ☐ General Plan Element ☐ General Plan Amendment
☐ Specific Plan ☐ Specific Plan Amendment ☐ Pre-planning Outreach Activity

Required Information

Project Title: Palmyra Cemetery

Local Government/Lead Agency: City of Orange

Contact Person: Vidal F. Márquez

Street Address: 300 E. Chapman Avenue

City: Orange **Zip:** 92866

Phone: 714 744 7214 **Fax:** 714 744 7222

Email: vmarquez@cityoforange.org

Specific Area Subject to Proposed Action

County: Orange **City/Community:** Orange

Project Description:

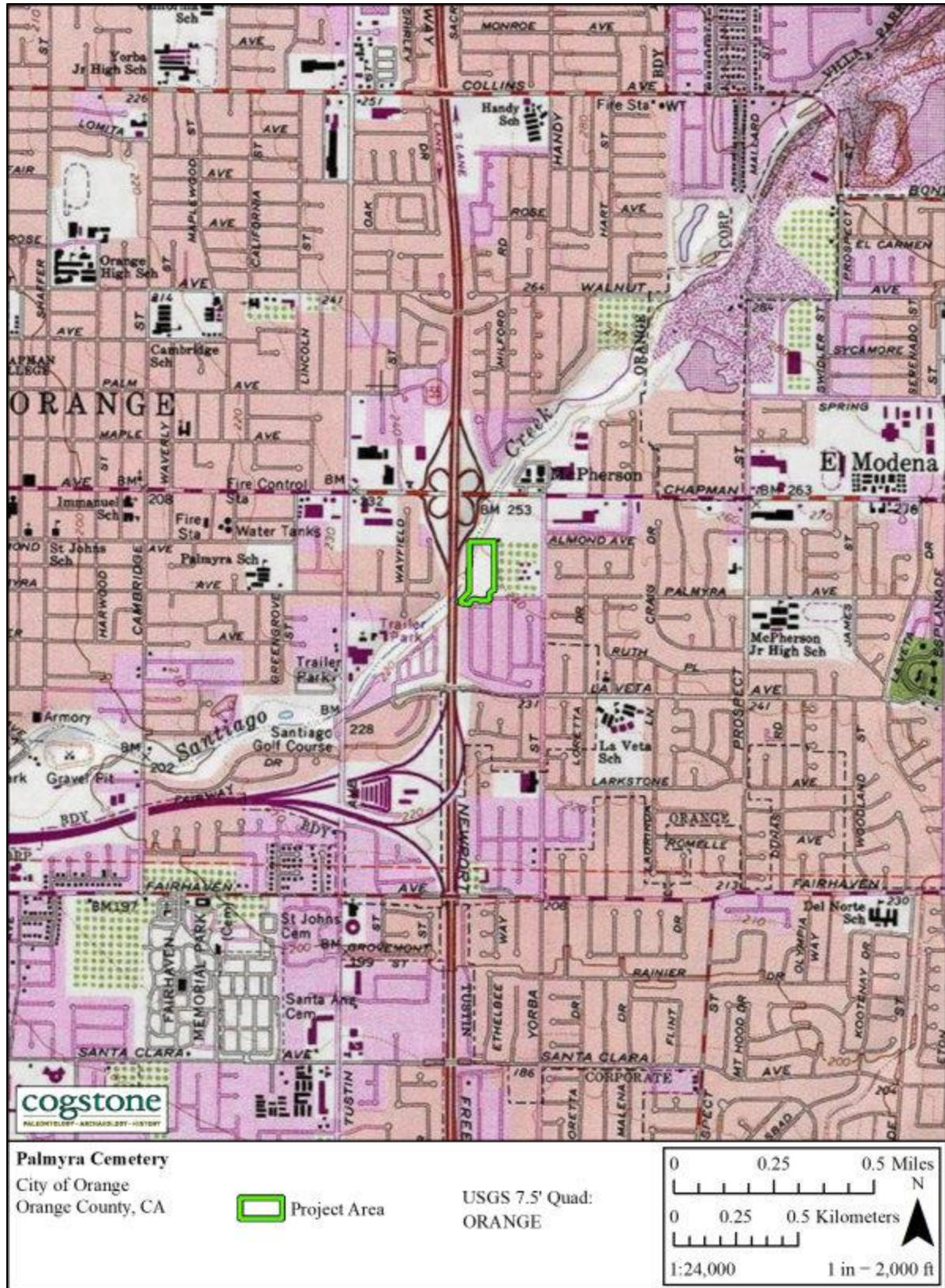
The Project involves the development of a cemetery which will require the import of at least two feet of fill. The existing 1970s building will be rehabilitated for the Project. The Project area has been previously developed as a gravel quarry, then a landfill, and finally used as a YMCA starting in the 1970s. A Section 404 permit will not be required for the Project.

Additional Request

☒ **Sacred Lands File Search – Required Information:**

USGS Quadrangle Name(s): Orange

Township: 4S **Range:** 9W **Section(s):** 33







CHAIRPERSON
Laura Miranda
Wiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Wiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
William Mungary
Paiute/White Mountain
Apache

COMMISSIONER
Julie Tumamaiti
Stenslie
Chumash

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

STATE OF CALIFORNIA

Gov. Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

February 8, 2021

Vidal F. Marquez
City of Orange

Via Email to: vmarquez@cityoforange.org

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Palmyra Cemetery Project, Orange County

Dear Mr. Marquez:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

- Any report that may contain site forms, site significance, and suggested mitigation measures.

All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,



Andrew Green
Cultural Resources Analyst

Attachment

**Native American Heritage Commission
Tribal Consultation List
Orange County
2/8/2021**

**Campo Band of Diegueno
Mission Indians**

Ralph Goff, Chairperson
36190 Church Road, Suite 1 Diegueno
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

**Ewiaapaayp Band of Kumeyaay
Indians**

Robert Pinto, Chairperson
4054 Willows Road Diegueno
Alpine, CA, 91901
Phone: (619) 445 - 6315
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This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Palmyra Cemetery Project, Orange County.

**Native American Heritage Commission
Tribal Consultation List
Orange County
2/8/2021**

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This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Palmyra Cemetery Project, Orange County.

APPENDIX D. PALEONTOLOGICAL SENSITIVITY RANKING CRITERIA

PFYC Description Summary (BLM 2016)	PFYC Rank
Very Low. The occurrence of significant fossils is non-existent or extremely rare. Includes igneous (excluding air-fall and reworked volcanic ash units), metamorphic, or Precambrian rocks. Assessment or mitigation of paleontological resources is usually unnecessary except in very rare or isolated circumstances that result in the unanticipated presence of fossils.	1
Low. Sedimentary geologic units that are unlikely to contain vertebrate or scientifically significant nonvertebrate fossils. Includes rock units less than 10,000 years old and sediments with significant physical and chemical changes (e.g., diagenetic alteration) which decrease the potential for fossil preservation. Assessment or mitigation of paleontological resources is not likely to be necessary.	2
Moderate. Units are known to contain vertebrate or scientifically significant nonvertebrate fossils, but these occurrences are widely scattered and/or of low abundance. Common invertebrate or plant fossils may be found and opportunities may exist for casual collecting. Paleontological mitigation strategies will be based on the nature of the proposed activity. Management considerations cover a broad range of options that may include record searches, pre-disturbance surveys, monitoring, mitigation, or avoidance. Surface-disturbing activities may require assessment by a qualified paleontologist to determine whether significant paleontological resources occur in the area of a proposed action, and whether the action could affect the paleontological resources.	3
High. Geologic units containing a high occurrence of significant fossils. Fossils must be abundant per locality. Vertebrates or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. Mitigation plans must consider the nature of the proposed disturbance, such as removal or penetration of protective surface alluvium or soils, potential for future accelerated erosion, or increased ease of access that could result in looting. Detailed field assessment is normally required and on-site monitoring or spot-checking may be necessary during land disturbing activities. In some cases avoidance of known paleontological resources may be necessary.	4
Very High. Highly fossiliferous geologic units that consistently and predictably produce vertebrate or scientifically significant invertebrate or plant fossils. Vertebrate fossils or scientifically significant invertebrate fossils are known or can reasonably be expected to occur in the impacted area. Paleontological resources are highly susceptible to adverse impacts from surface disturbing activities. Paleontological mitigation may be necessary before or during surface disturbing activities. The area should be assessed prior to land tenure adjustments. Pre-work surveys are usually needed and on-site monitoring may be necessary during land use activities. Avoidance or resource preservation through controlled access, designation of areas of avoidance, or special management designations should be considered.	5
Unknown. An assignment of “Unknown” may indicate the unit or area is poorly studied and field studies are needed to verify the presence or absence of paleontological resources. The unit may exhibit features or preservational conditions that suggest significant fossils could be present, but little information about the actual unit or area is known. Literature searches or consultation with professional colleagues may allow an unknown unit to be provisionally assigned to another Class, but the geological unit should be formally assigned to a Class after adequate survey and research is performed to make an informed determination.	U
Water or Ice. Typically used only for areas which have been covered thus preventing an examination of the underlying geology.	W, I

APPENDIX E. DPR 523 SITE RECORD FORMS

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code: 6Z

Other Listings
Review Code

Reviewer

Date

Page 1 of 12

*Resource Name or #: 2241 E. Palmyra Ave.

P1. Other Identifier:

P2. Location: ☒ Not for Publication ☐ Unrestricted

a. County: Orange

b. USGS 7.5' Quad:

Date: T ; R ; ¼ of ¼ of Sec ; S.B.B.M.

c. Address: 2241 E. Palmyra Ave.

City: Orange

Zip: 92869

d. UTM: Zone: ; mE/

mN

e. Other Locational Data:

Elevation:

P3a. Description:

(Note: Following the documentation and evaluation of this resource, on December 3, 2021, this building was destroyed as the result of a major fire. Only the building's concrete foundation survived.)

Built in 1974, this one-story, Modern-style building has an irregular footprint and roof style. The building is set on a concrete foundation raised approximately 1-2 feet above ground level (depending on elevation). The core of the building is rectangular with a flat roof; shed roofs of varying sizes, covered in composition shingles, project from all four elevations. The exterior of the building is clad in vertically oriented compressed wood board siding. All of the fenestration openings are boarded up by plywood. The main entrance is located at the east façade and is accessible via an ADA compliant concrete and wood plank ramp. A long rectangular concession opening covered with a plywood fold-out door is located at the northern half of the east façade. This area is covered by a wood frame pergola supported by four steel poles. A small rectangular-shaped cinderblock shed is attached to the north elevation of the pergola. The shed roof is slightly sloped with exposed wood eaves (the roofing material could not be determined at time of survey). The shed's only fenestration opening is a large steel roll-up door which occupies the majority of the south façade. (See Continuation Sheet)

P3b. Resource Attributes: HP13. Community Center/Social Hall-YMCA building

P4. Resources Present: ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other



P5b. Description of Photo:
South elevation (right) and east façade (left), view northwest

P6. Date Constructed/Age

and Sources: ☒ Historic

☐ Prehistoric ☐ Both

1974

P7. Owner and Address:

Kornerstone Park, LLC

2500 E. Ball Road

Suite 260

Anaheim, CA 92806

P8. Recorded by:

Cogstone Resource

Management, Inc.; 1518 W.
Taft Ave., Orange, CA 92865

P9. Date Recorded:

February 4, 2021

P10. Survey Type:

Pedestrian survey

P11. Report Citation: Duarte, Sandy, Shannon Lopez, and Kelly Vreeland, 2021, Cultural and Paleontological Resources Assessment for the Palmyra Cemetery Project, City of Orange, Orange County, California

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

BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 12

*Resource Name or #: 2241 E. Palmyra Ave.

NRHP Status Code: 6Z

B1. Historic Name: None

B2. Common Name: YMCA of Orange

B3. Original Use: YMCA Youth center (recreation center)

B4. Present Use: Demolished

*B5. Architectural Style: Modern style

*B6. Construction History:

On April 27, 1974, an article in the Los Angeles Times (L.A. Times) announced the "Y to Dedicate New \$175,000 Youth Center" in the City of Orange; a historic aerial photograph from 1974 shows the building in its current location that same year. Funding for the building was acquired through the donations of various businesses and individuals. Ca. 1974, the address of this location was listed as 290 S. Yorba Street and was updated to its current address (2241 E. Palmyra Ave.) around the same time. Prior to the construction of the new building, a temporary YMCA headquarters already existed on the southern portion of the property; it was demolished ca. 2014. The exterior compressed wood board siding was installed ca. 2015-2016, replacing the original wood plank material. (At the time of survey it was not clear if the original material was replaced or covered over by the compressed wood sheets.) The building was consistently used as a YMCA building until its closure in ca. 2019.

*B7. Moved? ☒No ☐Yes ☐Unknown Date: Original Location:

*B8. Related Features:

B9a. Architect: Leason Pomeroy III (LPA. Inc)

b. Builder: Unknown

*B10. Significance: None Theme: Recreational Development

Area: Orange, CA

Period of Significance: 1974-1976

Property Type: Community Center/Social Hall

Applicable Criteria: N/A

This building does not appear to be associated with events that have made a significant contribution to the broad patterns of National, State, or local history, therefore, this building is recommended not eligible for listing under California Register of Historical Resources (CRHR) Criterion 1 or National Register of Historic Places (NRHP) Criterion A. This building was designed by renowned local architect Leason Pomeroy III, however this building is not an exemplary representation of his work in comparison to other extant award-winning buildings. Therefore, this building is recommended not eligible for listing under CRHR Criterion 2/NRHP Criterion B (persons significant in our past) or CRHR Criterion 3/NRHP Criterion C (embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction). This building has not, nor is likely to yield information important in history or prehistory and, therefore, this building is recommended not eligible for listing under CRHR Criterion 4 or NRHP Criterion D.

Integrity: This building retains its integrity of Location, Design, Feeling, and Association. There is notable alteration to the building's integrity of Setting due to surrounding development such as residential development to the south/southeast and the construction of educational facilities immediately to the east. There is also loss of integrity of Materials and Workmanship with the installation of the compressed wood board siding. However, at the time of survey, it is not clear if the original exterior wall materials are covered over by the replacement material or were completely removed.

B11. Additional Resource Attributes:

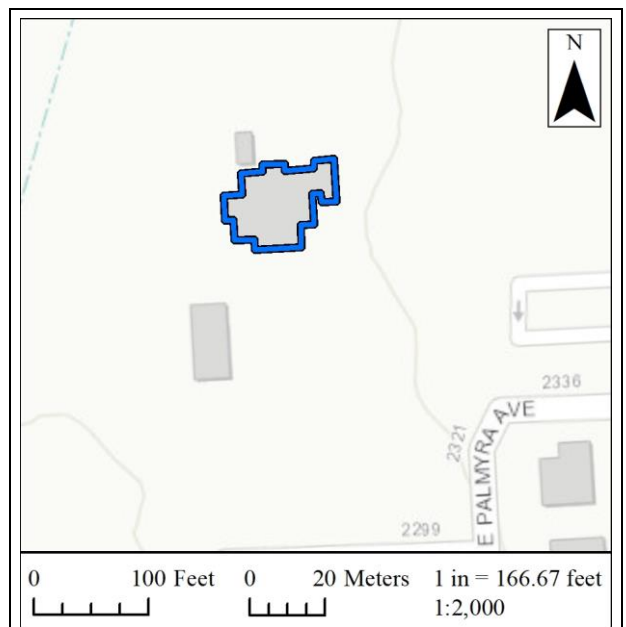
*B12. References:

(See Continuation Sheet)

B13. Remarks:

*B14. Evaluator: Shannon Lopez

*Date of Evaluation: February 4, 2021



State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #
HRI#
Trinomial

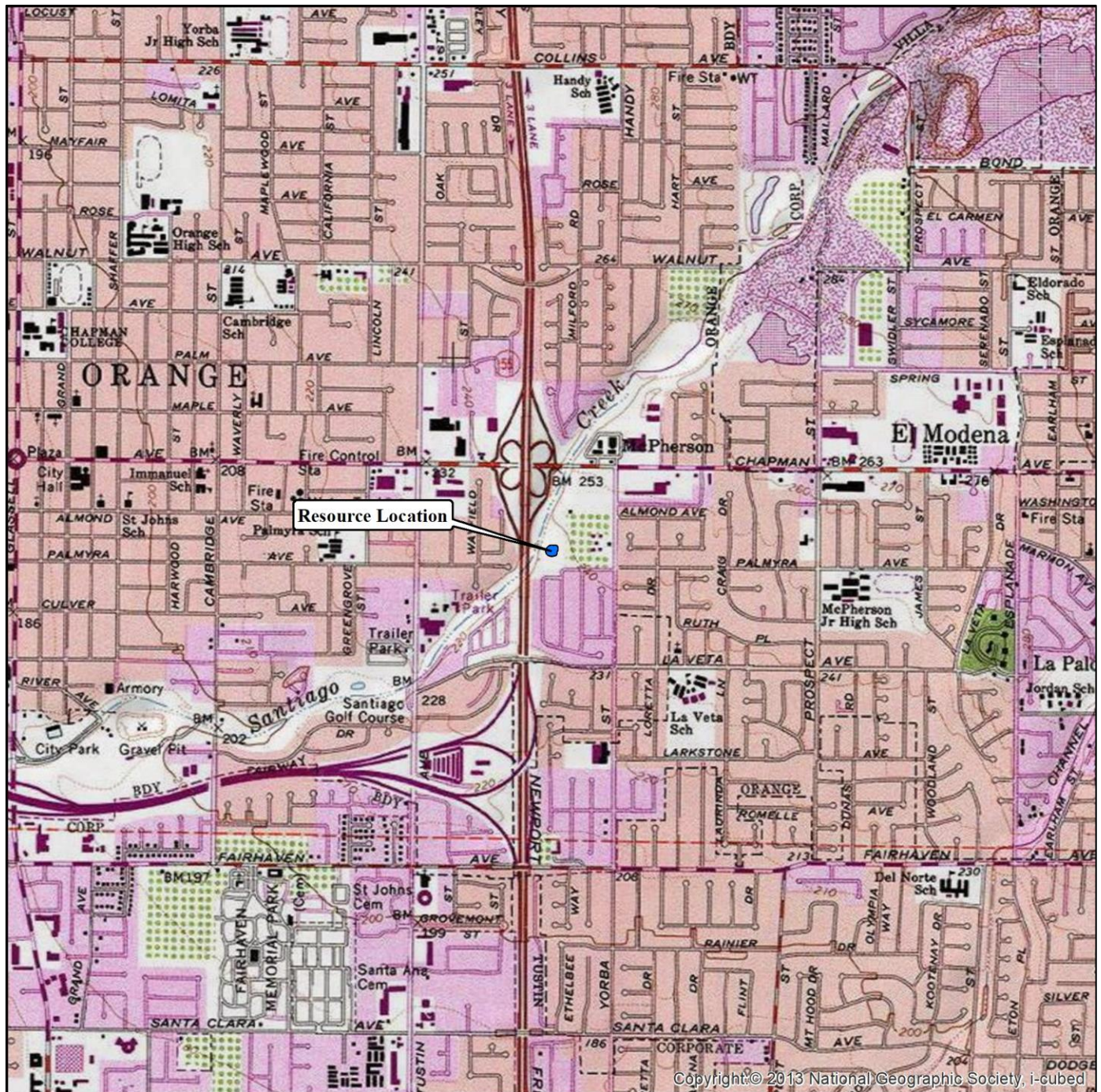
Page 3 of 12

*Resource Name or #: 2241 E. Palmyra Ave.

Map Name: Orange

*Scale: 1:24,000

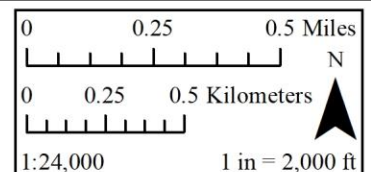
*Date of Map: 1981



2241 East Palmyra Avenue
City of Orange
Orange County, CA

 Historic Aged Building

USGS 7.5' Quad:
ORANGE



Description Cont.

At the south elevation, under the low hanging eaves of the projecting shed roof, are three rectangular windows (all covered by plywood). A pedestrian door (boarded up behind plywood) is in a recessed area at the southern half of the west elevation. At the center of this elevation are three fixed rectangular windows.

Brief History of the YMCA

In 1844, George Williams and 11 friends formed the first Young Men's Christian Association (YMCA) in London, England. It was originally intended as a place of refuge for young men seeking to escape the harshness of industrialized Victorian life and opened its door to all members of society. In 1851, retired sea captain Thomas Valentine Sullivan founded the first United States based YMCA after hearing of the successes of Williams and his organization. (YMCA 2020)

In 1853, Anthony Bowen, a freed slave, started the first YMCA for African Americans in Washington, D.C. and in 1856, the first "student YMCA" was founded at Cumberland University in Lebanon, Tennessee. In the 1860s, the YMCA housing program was first offered to young men who were transitioning from rural area to cities as a safe and affordable place to stay. YMCA housing accommodations doubled between 1922 and 1940 from 55,000 rooms to over 100,000. (YMCA 2020)

Upon the outbreak of the American Civil War, a conference with President Abraham Lincoln was held in 1961 which resulted in enhanced efforts to recruit new YMCA volunteers. Throughout the span of the Civil War, 5,000 YMCA members (then referred to as the U.S. Christian Commission) distributed food, clothing, medical supplies, served as chaplains, surgeons, nurses, and even offered literacy courses to soldiers. (YMCA 2020)

In 1875, 1879, and 1917 YMCAs supporting Chinese, Native American, and Japanese communities were established respectively. Throughout World War I, the YMCA continued to provide welfare and morale services for the military and by the war's end raised more than \$235 million (or \$4.3 billion today) for relief work. During World War II, the YMCA in collaboration with other voluntary organizations founded the United Service Organizations for National Defense (known today as the USO). (YMCA 2020)

During the late 1970's, the YMCA of the USA founded the Government Relations and Public Policy Office. This office represents the YMCA mission with lawmakers at the state and federal level. The YMCA has continued to respond with fundraising and rebuilding efforts to address multiple world crises such as September 11 (2001), the Pacific Rim tsunami (2002), Hurricane Katrina (2005) and the earthquake in Haiti (2010). (YMCA 2020)

In 1974, in the City of Orange, CA, the construction of a modern-style YMCA building at (what is now) 2241 E. Palmyra Ave. was announced. The project was funded through donations and designed by Leason Pomeroy III of LPA Inc. (LPA). LPA was founded in 1964 in the City of Orange by Leason Pomeroy III, a native of the City's Old Towne neighborhood. Pomeroy managed the design of the Orange YMCA building and many other projects inside and outside Orange County including Thomas F. Riley Terminal at John Wayne Airport, Orange County.

LPA (Leason Pomeroy Associates) Inc.

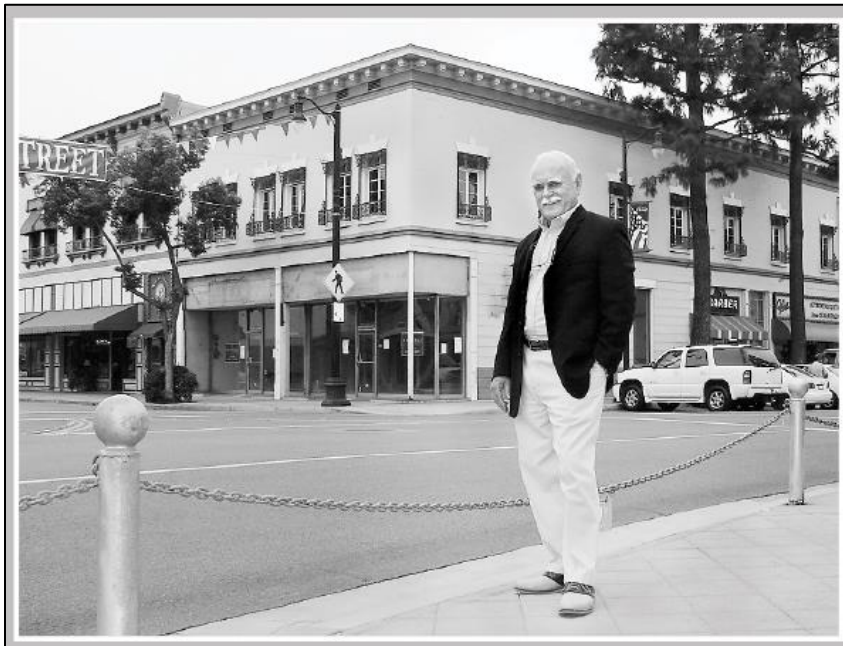
In 1965, LPA Inc. (LPA) was founded by Leason Pomeroy III in the City of Orange, California. In its early years, LPA focused on local and small projects such as the Orange YMCA and renovations to buildings within Old Town Orange. In the late 1960s LPA was awarded a contract for designing American Motors dealerships in California and Arizona. Also during this time, the company won a contract to create a three-phase master plan for a development adjacent to John Wayne Airport. In 1971, LPA won its first AIA Design award for its renovation of a 1-story building (44 Plaza Square) in Old Towne Orange. In the 1980s, the company expanded its services to interior design and would design a new two-level terminal at John Wayne Airport in 1987. By 1988, LPA Inc. was the largest architectural firm based on Orange County and the fourth largest firm in California by 1989 (*Los Angeles Times* 1988). In 1989, the company moved to a new three-story building in Irvine designed by LPA (Heinfeld 2015). In 1990, LPA Inc. was awarded the 1990 Firm Award from the California Council, The American Institute of Architecture for producing distinguished architecture for over 10 years (*The Sacramento Bee* 1990).

Leason F. Pomeroy III

Architect Leason F. Pomeroy III was born in ca. 1938 and is a native to the City of Orange's Old Towne. Pomeroy founded LPA in 1965 and opened his first office in the *Orange Daily News* building (44 Plaza Square; listed as a contributor to The Plaza Historic District in 1982 (Clark 1982)) in the historic Orange Plaza. Pomeroy has been heavily involved in preservation efforts of the historic buildings in Old Towne. One of Pomeroy's most notable projects was the design of the Orange County Thomas F. Riley Terminal at John Wayne Airport in 1987 (construction was completed in 1990). In 1988, Pomeroy received the 1988 Distinguished Achievement Award from the College of Architecture and Environmental Design at Arizona State University (*Los Angeles Times* 1988). In 1999, Pomeroy resigned as LPA's chairman at the age of 61 but continued to work with the company on several major projects for the UC Irvine campus as a consulting architect. By 2009, Pomeroy moved back to Orange and worked as an independent consultant (Anderson 2009).

Notable projects headed by Pomeroy as principal of LPA Inc. which are still extant include (but are not limited to):

- Chapel for Sunshine Acres Children's Home near Mesa, Arizona (1959)
- IBM Building, 4263 Commercial Street SE, Salem, Oregon (1970)
- Senator Ford (dealership), 3801 Florin Rd., Sacramento (1971)
- The Landmark Business and Financial Center, 1750 Howe Ave, Sacramento (1985); Received the Award of Excellence in 1986 from the California Council of the Society of American Registered Architects (*The Los Angeles Times* 1986)
- Renaissance Center, (ca. 1985) 4001 S Decatur Blvd, Las Vegas; Received an Honor Award in 1986 from the California Council of the Society of American Registered Architects (*The Los Angeles Times* 1986)
- Thomas F. Riley Terminal at John Wayne Airport, Orange County (1987)



Leason Pomeroy III. Photo taken by Mike Escobedo 2009.

References Cont.

Anderson, Karen

2009 "Know the Neighbors: Prominent Plaza Property Owners in Old Towne." *Orange Review*. Published in Sep/Oct 09 issue. Available at: <https://orangereview.com/article/462/leason-pomeroy>. Accessed February 8, 2021.

Clark, Paul F.

1982 "The Plaza Historic District". *National Register of Historic Places Inventory- Nomination Form*. Available at: <https://www.cityoforange.org/DocumentCenter/View/8664/Plaza-Historic-District-National-Register-Designation?bidId=>. Accessed: September 15, 2021.

Heinfeld, Dan

2015 "Celebrating 50 Years: LPA by the Decades." Available at: <http://blog.lpainc.com/celebrating-50-years-lpa-by-the-decades>. Accessed February 8, 2021.

Newspapers.com

1986 "SARA Lauds Designers of California Projects". *The Los Angeles Times* (Los Angeles Times). Published: April 6, 1986. Sunday. Page 165. Available at: <https://www.newspapers.com/image/401821287/>. Accessed: September 15, 2021.

1988 "People on the Move: Leason F. Pomeroy III". *The Los Angeles Times* (Los Angeles, California). Published: September 11, 1988. Sunday. Page 161. Available at: <https://www.newspapers.com/image/405007812/>. Accessed: September 15, 2021.

1988 "The Orange County Terminal Project: Setting the Record Straight". *Los Angeles Times* (Los Angeles, California). Published: December 7, 1988. Wednesday. Page 79. Available at: <https://www.newspapers.com/image/405854294/>. Accessed: September 15, 2021.

1990 "Award for design firm". *The Sacramento Bee* (Sacramento, California).

O'Dell, John

1999 "LPA Chairman Quits; CEO Is Seen as Likely Successor." *Los Angeles Times*. Published February 23, 1999. Available at: <https://www.latimes.com/archives/la-xpm-1999-feb-23-fi-10938-story.html>. Accessed February 8, 2021.

Percy, Nathaniel

2021 "3rd fire at old Orange YMCA building makes it a complete loss". *The Orange County Register*. Article published: December 3, 2021. Available at: <https://www.ocregister.com/2021/12/03/3rd-fire-at-old-orange-ymca-building-makes-it-a-complete-loss/>. Accessed: December 13, 2021.

Unknown

1974 "Y to Dedicate New \$175,000 Youth Center." *Los Angeles Times*. Article published April 27, 1974. Article provided by the Orange County Archives.

USGS Historical Topographic Map Explorer

1974 "Orange." Historic Aerial. <https://livingatlas.arcgis.com/topoexplorer/index.html>. Accessed February 11, 2021.

Photos Cont.



Photo 1. East façade, facing west



Photo 2. Exterior shed north of the main building's east façade



Photo 3. North elevation, facing southwest



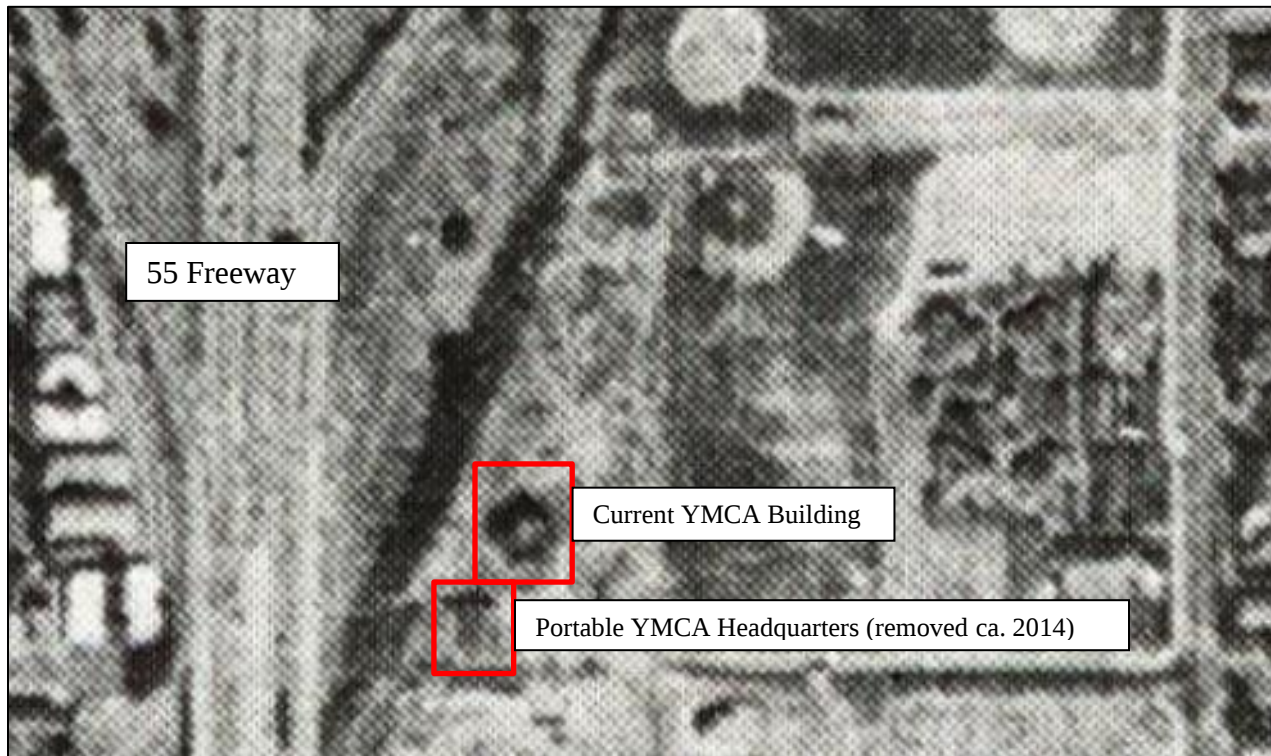
Photo 4. West elevation, facing east



Photo 5. South elevation, facing northeast



Photo Key



1974 Historic Aerial Photograph



2241 Palmyra Ave. Photo courtesy of Google Maps, taken 2014.



2241 Palmyra Ave. Photo courtesy of Google Maps, taken 2016.



"Orange city firefighters spray water on a fire burning a structure and trees at 2241 E. Palmyra Avenue, the site of the old YMCA building, early Friday afternoon, December 3, 2021, in Orange. Firefighters battled previous fires at the same location in October and November." (Photo by Mark Rightmire, *Orange County Register/SCNG*, 2021)