

Phase I Cultural Resources Study for the Former Freeman Products In-Situ Bioremediation Project Torrance, Los Angeles County, California

Samuel Gordenstein, Laura Groves van Onna, and M. Colleen Hamilton

Prepared By



Applied EarthWorks, Inc.
3550 E. Florida Avenue, Suite H
Hemet, CA 92544

Prepared For

Ramboll Americas Engineering Solutions, Inc.
350 S. Grand Avenue, Suite 2800
Los Angeles, CA 90071

June 2025

USGS Torrance, CA 7.5-minute topographic quadrangle
10.68 acres

Key Words: No archaeological resources, two 1960s buildings (2040 Artesia Boulevard [APN 4096-002-044],
1942 Artesia Boulevard [APN 4096-004-016]), CEQA

MANAGEMENT SUMMARY

The State of California through the California Department of Toxic Substances Control (DTSC) requests a Phase I Cultural Study for the Former Freeman Products In-Situ Bioremediation Project (Project) in the city of Torrance, Los Angeles County, California, to comply with the Project's Initial Study. Under contract to Ramboll Americas Engineering Solutions, Inc. (Ramboll), Applied EarthWorks, Inc. (Æ) conducted a cultural resource study of the Project area in accordance with the California Environmental Quality Act (CEQA). The DTSC is the lead agency for compliance with CEQA.

This report summarizes the methods and results of the cultural resource investigation, including background research, records search and literature review, and an archaeological and built environment survey of the Project area. The purpose of the investigation was to determine the potential for the proposed Project to impact historical resources eligible for or listed in the California Register of Historical Resources (CRHR).

The literature and records search results from the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System indicated that six projects have been documented within a 0.25-mile radius of the Project area, but no cultural resources have been recorded.

Æ Senior Historical Archaeologist Samuel Gordenstein completed a pedestrian survey of the Project area on April 25, 2025. During the survey, Gordenstein did not identify any archaeological resources in the Project area. Buildings within the Project area at 2040 Artesia Boulevard and 1942 Artesia Boulevard, built in 1961 and 1960, respectively, are over 50 years old. These buildings will not be impacted by the addition of the new injection wells.

Field notes documenting the current investigation are on file at Æ's Hemet office. A copy of this report will also be submitted to the SCCIC at California State University, Fullerton.

CONTENTS

1	INTRODUCTION.....	1
1.1	PROJECT LOCATION AND DESCRIPTION.....	1
1.2	REGULATORY CONTEXT.....	5
1.2.1	California Environmental Quality Act.....	5
1.3	REPORT ORGANIZATION.....	5
2	SETTING.....	6
2.1	ENVIRONMENTAL SETTING	6
2.2	PRECONTACT SETTING.....	6
2.2.1	Early Period (Milling Stone Horizon) Phase II: 8000/7500–5000 B.P.	7
2.2.2	Early Period (Milling Stone Horizon) Phase III: 5000–3000 B.P.	7
2.2.3	Intermediate Period: 3000–1300 B.P.....	8
2.2.4	Late Prehistoric Period: 1300–700 B.P.....	9
2.2.5	Late Prehistoric Period Phase II: 700–240 B.P.....	9
2.3	ETHNOHISTORIC SETTING.....	10
2.4	HISTORICAL SETTING	12
2.4.1	California History	12
2.4.2	Torrance in the Early Twentieth Century	13
2.4.3	Site-Specific History.....	13
3	SOURCES CONSULTED.....	15
3.1	CULTURAL RESOURCE LITERATURE AND RECORDS SEARCH.....	15
3.2	HISTORICAL MAPS AND AERIAL PHOTOGRAPH REVIEW	16
3.3	OTHER PERTINENT SOURCES CONSULTED.....	16
3.4	HISTORIC AERIAL AND MAP REVIEW.....	16
4	CULTURAL RESOURCE SURVEY METHODS AND RESULTS	18
4.1	CULTURAL RESOURCE SURVEY METHODS	18
4.2	ARCHAEOLOGICAL SURVEY RESULTS	18
4.3	BUILT ENVIRONMENT SURVEY RESULTS	22
5	MANAGEMENT RECOMMENDATIONS	24
6	REFERENCES.....	25

FIGURES AND TABLES

Figure 1-1	Project vicinity in Los Angeles County, California.....	2
Figure 1-2	Project location on USGS Torrance 7.5-minute topographic quadangle.....	3
Figure 1-3	Aerial view of the Project area along West Artesia Boulevard.	4
Figure 4-1	Project area showing overviews of the existing and proposed injection well locations.	19
Figure 4-2	Overview of 2040 Artesia Boulevard, facing south.....	20

Figure 4-3	Overview of 2000 Artesia Boulevard, facing northeast.....	20
Figure 4-4	South lawn of 2000 Artesia Boulevard, facing east.....	21
Figure 4-5	Overview of 1942 Artesia Boulevard, facing northeast.....	21
Table 3-1	Previous Cultural Resource Studies in the 0.25-Mile Search Radius	15
Table 3-2	Aerial Photographs in the UCSB Collection Showing the Project Area	16
Table 3-3	USGS Topographic Maps Consulted.....	16

1

INTRODUCTION

The State of California through the California Department of Toxic Substances Control (DTSC) requests a Phase I Cultural Study for the Former Freeman Products In-Situ Bioremediation (ISB) Project (Project) in the city of Torrance, Los Angeles County, California, to comply with the Project's Initial Study. Under contract to Ramboll Americas Engineering Solutions, Inc. (Ramboll), Applied EarthWorks, Inc. (Æ) conducted a cultural resource study of the Project area in accordance with the California Environmental Quality Act (CEQA). The DTSC is the lead agency for compliance with CEQA.

M. Colleen Hamilton (M.A., Registered Professional Archaeologists [RPA] 10535) served as Æ's principal investigator and was responsible for overall quality control, including report review and editing. Samuel Gordenstein (Ph.D., RPA 18104) served as Æ's project manager and authored the report. Gordenstein also conducted the fieldwork. Senior Architectural Historian Laura Groves van Onna (M.S.) completed the background research and prepared descriptions of the built environment resources.

1.1 PROJECT LOCATION AND DESCRIPTION

The Project is in the city of Torrance, Los Angeles County (Figure 1-1). Specifically, the Project is mapped within Township 3 South, Range 14 West, as shown on the U.S. Geological Survey (USGS) Torrance, CA 7.5-minute topographic quadrangle map (Figure 1-2). The elevation is approximately 42 feet above mean sea level.

The Project encompasses parcels at 2040, 2000, and 1942 Artesia Boulevard, totaling 10.68 acres in the city of Torrance. The parcels presently include the Former Freeman Products property now occupied by the Saint Francis Korean Catholic Church at 2040 Artesia Boulevard, the Church of Jesus Christ of Latter-Day Saints (LDS) at 2000 Artesia Boulevard, and an industrial building (RDS Industries) at 1942 Artesia Boulevard. The Project area within all three parcels includes buildings and paved parking lots, two of which (2040 and 2000 Artesia Boulevard) include landscaping and planters. There is an existing subsurface groundwater monitoring well network across all three parcels consisting of flushmount surface completions. The Project area is in a block bounded by Artesia Boulevard to the north, West 177th Street to the south, the Dominguez Channel to the east, and Van Ness Avenue to the west.

The Project aims to install injection wells at 50 locations across the three parcels (Figure 1-3) as part of the proposed ISB to remediate contamination resulting from former industrial activity at 2040 Artesia Boulevard. The injection wells will be entirely below surface, measuring approximately 12 inches wide and approximately 75 feet deep. A microbial culture will be injected into the injection wells to treat groundwater impacted by chlorinated volatile organic compounds (CVOs), most notably trichloroethene (TCE).



Figure 1-1 Project vicinity in Los Angeles County, California.

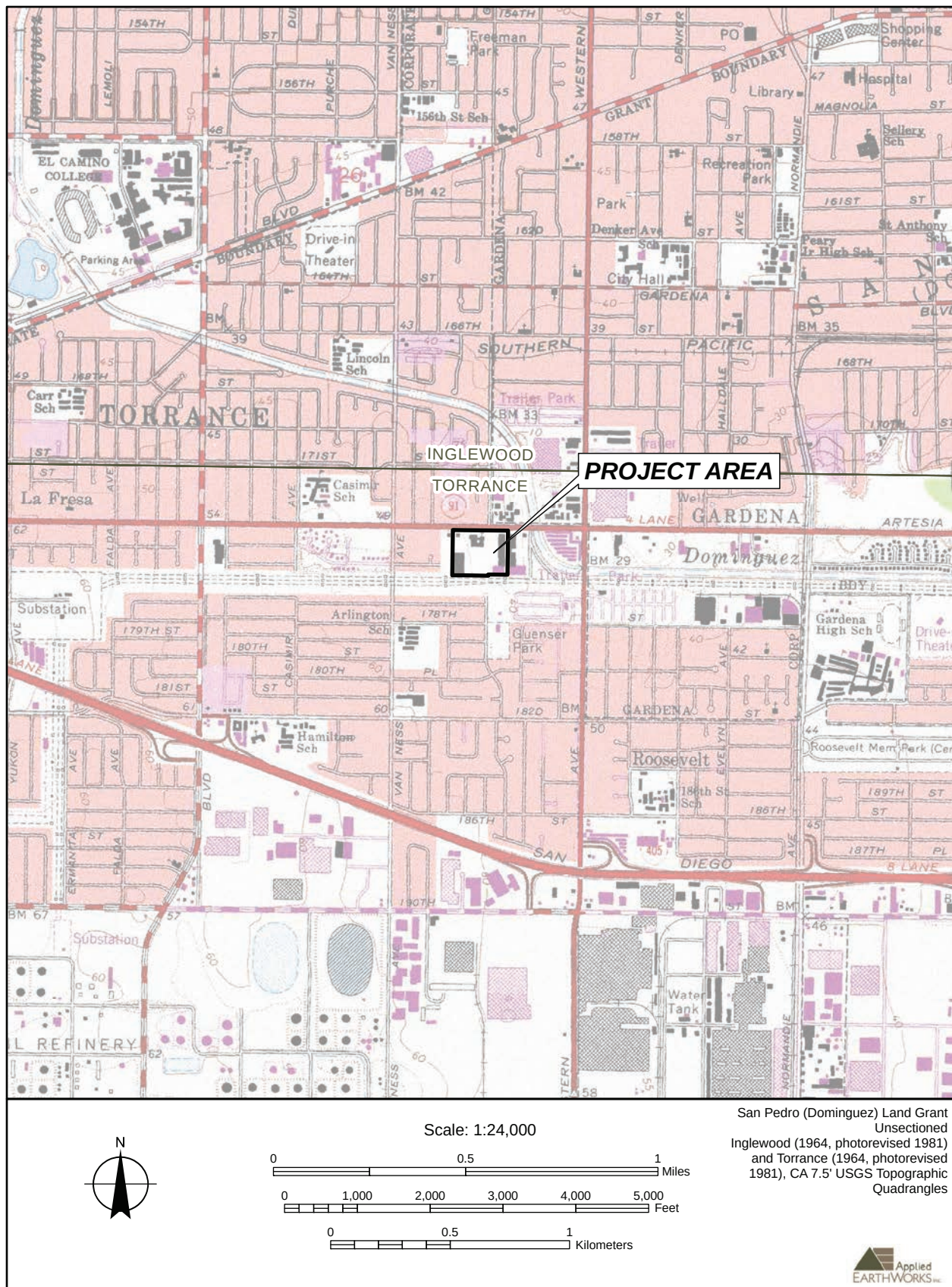


Figure 1-2 Project location on USGS Torrance, CA 7.5-minute topographic quadrangle.

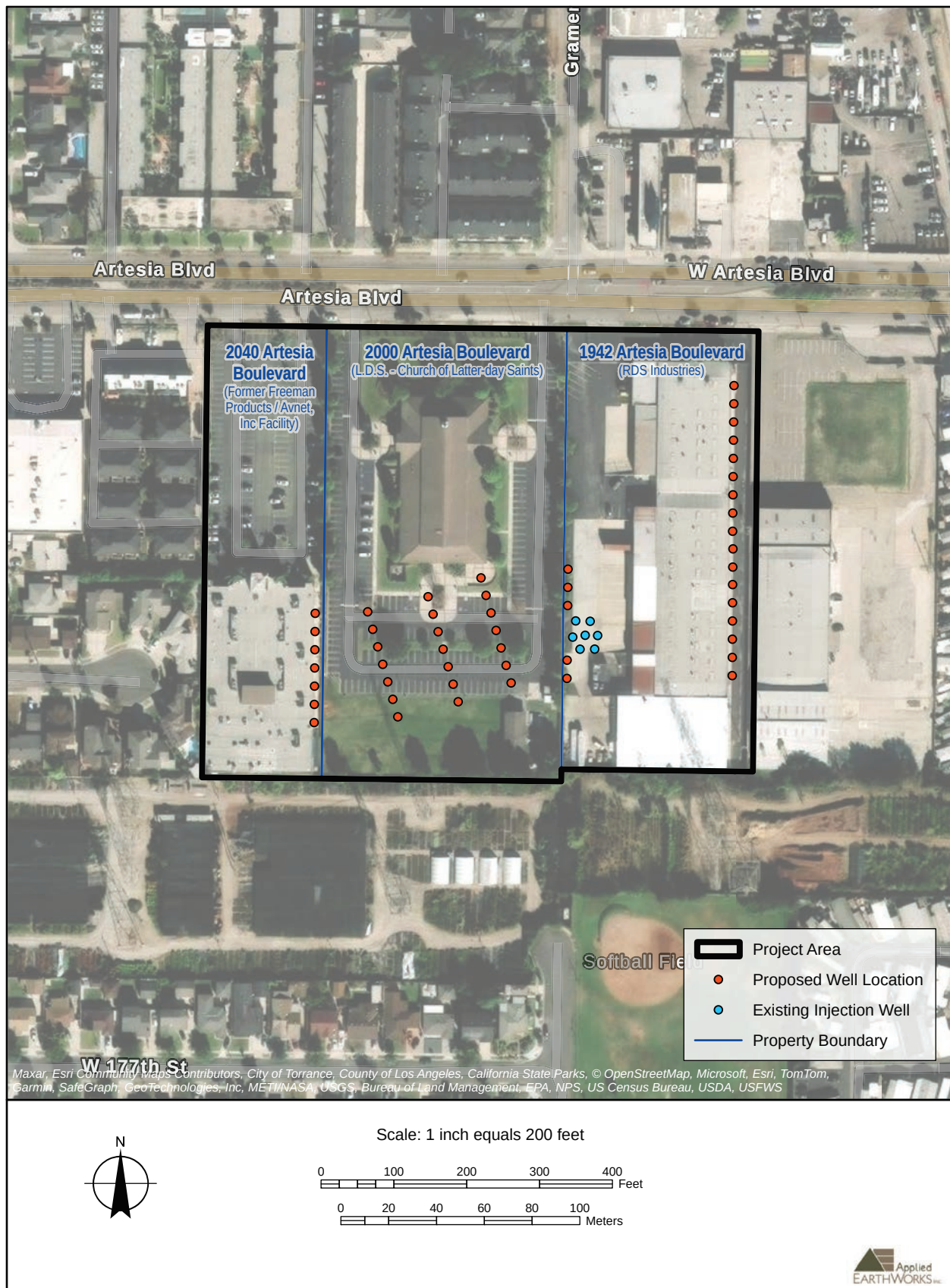


Figure 1-3 Aerial view of the Project area along West Artesia Boulevard.

1.2 REGULATORY CONTEXT

1.2.1 California Environmental Quality Act

The Project requires approval from the State and is therefore subject to the requirements of CEQA. The CEQA Statute and Guidelines directs lead agencies to determine whether a project will have a significant impact on historical resources. A cultural resource considered “historically significant” is considered a “historical resource,” if it is over 50 years of age and is included in a local register of historical resources or is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR) under any one of the following criteria (Title 14, California Code of Regulations [CCR], Section 15064.5):

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Compliance with CEQA’s cultural resource provisions typically involves several steps. Briefly, archival research and field surveys are needed, and identified cultural resources are inventoried and evaluated in prescribed ways. Precontact and historical archaeological sites as well as standing structures, buildings, and objects deemed historically significant and sufficiently intact (i.e., historical resources) must be considered in project planning and development.

A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment (14 CCR 15064.5[b]) and the lead agency is responsible for identifying potentially feasible measures to mitigate significant adverse changes in the significance of a historical resource (14 CCR 15064.5[b]4).

1.3 REPORT ORGANIZATION

This report documents the results of a cultural resource investigation of the proposed Project area. Chapter 1 described the Project and its location, defined the scope of the cultural resource investigation, and stated the regulatory context. Chapter 2 presents the natural and cultural setting of the Project area and the surrounding region. Chapter 3 summarizes the results of the archaeological literature review and records search. Chapter 4 provides the cultural resource survey methods and results. Finally, Chapter 5 provides cultural resource management recommendations.

2 SETTING

This chapter describes the precontact, ethnographic, and historical setting of the Project area to provide a context for understanding the nature and significance of cultural resources identified throughout the region. Throughout time, the nature and distribution of human activities in the region have been affected by such factors as topography and the availability of water and natural resources. Therefore, prior to a discussion of the cultural setting, the environmental setting of the area is summarized below.

2.1 ENVIRONMENTAL SETTING

The Project is generally situated within a broad valley of the Los Angeles Basin. This broad, level expanse of land comprises more than 800 square miles extending from Cahuenga Peak southward to the Pacific Coast, and from the Topanga Canyon southeast to the vicinity of Aliso Creek. The Los Angeles Basin is traversed by several large watercourses, most notably the Los Angeles, Rio Hondo, San Gabriel, and Santa Ana rivers. Marshlands fed by fresh or salt water once covered many portions of the basin. Specifically, the Project is surrounded by the Santa Monica Mountains to the northwest and north; the San Gabriel Mountains to the north and northeast; and to the east the Puente-Chino Hills, which together form the northern end of the Peninsular Ranges in Southern California. The region experiences Mediterranean climate under the Köppen Climate Classification System, characterized by cool, wet winters and warm, dry summers (McKnight and Hess 2000:221–223).

The soils are alluvium and colluvium underlain by Miocene marine sedimentary deposits. Geological faulting and folding of the crust in the area have trapped oil deposits beneath the surface (Mayuga 1970:161–162). Remnants of Valley Grassland and Coastal Sage Scrub zones cover much of the Los Angeles Basin and adjacent hill slopes. Dominant native plant species in these zones include rye grass, blue grass, bent grass, filaree, needle grass, triple-awned grass, California buckwheat, coastal sage, *Encelia* spp., yellow penstemon, mule fat, bee plant, monkey flower, beavertail and jumping cholla cactus as well as isolated stands of yucca. Few stands of native biotic communities remain today within the Los Angeles Basin; present-day plant communities are primarily landscaped and introduced species. Today, this is a densely populated, heavily developed urban area of residential, commercial, and industrial buildings.

2.2 PRECONTACT SETTING

A number of cultural chronologies and archaeological sequences have been proposed for coastal and littoral Southern California since the 1920s. These attempt to track the development of terrestrial hunting and foraging and marine resource exploitation adaptations among populations in the area since at least the beginning of the Holocene. These proposed sequences are generally based on changes in artifact types rather than linkage to socio-cultural systems in the region. In other words, the archaeological materials show cultural continuity for much of the Holocene, despite population increase, intensification of resource use, and techno-economic innovations in maritime and terrestrial resource exploitation (e.g., circular shell fishhooks, bow and arrow, and mortar and pestle). Lacking unequivocal archaeological evidence for major episodes of cultural

change, researchers have proposed a range of different cultural periods for the region. Variants of the Southern California prehistoric chronology include those proposed by King (1990) for the Santa Barbara Channel, Koerper and Drover (1983) for coastal Orange County, and Erlandson and Colten (1991) for Southern California, and generally reflect the common use of an essentially tripartite division of early, middle, and late for Holocene cultures in the region. Chronologies developed by Mason et al. (1994) for coastal Orange County, and by Altschul et al. (2007) for coastal Los Angeles County are followed here, with a few modifications.

2.2.1 Early Period (Milling Stone Horizon) Phase II: 8000/7500–5000 B.P.

Southern California coastal and littoral sites after 8000–7500 years before present (B.P.) were typified by an increase in relative quantities of milling stones and handstones, although some sites on San Clemente and Catalina islands lacked such assemblages (Meighan 2000). Sites from this phase of the Milling Stone Horizon have also been observed to contain crude scraper planes, scrapers and choppers, and large projectile points. Milling stones and handstones were associated with a subsistence regime based on the exploitation of hard seeds, although they were also used to process other resources. The coastal environment was shaped by early Holocene rising sea levels that did not stabilize until 5000 B.P. (Altschul et al. 2007). This delayed the full development of estuarine marshes and the onset of sedimentation of open estuaries and lagoons.

Resultant instability of water levels in stream mouths and estuaries may have caused the frequent movement of sites between estuary bank and bluff top. Occupants of Early Milling Stone Horizon sites in coastal western Los Angeles County relied on the exploitation of fish and shellfish and coastal prairie grasses, supplemented with opportunistic terrestrial hunting. The coastal foraging populations in the Ballona Creek area at this time were small and liable to move between lagoon bank and bluff-top camps (Altschul et al. 2007). Sites CA-VEN-1 and CA-LAN-92 on the Los Angeles County coast west of Malibu show a dependence on marine resources and the processing of seeds with ground stone. Sea mammal remains were recovered, and the procurement of fish was a major activity at CA-VEN-1, where bone gorges have been recovered. It is presumed that canoes were employed to catch the deep-water fish species identified at the site (Dallas 2004). Shell beads, worked bone, and choppers were also encountered. In contrast, at CA-LAN-958 at Malibu, an early Milling Stone ground stone assemblage was accompanied by shellfish, and very little evidence of either terrestrial fauna or fish exploitation was found (Porcasi and Porcasi 2002).

Radiometric data from coastal sites across a broad expanse of the Southern California coast from San Luis Obispo to Orange counties have suggested a drop in the number of coastal sites that is most pronounced between 6000 and 5500 B.P. (Dallas 2004; Glassow 1999). It is not known, of course, if this trend denotes a decline in coastal population or the aggregation of population in a smaller number of sites. Sites at the Ballona Creek estuary were reportedly abandoned from 6000 to 5000 B.P. (Altschul et al. 1992:43).

2.2.2 Early Period (Milling Stone Horizon) Phase III: 5000–3000 B.P.

During the subsequent Milling Stone Horizon, coastal sites present evidence of a diversification of subsistence strategies, with increased procurement of small terrestrial game. From 5000 through 3500 B.P., there is a substantial increase in the number of Southern California coastal sites that is especially notable in Orange County (Glassow 1999). Later sites of the Milling Stone

complex dating from after 5000 B.P. also include cogged stones and discoidals. Cairns of ground stone tools have been found atop flexed or extended primary interments and secondary reburials, which possibly reflect the importance of the tool type (Koerper et al. 2006). Smaller-sized dart points have also been recovered. Bone artifacts are not abundant but include bone awls, antler flakers, and atlatl hooks. Tarring pebbles and asphaltum with basketry impressions along with bone awls attest to basketry manufacture. Glassow (1996) has suggested that the increased frequency of mortars and pestles late in the Milling Stone period may be linked to processing of foods other than acorns, but that evidence of the use of basketry hoppers on mortars marks the proliferation of acorn processing. He dated these hopper mortars in the Santa Barbara region to after 4500 B.P., whereas the earliest crude mortars and pestles are dated from 5500–4500 B.P. (Glassow 1996:18). Hopper mortars became more common during the following Intermediate Period.

2.2.3 Intermediate Period: 3000–1300 B.P.

Early in the Intermediate Period, both on the coast and in the littoral zones, mortars and pestles tended to replace milling stones and handstones in ground stone assemblages. As noted above, this is believed to reflect a long-term shift from hard-seed exploitation to acorn processing, although the exploitation of grasses and hard seeds continued in the coastal and interior subsistence regimes. In Los Angeles County and elsewhere, this shift is earlier and more prevalent at coastal sites as opposed to interior sites. On the Santa Barbara coast, milling stones were completely replaced by mortars and pestles by 2200 B.P. (Glassow 1996:18). In some areas of the Southern California interior, milling stones and handstones remained common through historic times, although mortars and pestles (and bedrock mortars) were also found.

It was also formerly supposed that during the first 1,500 years of the Intermediate Period, there was a decrease in intensity of occupation of coastal sites, ending around A.D. 400–500 with the arrival of Takic groups from the interior deserts. Although cases of a settlement hiatus can be found in the Southern California coastal region—at the Newport Bay estuary in Orange County, for example—this is not a generalized phenomenon (Grenda et al. 1998). Paleoclimate data have suggested a period of heavier than average rainfall between circa 3000 and 1700 B.P. in coastal Los Angeles and Orange counties, followed by variable but drier conditions until the end of this period (Davis 1992).

At the Ballona Creek lagoon, by around 2000 B.P. coastal habitation sites became more numerous, larger, and more complex, featuring house features, associated hearths, and mortuary areas. The diversity of faunal assemblages increased, and mortars, pestles, and stone bowls became more abundant. Primary and secondary inhumations and secondary cremations have been encountered at bluff-top sites in this area. At Malaga Cove, bone harpoon barbs were recovered, along with circular shell fishhooks. These fishhooks first appeared in coastal archaeological assemblages during the Intermediate Period, the oldest dates for these artifacts coming from the southern Channel Islands (Raab et al. 1995).

By circa 2500 B.P., after the beginning of the Intermediate Period, settlement and population levels in interior areas in Los Angeles County, such as the San Fernando Valley, had also increased. While the Santa Monica Mountains, for example, were close enough to the coast to depend on Milling Stone Horizon subsistence patterns, this was not true farther inland (Ciolek-

Torello et al. 2006). This interior settlement has been linked to the gradual spread of acorn processing, an increase in exploited subsistence resources, and more moderate rainfall conditions. By circa 1500 B.P. or perhaps a little earlier, the bow and arrow were introduced.

One major issue regarding Intermediate Period occupation of the coastal littoral zones in Los Angeles County was the timing of the arrival of groups of Takic language affiliation in the region. It was long hypothesized that the arrival of these linguistic ancestors of the Gabrielino/Kizh, Serrano, Cahuilla, Luiseño, and other Southern California Takic language groups was coeval with the appearance of arrow points and the use of the bow, around circa A.D. 500. The idea of a “Takic wedge” descending from the interior deserts at around this time or even later has been generally accepted (Moratto 1984). However, based on linguistic and archaeological evidence, a number of investigators have recommended an earlier presence of Takic groups in the region dating to as early as circa 3000–3500 B.P. (Kowta 1969; Sutton 2009). This earlier arrival appears plausible, in part because of the relative timing of the presence of Numic and Tubatulabal Uto-Aztecan groups in the Southern California interior.

2.2.4 Late Prehistoric Period: 1300–700 B.P.

During the period from 1100 to 700 B.P., unstable and intermittently dry climate conditions affected the Southern California region. A period of heavy precipitation from 1300 to 1100 B.P. has been proposed for the beginning of this period, followed by prolonged episodes of extreme drought. These droughts represented a widespread global warming episode, referred to as the Medieval Climatic Anomaly, which also impacted native cultures in the North American southwest and elsewhere. The effects of this xeric episode and of a proposed rise in seawater temperatures at around this time on the southern California coast and interior have been widely studied and debated during the last 20 years. Persistent severe drought episodes have been dated as having occurred from circa A.D. 900–1000 through A.D. 1300 (Erlandson et al. 2008:95–96; Kennett 2005; Kennett and Kennett 2000; Raab and Larson 1997; Stine 1994). It has been argued that these persistent droughts and rise in seawater temperatures caused subsistence and nutritional stress, increased intergroup conflict in both the Southern California interior and on the coast, and resulted in a decrease in availability of both terrestrial and marine subsistence resources (Arnold 1997; Arnold et al. 1997; Lambert 1993; Lambert and Walker 1991).

The proposed subsistence crisis during this era has been viewed as leading to the emergence of more highly ranked social systems with more complex patterns of specialized craft production and distribution among the Island Chumash of the northern Channel Islands. This has been seen as generating a Late Prehistoric pattern of relative social complexity among the Chumash and, to a perhaps lesser degree, among their Gabrielino/Kizh and Serrano neighbors to the east in Los Angeles County (King 2004). The severity of the subsistence impact for coastal settlements due to alleged long-term increases in average seawater temperatures has been debated. Some researchers have provided evidence that although negative changes in seawater temperatures and marine productivity during this period may have occurred, these were not severe enough to devastate coastal fisheries (Kennett 2005; Kennett and Kennett 2000).

2.2.5 Late Prehistoric Period Phase II: 700–240 B.P.

By the beginning of Phase II of the Late Prehistoric, rainfall conditions had increased to what some researchers argue was a period of greater available moisture than at present, the so-called

“Little Ice Age,” after circa A.D. 1400 (Boxt et al. 1990). There is agreement about a substantial expansion of coastal and littoral populations in Southern California after 700 B.P. (A.D. 1300). Interestingly, there are indications of an expansion in the number of sites in several near-coastal areas in the Long Beach and Newport Beach areas during the A.D. 1400–1660 period, and a subsequent decline from A.D. 1600 to 1800 (Boxt et al. 1990:27; Grenda et al. 1998:27).

During this period, the northern Channel Islands populations made improvements to craft specializations and shell bead manufacture, which sustained trade with mainland settlements and with far-distant trade destinations to the east and provided an exchange medium for the regional economy. Steatite quarried on Santa Catalina Island was used to make stone bowls, pipes, comals, sucking tubes, pendants, beads, and effigies. A festival system developed in part around periodic mourning ceremonies involved the amassing of wealth in beads and other resources, particularly among political elites.

Many major settlements documented after the Spanish conquest were occupied during this period. In areas of inland settlement, by the end of the Intermediate Period mobility and long-distance migration toward the coast from seasonal camps was replaced by the development of permanent settlements. The pattern of settlement at this time included a permanent winter village with a cemetery, sweat lodge, chief’s house, dance and sacred enclosure, and a variety of subsidiary temporary camps and activity areas (Mason et al. 1994). Some village sites from this period have preserved elements of site structure, including the floors and foundations of residential units and sweat lodges (Ciolek-Torello and Bean 1998). Marriage ties and political alliances linked individual village territories, while alliances allowed communities to, in effect, “lend” access to resources to other communities. The development of the large coastal and littoral territorial villages of the Gabrielino/Kizh recorded in ethnohistoric accounts has fueled speculation about the achievement of a completely sedentary type of settlement. Temporary seasonal camps appear to have been used even in coastal areas where large village sites were located close to one another.

2.3 ETHNOHISTORIC SETTING

During the protohistoric period, the Los Angeles area was inhabited by the Gabrielino (Kizh) people, a Uto-Aztecan (or Shoshonean) group who may have entered the Los Angeles Basin as recently as 1500 B.P. from the southern Great Basin or interior California deserts. It is also possible that the Gabrielino peoples migrated into the Los Angeles region in successive waves over a lengthy period of time beginning as early as 4000 B.P. Gradually these Uto-Aztecan peoples began to displace the previous Hokan occupants of the southern coastal region (Kroeber 1925:578–580). In the protohistoric period, the Gabrielino were flanked by speakers of Hokan languages: the Chumash to the north and the Diegueño to the south (Kroeber 1925:578–580). Presented below is a cursory review of the Gabrielino territory and their culture, prepared for the Metropolitan Water District’s Headquarters Project in Los Angeles (Goldberg et al. 1999). For a detailed review of the Gabrielino, the reader is referred to William McCawley’s (1996) book, *The First Angelinos*.

It is believed that the total Gabrielino territory covered more than 1,500 square miles and included the watersheds of the Los Angeles River, San Gabriel River, Santa Ana River, and Rio Hondo. The Gabrielino also occupied the islands of Santa Catalina, San Clemente, and San

Nicolas. Within this large territory were more than 50 residential communities with populations that ranged from approximately 50 to 150 individuals. Each community consisted of one or more lineages, which maintained a permanent geographic territory that included a permanent settlement and a variety of hunting and gathering areas as well as ritual sites. A typical Gabrielino settlement contained a variety of structures used for religious, residential, and recreational purposes. In the larger communities, a sacred enclosure surrounded by the houses of the chief and other members of the elite community was generally located near the center of the community. Around this core, smaller homes made up the rest of the community. Other features common at residential sites were sweathouses and level clearings used as playing fields and dance grounds as well as cemeteries (McCawley 1996:32–33).

Gabrielino territory offered rich and diverse resources. Subsistence items described in ethnohistorical sources include large numbers of native grass seeds, six or more types of acorns, pinyon pine nuts, seeds and berries from various shrubs, fresh greens and shoots, mule deer, pronghorn, mountain sheep, rabbits and rodents, quail and waterfowl, snakes, lizards, insects, and freshwater fish, plus a wide variety of marine fish, shellfish, and sea mammals in coastal zones. This wealth of resources, coupled with an effective technology and a well-developed trade and ritual system, resulted in a society that was among one of the most materially wealthy and culturally sophisticated cultural groups in California (McCawley 1996:141). The management of food resources by the chief was the heart of the Gabrielino economy; a portion of each day's hunting, fishing, or gathered food resources was given to the chief who was responsible for managing the community's food reserves. Each family also kept a food supply for use in lean times.

Direct contact between the Europeans and the Gabrielino is thought to have occurred first in 1542 with the arrival of Cabrillo's small fleet at Santa Catalina Island, and later in 1602 when the Sebastian Vizcaíno expedition visited San Clemente and Santa Catalina islands and the mainland near present-day San Pedro (McCawley 1996:207). Later in 1769, the Gaspar de Portolá expedition crossed the Gabrielino homeland twice. Mission San Gabriel was founded on September 8, 1771, at a location near the Whittier Narrows. Because of conflict, recruitment and conversion of the Indians remained slow for the first few years of the mission's existence.

Sometime around 1774, Mission San Gabriel was moved to its present location to obtain more suitable land for agriculture. A second mission, San Fernando, was established within Gabrielino territory in 1797. Mission life was highly regimented and contrasted sharply with the traditional Gabrielino lifeway; as a result, colonization had a dramatic and negative effect on Gabrielino society, including fugitivism. The traditional Indian communities were depopulated, and epidemics caused by the introduction of European diseases further reduced the Indian population.

The later American takeover of California brought further hardships to the Gabrielino who eventually settled at small Indian and Mexican settlements in the Eagle Rock and Highland Park districts of Los Angeles as well as in Pauma, Pala, Temecula, Pechanga, and San Jacinto. The ethnographic evidence suggests that several Gabrielino settlements were located on the Los Angeles plain. Chester King identified several areas where archaeological remains of village sites dating to the ethnohistoric contact period may be located (Sheets and Stone 1993). Two of these vaguely defined areas include *Ha'utnga* in the Lynwood/South Gate/Watts area and

Amupunga near the Rancho San Pedro (Dominguez) Adobe. A third village area known as *Yaanga* (or *Yaangna*) is believed to have been on the west bank of the Los Angeles River slightly south of the old Spanish Plaza of Pueblo de Los Angeles in the vicinity of Union Station. More recently, tribal leaders have worked with scholars to map out village site locations in/around Los Angeles (Sahagùn and Greene 2023). According to this new map, which has minor differences for village locations in comparison to those identified by McCawley (1996), the Project APE is approximately equidistant to the villages of *Yaangna* (to the north), *Shevaanga* (to the northeast, identified by McCawley as *Naxaaw Nga* and *Sehat*), and *Povuu'unga* (to the southeast).

2.4 HISTORICAL SETTING

The history of the region provides a context for understanding local settlement from mission lands to the development of the modern urban landscape. It is the basis for the identification of the historical property types constructed during this period, and to provide a broader understanding of the historical context that shaped the Project area.

2.4.1 California History

In 1542, the Portuguese explorer Juan Rodriguez Cabrillo led a Spanish group from Mexico to explore the lands of what is now California. It was during this expedition that Europeans first came in contact with the region's native peoples. It would not be for another two-and-a-quarter centuries before Spain colonized California.

Responding to Russian and French presence in nearby parts of North America, Spain adopted a more aggressive colonization campaign in their Las Californias territories in the second half of the eighteenth century by implementing a system of presidios and missions. For this purpose, the Spanish government sent explorer Gaspar de Portolá and Franciscan priests Junípero Serra and Juan Crespí in search of locations for settlement in Alta California (Willard 1901). Father Crespí recommended a site along the Los Angeles River for Mission San Gabriel Arcángel, but the location was rejected in favor of Father Serra's proposed site near present-day Whittier Narrows along the San Gabriel River. The area that is now the city of Torrance was originally the 1785 Rancho San Pedro land grant.

By 1827, Los Angeles had become the largest trading center in Alta California and served as territorial capital from 1845 to 1847 (Estrada 2003:73–75). The status of Los Angeles as the regional center made it a prime target for the United States during the Mexican-American War (1846–1848). This war officially came to an end on February 2, 1848, when both sides signed the Treaty of Guadalupe Hidalgo, granting the United States ownership of the Las Californias territories that encompassed parts of California, Nevada, Utah, Arizona, Texas, Kansas, Colorado, Wyoming, Oklahoma, and New Mexico. Following the transfer, the American government revoked many of the land titles held by property owners under the previous Mexican government. The original pueblo plans were ignored, resulting in new ownership of the lands of what is now Los Angeles County were subsequently divided (Estrada 2003:75–79).

2.4.2 Torrance in the Early Twentieth Century

In 1785 King Carlos of Spain granted expeditionary soldier Juan Jose Dominguez land that today includes the modern boundaries of the city of Torrance. Only in circa 1912 were portions of the land sold by his descendants, most of it to industrialist Jared Sydney Torrance, responsible for the creation of the city. He intended to create an industrial center halfway between Los Angeles and San Pedro harbor, where goods could be moved for transport. He convinced major industrial firms and a railroad to move to Torrance, and in its first year Torrance had a population of 180 inhabitants. The city was planned by the famed Olmstead & Olmstead firm, with buildings designed by modernist Irving J. Gill. It was meant as a model city, with a design intended to prevent the encroachment of the industrial zone on the private residences. It took 30 years for the planned city to be finished.

The city was incorporated in 1921, also the year when oil was discovered at the Torrance-Wilmington Oil Field. By 1925, there were almost 600 oil derricks in the city, with production eventually lasting more than three decades. At this time the city expanded its boundaries. Despite the oil industry, agriculture was still important, and fields and farms were evident throughout the city. By the end of the decade Torrance had more than 7,000 residents. Despite economic hardship brought on by the Great Depression, oil and agriculture persisted in the 1930s. In this period, the city remained largely a commuter city for those working in Torrance's oil industry.

The slowing of the oil industry coincided with a population boom in the city. In the late 1940s and into the 1950s, developers "discovered" Torrance and its tracts of land used for agriculture, farming, and a fading oil industry. The GI Bill and other mechanisms helped to finance a boom of single-family homes, resulting in increased population for the city (City of Torrance n.d.; McKenna 2009; Torrance Historical Society and Museum 2024).

2.4.3 Site-Specific History

In the first half of the twentieth century, the Project area was semirural, with agricultural fields and groves dotting the landscape. The immediate area was not densely populated and lacked an intricate network of streets, sidewalks, and nearby highways, and the bed of the nearby Dominguez Channel had not yet had been lined with cement. Marshes close to the waterway can be seen in the early maps/photos (see Chapter 3 for details on the map/aerial photo review and all the primary sources consulted).

In the second half of the twentieth century, important changes occurred in the Project area, with the end of agricultural activities and the construction of much larger buildings. Los Angeles County Assessor's records show that a 39,000 square foot building was constructed in 1961 at 2040 Artesia Boulevard. It was first used by Kaag Industries for metal plating and jewelry manufacturing. Subsequently, Freeman Products, a division of Avnet, Inc., manufactured trophies and awards on the property from 1974 until 1994 (Unger 2016). The building was subsequently adapted for use as a church and underwent substantial alterations, particularly to the façade. The property is currently owned by the Archdiocese of Los Angeles.

A building was constructed at 2000 Artesia Boulevard between 1953 and 1962. It preceded the larger 25,000-square-foot present-day LDS church, which was built in 1986. They share a similar footprint in the front, facing Artesia Boulevard, but the newer building extends farther south, to

about the halfway point of the lot. The south half of the lot includes a paved parking lot and an undeveloped grassy area with a pavilion in the southeast corner in an area that was disturbed by agricultural activity into the 1940s. At 1942 Artesia Boulevard, the 46,000-square-foot industrial building that still remains was built in 1960 and takes up most of the lot. Small additions to the side and rear elevations of the building have occurred over time, with otherwise minor changes to the property.

3 SOURCES CONSULTED

The following chapter details the sources consulted during the prefield research portion of the Project that provided the information needed to write the site-specific history. These include a cultural resource literature and records search, review of historical map and aerial images of the Project area, and other pertinent sources.

3.1 CULTURAL RESOURCE LITERATURE AND RECORDS SEARCH

On April 23, 2025, prior to the field survey of the Project area, Æ Staff Archaeologist Michelle Villalba conducted an in-person literature and records search at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) housed at California State University, Fullerton. The objective of this records search was to determine whether any precontact or historic-era cultural resources had been recorded previously in the Project area or within a 0.25-mile-wide radius of the Project area.

The records search review indicated six cultural resource investigations have been conducted previously within a 0.25-mile radius of the Project area (Table 3-1). None of these investigations involved the Project area. As a result, none of the Project area has been investigated previously. No previously recorded cultural resources were identified within the 0.25-mile search radius.

**Table 3-1
Previous Cultural Resource Studies in the 0.25-Mile Search Radius**

SCCIC Report No.	Authors(s)	Date	Title
LA-07989	Bonner, Wayne H., and Kathleen A. Crawford	2005	Direct APE Historic Structural Assessment for Cingular Telecommunications Facility Candidate EI-049-11 (SCE/Western Torrance) Western Avenue and Artesia Boulevard, Torrance, Los Angeles County, California
LA-08865	Bonner, Wayne H.	2006	Cultural Resources Records Search and Site Visit Results for T-Mobile Candidate La13125a (Artesia/Van Ness Avenue M8-t5 Mesa-Redondo), West 182nd Street, Torrance, Los Angeles County, California
LA-09184	Bonner, Wayne H.	2007	Cultural Resources Records Search and Site Visit Results for Royal Street Communications, LLC Candidate LA2883A (Dynasty SCE), 17414 South Western Avenue, Gardena, Los Angeles County, California
LA-10333	McKenna, Jeanette M.	2009	A Brief Historic Context Statement Prepared for the General Plan Update: The City of Torrance, Los Angeles County, California
LA-10970	Bonner, Wayne H., and Kathleen A. Crawford	2011	Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC Candidate EL0049-11 (SCE Western Torrance), 17605 Torrance Avenue, Torrance, Los Angeles County, California
LA-12442	Fulton, Phil	2013	Cultural Resource Assessment Class I Inventory Verizon Wireless Services Utopia Facility, City of Gardena, Los Angeles County, California

3.2 HISTORICAL MAPS AND AERIAL PHOTOGRAPH REVIEW

In addition to the CHRIS records search, historical maps and aerial photographs from various sources were consulted to assess land use and development in the study area through time. Aerial photographs of the area included images in the University of California, Santa Barbara (UCSB), Geospatial Collection (<https://www.library.ucsb.edu/geospatial>; see Table 3-2). USGS topographic quadrangle maps were accessed online (<https://ngmdb.usgs.gov/topoview/>; see Table 3-3). Additional aerial images accessible online also were consulted (<https://historicaerials.com/>). No pertinent Sanborn fire insurance maps of the area were identified.

Table 3-2
Aerial Photographs in the UCSB Collection Showing the Project Area

Year	Image	Scale	Flight Date
1941	Flight C-7558B, Frame 4	1:14,400	December 1
1951	Flight C-16580, Frame 1-33	1:24,000	January 1
1971	Flight TG-2755, Frame 2-22	1:10,440	March 1

Table 3-3
USGS Topographic Maps Consulted

Year	Name	Edition	Scale
1934	Torrance, California	1942	1:20,000
1943	San Pedro, California	1943	1:125,000
1964	Torrance, California	1984	1:24,000

3.3 OTHER PERTINENT SOURCES CONSULTED

The Built Environment Resource Directory maintained by the Office of Historic Preservation and the California Register of Historical Resources were consulted to identify any potential historic resources in the study area. No resources were identified. A staff also examined Los Angeles County Assessor's records (<https://maps.assessor.lacounty.gov/>) for information about the parcels in the Project area.

3.4 HISTORIC AERIAL AND MAP REVIEW

The 1934 USGS map shows that the nearby Dominguez Channel riverbed had yet to be lined with cement, although the transmission line directly behind the Project area is already present. In 1941, the UCSB aerial photo shows the river remains in the same condition, while three structures, agricultural fields, and possible orchards are evident at 2040 Artesia Boulevard; agricultural fields are visible at 2000 Artesia Boulevard; and three structures, corrals, and more potential orchards are identifiable at 1942 Artesia Boulevard.

The 1951 aerial image shows largely the same scenario for the three properties, although the three structures at 2040 Artesia Boulevard are no longer present, replaced by one long shed. Consultation of additional online historic aerial imagery shows that by the following year (1952)

two more identical long sheds had been constructed on the property. They were likely used for agricultural and/or farming purposes.

In the second half of the century this area is more urbanized. Aerial photographs demonstrate that sometime between 1953 and 1962 a building is constructed at 2000 Artesia Boulevard. It is not the larger 25,000-square-foot present-day LDS church building, which was built in 1986. At 1942 Artesia Boulevard, a 1963 online aerial photo shows the present-day building at its current location, while the 1971 aerial photo from the UCSB collection demonstrates that the present-day building at 2040 Artesia Boulevard was already constructed.

CULTURAL RESOURCE SURVEY METHODS AND RESULTS

This chapter details the methods and results of the pedestrian survey of the Project area. The entire Project area was accessible during the survey completed by Æ Senior Historical Archaeologist Samuel Gordenstein.

4.1 CULTURAL RESOURCE SURVEY METHODS

Prior to conducting a pedestrian archaeological and built environment survey, Æ's staff conducted background research to identify areas within the Project where archaeological deposits might exist or extant historic-aged buildings, structures, or objects might be present. Archival results relating to the history of activity within and near the Project area are presented in Chapter 2.

Gordenstein completed the opportunistic pedestrian survey of the Project area on April 25, 2025 (Figure 4-1). He began at the northwest end of the Project area, at 2040 Artesia Boulevard, and proceeded southward, examining locations in the property without the presence of hardscape. The procedure was repeated at 2000 Artesia Boulevard and then at 1942 Artesia Boulevard. Ground surface conditions were photo-documented to record visibility and land use, and proposed and existing injection well locations were photographed as well as the built environment. Photographs and field notes were archived on Æ's secure cloud server. Any newly identified resources were to be photographed and mapped with an Arrow 100 Global Navigation Satellite System receiving unit connected to an iPad.

4.2 ARCHAEOLOGICAL SURVEY RESULTS

At 2040 Artesia Boulevard, 95 percent of the ground was obscured by a building and hardscape, and the remainder of the area was landscaped with a lawn and plants such as Indian hawthorn, roses, oriental iris, and rubber plant (Figure 4-2). Ground visibility was less than 5 percent and included the dark loam associated with the landscaped plants around the perimeter of the property.

At 2000 Artesia Boulevard, approximately 50 percent of the ground was covered by buildings and hardscape, and the remainder was occupied by lawns and landscaping that included Brisbane box trees, wild verbena, Chinese banyan trees, common agapanthus, and Indian hawthorn bushes, among others (Figure 4-3). The southeast corner of the south lawn contained a recreational area with barbecue grills, benches on small cement pads, and a larger covered pavilion with tables on a cement pad (Figure 4-4). The landscaped areas close to the main building and on the property perimeter were mostly covered with brown mulch. Ground visibility was less than 2 percent.

At 1942 Artesia Boulevard, 100 percent of the property was occupied by a building and hardscape, and no ground surface was visible (Figure 4-5).

No archaeological sites, features, or isolates were identified in the Project area.



Figure 4-1 Project area showing overviews of the existing and proposed well locations.



Figure 4-2 Overview of 2040 Artesia Boulevard, facing south.



Figure 4-3 Overview of 2000 Artesia Boulevard, facing northeast.



Figure 4-4 South lawn of 2000 Artesia Boulevard, facing east.



Figure 4-5 Overview of 1942 Artesia Boulevard, facing northeast.

4.3 BUILT ENVIRONMENT SURVEY RESULTS

Æ identified two historic-era built environment resources within the Project area—a religious building at 2040 Artesia Boulevard (APN 4096-002-044) and an industrial building at 1942 Artesia Boulevard (APN 4096-004-016). Los Angeles County Assessor’s data indicate that the original construction dates for these existing buildings are circa 1961 and 1960, respectively. Therefore, they are 50 years of age or greater, meet the threshold for consideration of historic designation, and are subject to evaluation under CEQA. Evaluation for these buildings is not within the current scope of work, nor is the Project expected to impact these buildings. However, if future work is proposed for these buildings, Æ recommends conducting evaluations of eligibility for listing in the CRHR and analyzing impacts, as appropriate. Physical descriptions of these resources are provided below.

2040 Artesia Boulevard

The property at 2040 Artesia Boulevard is south of Artesia Boulevard between South Western Avenue and Van Ness Avenue. It contains a single-story religious building set back from Artesia Boulevard within the southern half of the irregularly shaped parcel. The remaining portions of the parcel contain an asphalt-paved parking lot surrounded by perimeter fencing and are accented with landscaping (Figure 4-2). There are concrete block walls along the east and west property lines. Fencing along the north property line and within the front portion of the property consists of metal fencing with brick posts, interrupted by two entrances for vehicle access along Artesia Boulevard. Dual pylon signage within the northeast corner of the property has Korean characters and also reads “St. Francis Korean Catholic Center” and “2040.”

The building is substantially rectangular in plan and topped by a flat roof, aside from the façade which has elements that project horizontally and vertically with central emphasis. It appears to be composed of concrete, with stone and red brick used to accent columns along the façade. The front (north) elevation is organized symmetrically with a central angled projection supported by six large square columns. The two columns at the center are the tallest and the column to the east has a pinnacle. The main entrance appears to be central and framed by a metal grill shaped to form a Gothic arch between the two central columns. There is floor-to-ceiling metal-framed fenestration along the façade beneath the central projection as well as a small window on each side of the central projection. This projection is framed by wide corner pieces on each end of the front (north) elevation that are consistent with the design of the square columns.

1942 Artesia Boulevard

The property at 1942 Artesia Boulevard is south of Artesia Boulevard between South Western Avenue and Van Ness Avenue. It contains a single-story industrial building that takes up most of its rectangular parcel and is surrounded by asphalt and concrete pavement, with perimeter and internal chain-link fencing as well as rolling gates for two vehicle entrances along Artesia Boulevard.

The building is irregular in plan, composed of concrete covered with white paint, and topped by a flat roof. Painted signage across the upper west portion of the front (north) elevation reads “1942” and “R.D.S. INDUSTRIES INC. ‘Manufacturers of Really Good Stuff.’” The main entrance is centered on the front (north elevation) has a metal-framed door surrounded by

storefront windows with stone cladding to the east and is topped by a flat metal awning supported by wire cables. Most of the eastern portion of the front (north) elevation has sliding metal ribbon windows and is abutted by palm trees. Multiple loading bays with roll-up doors are apparent along the west side elevation (Figure 4-5), with sporadic pedestrian entrances. Multiple openings of similar size and placement are apparent along the east side elevation for light and/or ventilation.

5 MANAGEMENT RECOMMENDATIONS

The Project area is mostly developed and previous disturbances include building construction, hardscape installation, and agricultural activities as well as drilling for installation of existing groundwater monitoring wells at all three parcels and injection wells at 1942 Artesia Boulevard. Ground visibility was generally poor throughout the Project area due to the presence of hardscape, lawns, and mulch. No cultural resources were identified in or near the Project area. The boreholes that will be drilled for the proposed wells are only 12 inches wide. For all of these reasons, there is a low likelihood that archaeological deposits or features will be found during construction, and no further management related to archaeological resources is recommended.

The buildings located at 2040 and 1942 Artesia Boulevard, are over 50 years old and therefore potentially eligible for inclusion in the CRHR. It was not part of the scope of this contract to evaluate these resources. These buildings will not be impacted by the addition of the new injection wells. AEC recommends that a built environment evaluation be completed should any future construction impact the buildings.

In the event that potentially significant archaeological materials are encountered during well installation, all work must be halted in the vicinity of the discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the find. If significant archaeological remains are encountered, the impacts of the Project must be mitigated appropriately. Any such discoveries, and subsequent evaluation and treatment, should be documented in a cultural resource monitoring and treatment report, which should be submitted to the SCCIC for inclusion in the CHRIS.

Additionally, Health and Safety Code Section 7050.5, CEQA Guidelines Section 15064.5(e), and Public Resources Code Section 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of human remains in a location other than a dedicated cemetery. Finally, if the Project is expanded to include areas not covered by this survey or other recent cultural resource studies, additional cultural resource studies may be required.

6 REFERENCES

- Altschul, Jeffrey H., William R. Ciolek-Torello, and Jeffrey A. Homburg
 1992 Late Prehistoric Change in the Ballona Wetland. In *Archaeological Investigations of Some Significant Sites on the Central Coast of California*, edited by Herb Dallas Jr. and Gary S. Breschini, pp. 89–108. Coyote Press, Salinas, California.
- Altschul, Jeffrey H., John G. Douglas, William R. Ciolek-Torello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey A. Homburg, Manuel Palacios-Fest, Steven Shelley, Angela Kelly, and David Maxwell
 2007 Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles. *Proceedings of the Society for California Archaeology* 20:34–42. Chico, California.
- Arnold, Jeanne E.
 1997 Bigger Boats, Crowded Creekbanks: Environmental Stresses in Perspective. *American Antiquity* 62:337–339.
- Arnold, Jeanne E., Roger H. Colten, and Scott Pletka
 1997 Contexts of Cultural Change in Insular California. *American Antiquity* 62:300–318.
- Boxt, Matthew A., L. Mark Raab, Owen K. Davis, and Kevin O. Pope
 1990 Extreme Late Holocene Climate Change in Coastal Southern California. *Pacific Coast Archaeological Society Quarterly* 35(2):25–37.
- Ciolek-Torello, Richard, Donn R. Grenda, Angela Keller, and Ann Q. Stoll
 2006 *A Passage in Time: The Archaeology and History of the Santa Susana Pass State Historic Park, California*. Technical Series 87. Statistical Research, Inc., Tucson, Arizona.
- Ciolek-Torello, William R., and Lowell J. Bean
 1998 Architecture and Site Structure. In *House Pits and Middens; A Methodological Study of Site Structure and Formation Processes at CA-ORA-116, Newport Bay, Orange County, California*, edited by Donn R. Grenda, Christopher J. Doolittle, and Jeffrey H. Altschul, pp. 191–222. Statistical Research Technical Series 69. Tucson, Arizona.
- City of Torrance
 n.d. *City of Torrance Spanning the Years*. Electronic document, <https://www.torranceca.gov/home/showpublisheddocument/47243/636808979700770000>, accessed May 7, 2025.
- Dallas, Herb
 2004 Reevaluating the Early Millingstone Complex in Coastal Southern California: Ven 1, a Case Study. edited by Gregory G. White. *Proceedings of the Society for California Archaeology* 17:151–161. Chico, California.

Davis, Owen K.

- 1992 Rapid Climatic Change in Coastal Southern California Inferred from Pollen Analysis of San Joaquin Marsh. *Quaternary Research* 37:89–100.

Erlandson, Jon M., and Roger H. Colten

- 1991 An Archaeological Context for Early Holocene Studies on the California Coast. In *Hunter-Gatherers of Early Holocene Coastal California*, edited by Jon M. Erlandson and Roger H. Colten, pp. 1–10. Perspectives in California Archaeology, Vol. 1. University of California, Los Angeles.

Erlandson, Jon M., Torben C. Rick, and René L. Vellanoweth

- 2008 *A Canyon through Time: Archaeology, History, and Ecology of the Tecolote Canyon Area, Santa Barbara County, California*. University of Utah Press, Salt Lake City.

Estrada, William D.

- 2003 *Sacred and Contested Space: The Los Angeles Plaza*. Ph.D. dissertation, Department of History, University of California, Los Angeles.

Glassow, Michael A.

- 1996 The Significance to California Prehistory of the Earliest Mortars and Pestles. *Pacific Coast Archaeological Society Quarterly* 32(4):14–26.

- 1999 Development of Maritime Adaptations during the Middle Holocene of the California Coast. *Revista de Arqueología Americana* 16:155–182.

Goldberg, Susan K., Brad J. Adams, Carole Denardo, Scott A. Williams, Marilyn J. Wyss, Mark C. Robinson, Jill A. Onken, Cari M. Inoway, Melinda C. Horne, Ken Moslak, Suzanne Griset, Virginia S. Popper, Steve L. Martin, M. Steven Shackley, Thomas M. Origer, Janet L. McVickar, and Beta Analytic

- 1999 *The People of Yaanga?: Archaeological Investigations at CA-LAN-1595/H, the Metropolitan Water District of Southern California Headquarters Project*. Applied EarthWorks, Inc., Hemet, California. Prepared for The Metropolitan Water District of Southern California, Los Angeles. Submitted to Union Station Partners, Altadena, California.

Grenda, Donn R., Christopher J. Doolittle, and Jeffrey H. Altschul (editors)

- 1998 *House Pits and Middens: A Methodological Study of Site Structure and Formation Processes at CA-ORA-116, Newport Bay, Orange County, California*. Statistical Research Technical Series 69. Tucson, Arizona.

Kennett, Douglas J.

- 2005 *The Island Chumash: Behavioral Ecology of a Maritime Society*. University of California Press, Berkeley and Los Angeles.

Kennett, Douglas J., and James P. Kennett

- 2000 Competitive and Cooperative Responses to Climatic Instability in Coastal Southern California. *American Antiquity* 65:379–395.

King, Chester D.

- 1990 *Evolution of Chumash Society: A Comparative Study of Artifacts Used for Social System Maintenance in the Santa Barbara Channel Region before A.D. 1804*. Evolution of North American Indians, Vol. 12, David Hurst Thomas, general editor. Garland, New York.

- 2004 *Ethnographic Overview of the Angeles National Forest: Tataviam and San Gabriel Mountain Serrano Ethnohistory*. Topanga Anthropological Consultants, Topanga, California. Prepared for the U.S. Department of Agriculture, Southern California Province, Angeles National Forest, Arcadia, California.

Koerper, Henry C., and Chris E. Drover

- 1983 Chronology Building for Coastal Orange County, the Case from CA-ORA-119a. *Pacific Coast Archaeological Society Quarterly* 19(2):1–34.

Koerper, Henry C., Karl Reitz, Sherri Gust, and Steven Iverson

- 2006 A Pattern Recognition Study of Cogged Stone Ritual Behavior. edited by Sharon A. Waechter. *Proceedings of the Society for California Archaeology* 19:120–127. Society for California Archaeology, Chico.

Kowta, Mark

- 1969 *The Sayles Complex: A Late Milling Stone Assemblage from Cajon Pass and the Ecological Implications of Its Scraper Planes*. University of California Publications in Anthropology 6. University of California Press, Berkeley and Los Angeles.

Kroeber, Alfred L.

- 1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C.

Lambert, Patricia M.

- 1993 Health in Prehistoric Populations of the Santa Barbara Channel Islands. *American Antiquity* 58:509–522.

Lambert, Patricia M., and Phillip L. Walker

- 1991 Physical Anthropological Evidence for the Evolution of Social Complexity in Coastal Southern California. *Antiquity* 65:963–973.

Mason, Roger D., Mark L. Peterson, Lisa P. Klug, Jon E. Ericson, Henry C. Koerper, Adella B. Schroth, Robert O. Gibson, Chester D. King, and R. McCleary

- 1994 *Newport Coast Archaeological Project: Newport Coast Settlement Systems; Analysis and Discussion*, Vol. I. The Keith Companies Archaeological Division, Costa Mesa, California. Prepared for Coastal Community Builders, Newport Beach, California. On file, South Central Coastal Information Center, California State University, Fullerton.

Mayuga, M. N.

- 1970 Geology and Development of California's Giant—Wilmington Oil Field. In *Geology of Giant Petroleum Fields, Memoirs of the American Association of Petroleum*, Vol. 14, pp. 158–184.

- McCawley, William
 1996 *The First Angelinos: The Gabrielino Indians of Los Angeles*. Malki Museum Press/Ballena Press, Banning, California.
- McKenna, Jeanette A.
 2009 *An Historic Context Statement Prepared for the General Plan Update: The City of Torrance, Los Angeles County, California*. McKENNA et al., Whittier, California. Prepared for the The Planning Center, Costa Mesa, California.
- McKnight, Tom L., and Darrell Hess
 2000 *Physical Geography: A Landscape Appreciation*. Prentice Hall, Upper Saddle River, New Jersey.
- Meighan, Clement W.
 2000 Overview of the Archaeology of San Clemente Island. *Pacific Coast Archaeological Society Quarterly* 36(1):1–17.
- Moratto, Michael J.
 1984 *California Archaeology*. Academic Press, Orlando, Florida.
- Porcasi, Judith F., and Paul Porcasi
 2002 New Dates and Data from Archaic Malibu with Some Regional Considerations. *Pacific Coast Archaeological Society Quarterly* 38(4):21–43.
- Raab, L. Mark, Katherine Bradford, Judith F. Porcasi, and William J. Howard
 1995 Return to Little Harbor, Santa Catalina Island, California: A Critique of the Marine Paleotemperature Model. *American Antiquity* 60:287–308.
- Raab, L. Mark, and Daniel O. Larson
 1997 Medieval Climatic Anomaly and Punctuated Cultural Evolution in Coastal Southern California. *American Antiquity* 62:319–336.
- Sahagùn, Louis, and Sean Greene
 2023 Tribal Leaders and Researchers Have Mapped the Ancient “Lost Suburbs” of Los Angeles. *Los Angeles Times* 9 October, <https://www.latimes.com/environment/story/2023-10-09/researchers-map-ancient-tribal-villages-of-los-angeles>, accessed May 3, 2025.
- Sheets, Robert, and David F. Stone
 1993 *Phase I/Phase 2 Historic and Archaeological Evaluations, Building 301, Santa Barbara Municipal Airport*. Science Applications International Corporation, Santa Barbara, California. Prepared for Airport Planner, Goleta, California.
- Stine, Scott
 1994 Extreme and Persistent Drought in California and Patagonia during Medieval Time. *Nature* 369:546–549.

Sutton, Mark Q.

- 2009 A Reevaluation of Northern Uto-Aztecan Prehistory in California. Paper presented at the 2009 Annual Meetings of the Society for California Archaeology, Modesto.

Torrance Historical Society and Museum

- 2024 Research, <https://torrancehistoricalsociety.org/research/>, accessed May 7, 2025.

Unger, Samuel

- 2016 General Waste Discharge Requirements for in-Situ Groundwater Remediation at the Former Freeman Products Facility Property 2040 Artesia Boulevard, Torrance, California (File No. 16-098, CI-10283, Order No. R4-2014-0187). Letter from California Water Boards, Los Angeles Regional Water Quality Control Board.

Willard, Charles D.

- 1901 *The Herald's History of Los Angeles City*. Kingsley-Barnes & Neuner, Los Angeles, California.