

The importance of seed processing is apparent in the dominance of stone grinding implements in contemporary archaeological assemblages; namely, milling stones (metates and slabs) and handstones (manos and mullers). Milling stones occur in large numbers for the first time during this period, and are even more numerous near the end of this period. Recent research indicates that Milling Stone Horizon food procurement strategies varied in both time and space, reflecting divergent responses to variable coastal and inland environmental conditions (Byrd and Raab 2007).

Milling Stone Horizon sites are common in the southern California coastal region between Santa Barbara and San Diego, and at many inland locations, including the Prado Basin in western Riverside County and the Pauma Valley in northeastern San Diego County (e.g., Herring 1968; Langenwalter and Brock 1985; Sawyer and Brock 1999; Sutton 1993; True 1958). Wallace (1955, 1978) and Warren (1968) relied on several key coastal sites to characterize the Milling Stone period and Encinitas Tradition, respectively. These include the Oak Grove Complex in the Santa Barbara region, Little Sycamore in southwestern Ventura County, Topanga Canyon in the Santa Monica Mountains, and La Jolla in San Diego County. The well-known Irvine site (CA-ORA-64) has occupation levels dating between ca. 6000 and 4000 B.C. (Drover, et al. 1983; Macko 1998b).

Stone chopping, scraping, and cutting tools made from locally available raw material are abundant in Milling Stone/Encinitas deposits. Less common are projectile points, which are typically large and leaf-shaped, and bone tools such as awls. Items made from shell, including beads, pendants, and abalone dishes, are generally rare. Evidence of weaving or basketry is present at a few sites.

Kowta (1969) attributes the presence of numerous scraper-planes in Milling Stone sites to preparation of agave or yucca for food or fiber. The mortar and pestle, associated with pounding foods such as acorns, were first used during the Milling Stone Horizon (Wallace 1955, 1978; Warren 1968).

Cogged stones and discoidals are diagnostic Milling Stone period artifacts, and most specimens have been found within sites dating between 4000 and 1000 B.C. (Moratto 1984). The cogged stone is a ground stone object with gear-like teeth on its perimeter. Discoidals are similar to cogged stones, differing primarily in their lack of edge modification. Discoidals are found in the archaeological record subsequent to the introduction of the cogged stone.

Cogged stones and discoidals are often purposefully buried, and are found mainly in sites along the coastal drainages from southern Ventura County southward, with a few specimens inland at Cajon Pass, and heavily in Orange County (Dixon 1968; Moratto 1984). These artifacts are often interpreted as ritual objects (Eberhart 1961; Dixon 1968), although alternative interpretations (such as gaming stones) have also been suggested (e.g., Moriarty and Broms 1971).

Characteristic mortuary practices of the Milling Stone period or Encinitas Tradition include extended and loosely flexed burials, some with red ochre, and few grave goods such as shell beads and milling stones interred beneath cobble or milling stone cairns. “Killed” milling stones, exhibiting holes, may occur in the cairns. Reburials are common in the Los Angeles County area, with north-oriented flexed burials common in Orange and San Diego Counties (Wallace 1955, 1978; Warren 1968).

Koerper and Drover (1983) suggest that Milling Stone period sites represent evidence of migratory hunters and gatherers who used marine resources in the winter and inland resources for the remainder of the year. Subsequent research indicates greater sedentism than previously recognized.

Evidence of wattle-and-daub structures and walls has been identified at several sites in the San Joaquin Hills and Newport Coast area (Koerper 1995; Strudwick 2005), while numerous early house pits have been discovered on San Clemente Island (Byrd and Raab 2007). This architectural evidence and seasonality studies suggest semi-permanent residential base camps that were relocated seasonally (de Barros 1996; Koerper, et al. 2002; Mason, et al. 1997) or permanent villages from which a part of the population left at certain times of the year to exploit available resources (Cottrell and Del Chario 1981).

4.1.1.3 Horizon III – Intermediate (3000 B.C.–A.D. 500)

Following the Milling Stone Horizon, Wallace’s Intermediate Horizon and Warren’s Campbell Tradition in Santa Barbara, Ventura, and parts of Los Angeles Counties, date from approximately 3000 B.C. to 500 A.D. and are characterized by a shift toward a hunting and maritime subsistence strategy, along with a wider use of plant foods. The Campbell Tradition (Warren 1968) incorporates David B. Rogers’ (1929) Hunting Culture and related expressions along the Santa Barbara coast. In the San Diego region, the Encinitas Tradition (Warren 1968) and the La Jolla Culture (Moriarty 1966; Rogers 1939, 1945) persist with little change during this time.

During the Intermediate Horizon and Campbell Tradition, there was a pronounced trend toward greater adaptation to regional or local resources. For example, an increasing variety and abundance of fish, land mammal, and sea mammal remains are found in sites along the California coast during this period. Related chipped stone tools suitable for hunting are more abundant and diversified, and shell fishhooks become part of the toolkit during this period. Larger knives, a variety of flake scrapers, and drill-like implements are common during this period.

Projectile points include large side-notched, stemmed, and lanceolate or leaf-shaped forms. Koerper and Drover (1983) consider Gypsum Cave and Elko series points, which have a wide distribution in the Great Basin and Mojave deserts between ca. 2000 B.C. and A.D. 500, to be

diagnostic of this period. Bone tools, including awls, were more numerous than in the preceding period, and the use of asphaltum adhesive was common.

Mortars and pestles became more common during this period, gradually replacing manos and metates as the dominant milling equipment. Hopper mortars and stone bowls, including steatite vessels, appeared in the toolkit at this time as well. This shift appears to correlate with the diversification in subsistence resources.

Many archaeologists believe this change in milling stones signals a shift away from the processing and consuming of hard seed resources to the increasing importance of the acorn (e.g., Glassow, et al. 1988; True 1993). It has been argued that mortars and pestles may have been used initially to process roots (e.g., tubers, bulbs, and corms associated with marshland plants), with acorn processing beginning at a later point in prehistory (Glassow 1997) and continuing to European contact.

Characteristic mortuary practices during the Intermediate Horizon and Campbell Tradition included fully flexed burials, placed face down or face up, and oriented toward the north or west (Warren 1968). Red ochre was common, and abalone shell dishes infrequent. Interments sometimes occurred beneath cairns or broken artifacts. Shell, bone, and stone ornaments, including charmstones, were more common than in the preceding Encinitas Tradition.

Some later sites include *Olivella* shell and steatite beads, mortars with flat bases and flaring sides, and a few small points. The broad distribution of steatite from the Channel Islands and obsidian from distant inland regions, among other items, attest to the growth of trade, particularly during the later part of this period. Howard and Raab (1993) have argued that the distribution of *Olivella* grooved rectangle beads marks “a discrete sphere of trade and interaction between the Mojave Desert and the southern Channel Islands” (Byrd and Raab 2007).

4.1.1.4 Horizon IV – Late Prehistoric (A.D. 500–Historic Contact)

In the Late Prehistoric Horizon (Wallace 1955, 1978), which lasted from the end of the Intermediate Horizon (ca. A.D. 500) until European contact, there was an increase in the use of plant food resources in addition to an increase in land and sea mammal hunting. There was a concomitant increase in the diversity and complexity of material culture during the Late Prehistoric, demonstrated by more classes of artifacts.

The recovery of a greater number of small, finely chipped, projectile points, usually stemless with convex or concave bases, suggests an increased utilization of the bow and arrow rather than the atlatl (spear thrower) and dart for hunting. Other items include steatite cooking vessels and containers, the increased presence of smaller bone and shell circular fishhooks, perforated stones, arrow shaft straighteners made of steatite, a variety of bone tools, and

personal ornaments made from shell, bone, and stone. There is also an increased use of asphalt for waterproofing and as an adhesive.

Many Late Prehistoric sites contain beautiful and complex objects of utility, art, and decoration. Ornaments include drilled whole venus clam (*Chione* spp.) and drilled abalone (*Haliotis* spp.). Steatite effigies become more common, with scallop (*Pecten* spp. and *Argopecten* spp.) shell rattles common in middens.

Mortuary customs are elaborate and include cremation and interment with abundant grave goods. By A.D. 1000, fired clay smoking pipes and ceramic vessels began to appear at some sites (Drover 1971, 1975; Meighan 1954; Warren and True 1961).

The scarcity of pottery in coastal and near-coastal sites implies ceramic technology was not well developed in that area, or that ceramics were obtained by trade with neighboring groups to the south and east. The lack of widespread pottery manufacture is usually attributed to the high quality of tightly woven and watertight basketry that functioned in the same capacity as ceramic vessels.

There was an increase in population size during this period, accompanied by the advent of larger, more permanent villages (Wallace 1955). Large populations and, in places, high population densities are characteristic, with some coastal and near-coastal settlements containing as many as 1,500 people. Many of the larger settlements were permanent villages in which people resided year-round. The populations of these villages may have also increased seasonally.

In Warren's (1968) cultural ecological scheme, the period between A.D. 500 and European contact is divided into three regional patterns. The Chumash Tradition is present mainly in the region of Santa Barbara and Ventura Counties; the Takic or Numic Tradition is present in the Los Angeles, Orange, and western Riverside Counties region; and the Yuman Tradition is present in the San Diego region.

The seemingly abrupt changes in material culture, burial practices, and subsistence focus at the beginning of the Late Prehistoric period are thought to be the result of a migration of people to the coast from inland desert regions to the east. In addition to the small triangular and side-notched points similar to those found in the desert regions in the Great Basin and Lower Colorado River, Colorado River pottery and introduction of cremation in the archaeological record are diagnostic of the Yuman Tradition in the San Diego region. This combination suggests a strong influence from the Colorado Desert region.

In Los Angeles, Orange, and western Riverside Counties, similar changes (introduction of cremation, pottery, and small triangular arrow points) are thought to be the result of a Takic migration to the coast from inland desert regions. This Takic, or Numic, Tradition was

formerly referred to as the “Shoshonean wedge” or “Shoshonean intrusion” (Warren 1968). This terminology, used originally to describe a Uto-Aztecan language group, is generally no longer used to avoid confusion with ethnohistoric and modern Shoshonean groups who spoke Numic languages (Heizer 1978; Shipley 1978). Modern Gabrielino/Tongva, Juaneño, and Luiseño in this region are considered the descendents of the prehistoric Uto-Aztecan, Takic-speaking populations that settled along the California coast during this period or perhaps somewhat earlier.

4.1.2 Ethnographic Overview

The project area is located in the heart of Gabrielino/Tongva territory (Bean and Smith 1978; Kroeber 1925). Surrounding native groups included the Chumash and Tatataviam/Alliklik to the north, the Serrano to the east, and the Luiseño/Juaneño to the south. There is documented interaction between the Gabrielino and many of their neighbors in the form of intermarriage and trade.

4.1.2.1 Gabrielino/Tongva

The name Gabrielino denotes those people who were administered by the Spanish from Mission San Gabriel, including people from the Gabrielino area proper as well as other social groups (Bean and Smith 1978; Kroeber 1925). Therefore, in the post-Contact period, the name does not necessarily identify a specific ethnic or tribal group.

The names by which Native Americans in southern California identified themselves have, for the most part, been lost. Many contemporary Gabrielino identify themselves as descendants of the indigenous people living across the plains of the Los Angeles Basin and refer to themselves as the Tongva (King 1994). This term is used in the remainder of this section to refer to the pre-Contact inhabitants of the Los Angeles Basin and their descendants.

Tongva lands encompassed the greater Los Angeles Basin and three Channel Islands, San Clemente, San Nicolas, and Santa Catalina. Their mainland territory was bounded on the north by the Chumash at Topanga Creek, the Serrano at the San Gabriel Mountains in the east, and the Juaneño on the south at Aliso Creek (Bean and Smith 1978; Kroeber 1925).

The Tongva language, as well as that of the neighboring Juaneño/Luiseño, Tatataviam/Alliklik, and Serrano, belongs to the Takic branch of the Uto-Aztecan language family, which can be traced to the Great Basin area (Mithun 2004). This language family’s origin differs substantially from that of the Chumash to the north and the Ipai, Tipai, and Kumeyaay farther south. The language of the Ipai, Tipai, and Kumeyaay is derived from the California-Delta branch of the Yuman-Cochimi language family, which originated in the American Southwest (Mithun 2004).

The Chumash language is unlike both the Yuman-Cochimi and Uto-Aztecan families, and may represent a separate lineage (Mithun 2004). Linguistic analysis suggests that Takic-speaking immigrants from the Great Basin area began moving into southern California around 500 B.C. (Kroeber 1925). This migration may have displaced both Chumashan- and Yuman-speaking peoples, but the timing and extent of the migrations and their impact on indigenous peoples is not well understood.

The Tongva language consisted of two main dialects, Eastern and Western; the Western group included much of the coast and the Channel Island population (King 2004). Lands of the Western group encompassed much of the western Los Angeles Basin and San Fernando Valley, northward along the coast to the Palos Verdes Peninsula (McCawley 1996).

Tongva society was organized along patrilineal non-localized clans, a characteristic Takic pattern. Clans consisted of several lineages, each with their own ceremonial leader. The chief, or *tómyaar*, always came from the primary lineage of the clan/village. One or two clans generally made up the population of a village.

Even though the Tongva did not have a distinctly stratified society, there were two general classes of individuals: elites and commoners. The elites consisted of primary lineage members, other lineage leaders (who maintained a separate ceremonial language), the wealthy, and the elite families of the various villages who commonly married among themselves. The commoner class contained those from “fairly well-to-do and long-established lineages” (Bean and Smith 1978). A third, lower class consisted of slaves taken in war and individuals, unrelated to the inhabitants, who drifted into the village.

The Tongva established large, permanent villages in the fertile lowlands along rivers and streams, and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated of at least 5,000 (Bean and Smith 1978), but recent ethnohistoric work suggests a number more likely approaching 10,000 (O’Neil 2002).

Several Tongva villages appear to have served as trade centers, largely due to their centralized geographic position in relation to the Southern Channel Islands and other tribes. These villages maintained particularly large populations and hosted annual trade fairs that would bring their population to 1,000 or more for the duration of the event (McCawley 1996).

Houses constructed by the Tongva were large, circular, domed structures made of willow poles thatched with tule that could hold up to 50 people (Bean and Smith 1978). Other structures served as sweathouses, menstrual huts, ceremonial enclosures, and probably communal granaries. Fields for races and games, such as lacrosse and pole throwing, were cleared adjacent to Tongva villages (McCawley 1996).

The Tongva subsistence economy was based on gathering and hunting. The surrounding environment was rich and varied, and the tribe exploited mountains, foothills, valleys, and deserts as well as riparian, estuarine, and open and rocky coastal ecological niches. As with most native Californians, acorns were the staple food (an established industry by the time of the early Intermediate period). Acorns were supplemented by the roots, leaves, seeds, and fruits of a wide variety of flora (e.g., islay, cactus, yucca, sages, and agave). Fresh- and saltwater fish, shellfish, birds, reptiles, and insects, as well as large and small mammals, were also consumed (Bean and Smith 1978; Kroeber 1925; McCawley 1996).

A wide variety of tools and implements were employed by the Tongva to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Many plant foods were collected with woven seed beaters, several forms of burden baskets, carrying nets, and sharpened digging sticks, sometimes with stone weights fitted onto them.

Groups residing near the ocean used ocean-going plank canoes (known as a *ti'at*) and tule balsa canoes for fishing, travel, and trade between the mainland and the Channel Islands. The ocean-going canoes were capable of holding six to 14 people and were used for travel and trade between the mainland and the Channel Islands. The tule balsa canoes were used for near-shore fishing (Blackburn 1963; McCawley 1996).

Tongva people processed food with a variety of tools, including portable and bedrock mortars, pestles, basket hopper mortars, manos and metates, hammerstones and anvils, woven strainers and winnowers, leaching baskets and bowls, woven parching trays, knives, bone saws, and wooden drying racks. Food was consumed from a number of woven and carved wood vessels.

The ground meal and unprocessed hard seeds were stored in large, finely woven baskets, and the unprocessed acorns were stored in large granaries woven of willow branches raised off the ground on platforms. Santa Catalina Island steatite was used to make comals, ollas, and cooking vessels that would not crack after repeated firings. In addition to cooking vessels, steatite was used to make effigies, ornaments, and arrow straighteners (Blackburn 1963; Kroeber 1925; McCawley 1996).

The Tongva participated in an extensive exchange network, trading coastal goods for inland resources. They exported Santa Catalina Island steatite products, roots, seal and otter skins, fish and shellfish, red ochre, and lead ore to neighboring tribes, as well as people as far away as the Colorado River. In exchange they received ceramic goods, deer skin shirts, obsidian, acorns, and other items. This burgeoning trade was facilitated by the use of craft specialists, a standard medium of exchange (*Olivella* bead currency), and the regular destruction of valuables in ceremonies, which maintained a high demand for these goods (McCawley 1996).

At the time of Spanish contact, the basis of Tongva religious life was the *Chinigchinich* cult, centered on the last of a series of heroic mythological figures. Chinigchinich gave instruction on laws and institutions, and also taught the people how to dance, the primary religious act for this society. He later withdrew into heaven, where he rewarded the faithful and punished those who disobeyed his laws (Kroeber 1925). The Chinigchinich religion seems to have been relatively new when the Spanish arrived. It was spreading south into the Southern Takic groups even as Christian missions were being built and may represent a mixture of native and Christian belief and practices (McCawley 1996).

Deceased Tongva were either buried or cremated, with inhumation being more common on the Channel Islands and the neighboring mainland coast and cremation predominating on the remainder of the coast and in the interior (Harrington 1942; McCawley 1996). Cremation ashes have been found in archaeological contexts buried within stone bowls and in shell dishes (Ashby and Winterbourne 1966), as well as scattered among broken ground stone implements (Cleland, et al. 2007). Archaeological data such as this correspond with ethnographic descriptions of an elaborate mourning ceremony that included a wide variety of offerings, including seeds, stone grinding tools, otter skins, baskets, wood tools, shell beads, bone and shell ornaments, and projectile points and knives. Offerings varied with the sex and status of the deceased (Dakin 1978; Johnston 1962; McCawley 1996). At the behest of the Spanish missionaries, cremation essentially ceased during the post-Contact period (McCawley 1996).

4.1.2.2 Native American Communities in Los Angeles

Ethnohistoric data indicate that the Gabrielino ethnographic village of *Yaanga* (*Yang-na*, *Yabit*, or other spellings) was located in or near the original Pueblo of Los Angeles. In 1852, Hugo Reid indicated that *Yang-na* and Los Angeles were one and the same (Dakin 1978). Gabrielino informant José Zalvidea told ethnographer J. P. Harrington that *Yaanga* “is the old name of the site of the Los Angeles plaza” and the name means “it is alkali, like the earth is salty” (McCawley 1996).

Alternative names associated with the community include *Iyakha* (meaning “poison oak” in Luiseño) and *Wenot* (meaning “river” in Gabrielino). *Yaanga* was abandoned prior to 1836, but was succeeded by a series of Native American settlements in the same area. The community of *Geveronga*, which contributed 31 neophytes to the San Gabriel Mission between 1788 and 1809, may have been located nearby (McCawley 1996).

The precise location of Contact-era (late seventeenth century) Native American communities within downtown Los Angeles, including *Yaanga*, *Geveronga*, and related settlements, is unclear. Historical records place *Yaanga* in the vicinity of the pueblo plaza, which was located less than 0.25 mile north northwest of the project area, although historians and archaeologists have presented multiple possible village locations within this general area (Applied Earthworks 1999).

The archaeological evidence for these settlements is not clear-cut. Early Spanish period Native American deposits have been identified in several locations, the most significant being the cemetery next to Union Station. It is unclear whether this cemetery was adjacent to, affiliated with, or precisely contemporary with *Yaanga* (Applied Earthworks 1999).

The preponderance of available evidence indicates that early historic Native American communities in the area were situated near the Los Angeles River, which is currently located approximately 0.5 mile east of the project. Consequently, the project has the potential to encounter archaeological deposits associated with these communities.

4.1.3 Historic Overview

The post-Contact history of California is divided into three periods: the Spanish period (1769–1822), the Mexican period (1822–1848), and the American period (1848–present). Each of these periods is briefly described below.

4.1.3.1 Spanish Period (1769–1822)

The first Europeans to observe what became southern California were members of the 1542–1543 expedition of Juan Rodriguez Cabrillo. Cabrillo noted the numerous campfires of the Gabrielino and thus named the area the Bay of Smokes. Cabrillo and other early explorers sailed along the coast and made limited expeditions into Alta (upper) California between 1529 and 1769. Although Spanish, Russian, and British explorers briefly visited Alta California during this nearly 250-year span, they did not establish permanent settlements (Starr 2007).

Gaspar de Portolá and Franciscan Father Junipero Serra established the first Spanish settlement in Alta California at San Diego in 1769. Mission San Diego de Alcalá was the first of 21 missions built by the Spanish between 1769 and 1823. Portolá continued north, passing through the project area and reaching San Francisco Bay on October 31, 1769.

On September 4, 1781, 12 years after the Portolá's initial visit, a dozen families from Sonora, Mexico founded *El Pueblo de la Reina de los Angeles* under the specific directions of Governor Felipe de Neve (Robinson 1979:238). The site chosen for the new pueblo was elevated on a broad terrace one-half mile west of the river (Gumprecht 1999). As a planned pueblo (one of only three in California), four square leagues (about 28 square miles) of land were set aside for the settlement (Robinson 1979).

The area's rich, well-watered soils created an ideal locale for a town meant to supply livestock and feed to the presidios of San Diego and Santa Barbara, and to serve as a home for retired Spanish soldiers. The soldiers were given vast tracts of land to start farms and ranches.

To expand their herds of cattle, colonists enlisted the labor of the surrounding Indian population (Engelhardt 1927b). By 1786, the flourishing pueblo attained self-sufficiency, and funding by the Spanish government ceased. Fed by a steady supply of water and an

expanding irrigation system, agriculture and ranching grew, and by the early 1800s the pueblo produced 47 different agricultural products (Gumprecht 1999).

The process of converting the local Native American population to Christianity through baptism and relocation to mission grounds began in this region by the Franciscan padres at the San Gabriel Mission, which was established in 1771 (Engelhardt 1927a). The San Fernando Mission was founded 26 years later, its location chosen as a stopping point between the San Gabriel and San Buenaventura missions (Engelhardt 1927b).

The majority of the Native Americans from the Los Angeles Basin were persuaded to settle in the vicinity of the two missions. These included the Eastern Gabrielino of the plains as far south as the Santa Ana River and west to the Los Angeles River. The padres also proselytized the Serrano of the San Gabriel and San Bernardino Mountains, the Vanyume Serrano of the Mojave Desert, many of the western Cahuilla in the Coachella and San Jacinto Valley, some Luiseño of the San Jacinto Valley, and Western Gabrielino of the plains west of the Los Angeles River, San Fernando Valley, and the southern Channel Islands.

The missions were charged with administering to the Indians within their areas. Although mission life gave the Indians skills needed to survive in their rapidly changing world, the close quarters and regular contact with Europeans transmitted diseases for which they had no immunity, decimating their populations (McCawley 1996).

4.1.3.2 Mexican Period (1822–1848)

After the end of the Mexican Revolution against the Spanish crown (1810–1821), all Spanish holdings in North America (including both Alta and Baja California) became part of the new Mexican republic. Alta California became a state in 1821, and Los Angeles selected its first city council the following year.

Independence and removal of economic restrictions attracted settlers to Los Angeles, and the town slowly grew in size, expanding to the south and west. The population nearly doubled during this period, rising from 650 to 1,250 between 1822 and 1845 (Weber 1992). Until 1832, Los Angeles was essentially a military post, with all able-bodied males listed on the muster rolls and required to perform guard duty and field duty whenever circumstances required (Los Angeles County 1963). The Mexican Congress elevated Los Angeles from pueblo to city status in 1835, declaring it the new state capital (Robinson 1979).

Under Mexican rule, the authority of the California missions gradually declined, culminating with their secularization in 1834. Although the Mexican government directed that each mission's lands, livestock, and equipment be divided among its neophytes, the majority of these holdings quickly fell into non-Indian hands. Mission buildings were abandoned and quickly fell into decay.

If mission life was difficult for Native Americans, secularization was worse. After two generations of dependence upon the missions, they were suddenly disenfranchised. After secularization, “nearly all of the Gabrielinos went north while those of San Diego, San Luis and San Juan overran this county, filling the Angeles and surrounding ranchos with more servants than were required” (Dakin 1978).

Former mission lands were quickly divided and granted to private citizens for use as agricultural and pastoral land. Most of the land grants to Mexican citizens in California (Californios) were located inland, a policy intended to increase the population away from the coastal areas where the Spanish settlements were concentrated (Dakin 1978).

After years of surreptitious commerce, the first party of American immigrants arrived in Los Angeles in 1841, including William Workman and John Rowland, who soon became influential landowners. As the possibility of a takeover of California by the United States loomed large in the 1840s, the Mexican government increased the number of land grants in an effort to keep the land in Mexican hands (Wilkman and Wilkman 2006). Governor Pío Pico and his predecessors made more than 600 rancho grants between 1833 and 1846, putting most of the state’s lands into private ownership for the first time (Gumprecht 1999).

4.1.3.3 American Period (1848–Present)

The United States took control of California in 1846, seizing Monterey, San Francisco, San Diego, and Los Angeles with little resistance. Los Angeles soon slipped from American control, however, and needed to be retaken in 1847.

Approximately 600 U.S. sailors, marines, Army dragoons, and mountain men converged under the leadership of Colonel Stephen W. Kearney and Commodore Robert F. Stockton in early January of 1847 to challenge the California resistance, which was led by General Jose Maria Flores. The American party scored a decisive victory over the Californios in the Battle of the Rio San Gabriel and at the Battle of La Mesa the following day, effectively ending the war and opening the door for increased American immigration (Harlow 1992).

Hostilities officially ended with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico \$15 million for the conquered territory, including California, Nevada, Utah, Arizona, New Mexico, Wyoming, and parts of Colorado. This represented nearly half of Mexico’s pre-1846 holdings. California joined the Union in 1850 as the 31st state (Wilkman and Wilkman 2006).

Although the discovery of gold in northern California in 1848 gave rise to the California gold rush, Los Angeles was where the first California gold was found. Francisco López had found several gold nuggets clinging to wild onion roots near the San Fernando Mission in 1842 (Guinn 1977; Workman 1935). The big strike at Sutter’s Creek seven years later led to an

enormous influx of American citizens in the 1850s and 1860s, and these “forty-niners” rapidly displaced the old rancho families.

One year after discovering gold, nearly 90,000 people journeyed to the California gold fields. With most miners drawn to central California by its well-known strikes, Los Angeles attracted people who were largely peripheral to the gold rush, including a healthy contingent of gamblers (Robinson 1979).

Surrounded by miles of ranchos, Los Angeles was the center of a vibrant cattle industry throughout the nineteenth century. The city served as a trading hub for southern California’s “cow counties,” and at mid-century the plaza was lined with the shops and town homes of ranch owners (Robinson 1979). In 1835, Los Angeles County had approximately 75,000 to 100,000 cattle, 1,700 horses, and 13,000 sheep, and produced about 4,000 bushels of cereal and legumes each year (Los Angeles County 1963).

Agricultural interests were gradually supplanted by more urban industries, with about a third of Los Angeles residents supporting themselves with non-agricultural pursuits by 1836 (Weber 1992). By 1853, the population of the state exceeded 300,000. Thousands of settlers and immigrants continued to pour into the state, particularly after completion of the transcontinental railroad in 1869.

When the Southern Pacific Railroad extended its line from San Francisco to Los Angeles in 1876, it signaled the beginning of Los Angeles’ first major growth spurt. Newcomers poured into the city, nearly doubling the population between 1870 and 1880.

Completion of the second transcontinental line, the Santa Fe, took place in 1886, causing a price war that drove fares to an unprecedented low, including a promotional one-way ticket from Kansas City that sold for one dollar. More settlers continued to head west and the demand for real estate skyrocketed. As real estate prices soared, land that had been farmed for decades outlived its agricultural value and was sold to become residential communities.

The large ranchos that surrounded the City were each annexed, subdivided, and developed in turn. Los Angeles’ population more than quadrupled in a decade, from 11,183 in 1880 to 50,395 by 1890 (Meyer 1981; Robinson 1979; Wilkman and Wilkman 2006). During the first three decades of the twentieth century, more than 2 million people moved to Los Angeles County, transforming it from a largely agricultural region into a major metropolitan area (Gumprecht 1999).

4.1.3.4 City of Los Angeles

The Spanish Governor of California, Felipe de Neve, recognized the need to establish a pueblo north of the Mission San Gabriel to help supply Spain’s military Presidios in California as well as maintain Spain’s control over the region. On September 4, 1781, 22 settlers from Mexico

accompanied by the governor, soldiers, mission priests, and several Native Americans arrived at the site alongside the Los Angeles River, which was officially declared *El Pueblo de la Reina de los Angeles*, or the Town of the Queen of the Angels (Ríos-Bustamante 1992).

Less than one month after the pueblo's founding, Los Angeles residents began constructing an extensive water management system. They diverted water from the river (near the present N. Broadway bridge) into a ditch named the *Zanja Madre* (mother ditch), which in turn fed numerous smaller *zanjas*. The city's residents used this water for ranching and agriculture, as well as domestic purposes such as drinking, bathing, and clothes washing (Newmark 1977). The Los Angeles *zanja* system was expanded and improved in subsequent decades and remained in use until the early 1900s.

Many *zanja* segments were converted into masonry-lined canals, iron or cement pipes, or brick-lined, subsurface conduits (Costello and Wilcoxon 1978; Gumprecht 1999; Slawson 2006). The early construction, extensive footprint, and longevity of this water system are evidence of its great importance to the city.

The Pueblo of Los Angeles grew in population during the Mexican period, but retained an emphasis on ranching as the primary economic activity. Mexican governors granted numerous *ranchos* during this period, and the few granted during the Spanish period continued to operate or were broken up into smaller *ranchos*.

On May 23, 1835, Los Angeles was officially declared a city by Mexican national decree (Bancroft 1886). During the Mexican period, Anglo-Americans such as Hugo Reid and Don Juan Forster were assimilated into Los Angeles's citizenry and culture (Dakin 1978).

On April 4, 1850, only two years after the Mexican American War and five months prior to California receiving statehood, the City of Los Angeles was formally incorporated. Los Angeles maintained its role as a regional business center in the early American period; the transition of many former *ranchos* lands to agriculture and development of citriculture in the late 1800s further strengthened this status (Caughey and Caughey 1977).

These factors, combined with the expansion of port facilities and railroads throughout the region, contributed to the real estate boom of the 1880s in Los Angeles (Caughey and Caughey 1977; Dumke 1944). The boom's fiscal impact can be observed through the city's tax assessments: in 1886, Los Angeles was assessed \$18 million; in 1889, the total was \$46 million (Dumke 1944). Since the real estate boom largely occurred in surrounding areas, Los Angeles, as the commercial center, reaped substantial benefits from the explosive growth.

The City of Los Angeles recognized the need for water to sustain the growing population in the late 1800s, and Irish immigrant William Mulholland personified the city's efforts to establish a plentiful and stable water supply (Dumke 1944; Nadeau 1997). The city purchased

large tracts of land in the Owens Valley, and Mulholland planned and directed the construction of the 240-mile aqueduct that brought the valley's water to the city by 1913 (Nadeau 1997).

Los Angeles continued to grow in the twentieth century in part due to the discovery of oil in the area and its strategic location as a wartime port. The military presence led to the aviation and eventually aerospace industries having a large presence in the city and region.

Mines Field, which would become Los Angeles International Airport (LAX), was established in 1928. The complexion of this multicultural city continued to change; however, the process was frequently painful for new and often unwelcome ethnic groups (Garcia et al. 2004).

Hollywood became the entertainment capital of the world through the presence of film and television industries and continues to tenuously maintain that position. With nearly four million residents, Los Angeles is the second largest city in the U.S. (by population) and remains a city with worldwide influence, while continuing to struggle with its population's growth and needs.

4.2 CHRIS Literature Search

A cultural resources records search for the Regional Connector Transit Corridor project was performed by SWCA at the California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC) on February 10, 2009 (Appendix A). Subsequent requests for information were made in March, April, and May 2009. The records search included a review of the available documents and site records within a 0.25-mile radius of the project area. In addition to official maps and records, the following sources of information were consulted as part of the records search:

- National Register of Historic Places – Listed Properties (2006, updated to present)
- California Register of Historical Resources (2006, and review of minutes from State Historic Resources Commission meetings thereafter)
- California Inventory of Historical Resources (1976)
- California State Historical Landmarks (1996 and updates)
- California Points of Historical Interest (1992 and updates)
- Office of Historic Preservation Historic Property Directory and Determinations of Eligibility (2008)

- Survey of Surveys: A Summary of California’s Historical and Architectural Resource Surveys (1986)
- Five Views: An Ethnic Sites Survey for California (1988)

The records search focused on obtaining information about private and public lands located within a 0.25-mile search radius of the project alignment.

4.2.1 Previous Studies in 0.25-mile Radius of APE

Downtown Los Angeles has been the subject of a large number of cultural resources studies in the last three decades. The SCCIC records search identified 143 prior cultural resources studies within a 0.25-mile radius of the direct APE. Of these, 23 studies were located within the direct APE and 12 were adjacent to the direct APE (Table 4-1).

SCCIC Report No.	Study	Author	Year	Proximity to Direct APE
LA447	Preliminary Evaluation of Cultural Resources Located Along a Series of Proposed Urban Mass Transit System Alignment Alternatives in the City of Los Angeles, California	Singer, C.	unknown	within
LA483	Archaeological Resources Survey for the Proposed Downtown People Mover Project	Greenwood, R.	1978	within
LA982	Archaeological Resource Survey and Impact Assessment of a Proposed Parking Lot, Los Angeles, California	Bove, F.	1977	within
LA1578	Technical Report Archaeological Resources Los Angeles Rapid Rail Transit Project Draft Environmental Impact Statement and Environmental Impact Report	Westec Services, Inc.	1983	within
LA1770	Report of Archaeological Reconnaissance Survey of: ESA Project 7217B, City of Los Angeles, Los Angeles County, CA	Salls, R.	1989	within

Table 4-1. Prior Cultural Resources Studies Within or Adjacent to the Direct APE

SCCIC Report No.	Study	Author	Year	Proximity to Direct APE
LA3103	Cultural Resources Impact Mitigation Program Angeles Metro Red Line Segment 1	Greenwood, R.	1993	within
LA3668	St. Vibiana's Cathedral Los Angeles, California	Dillon, B.	1997	within
LA3813	An Archival Study of a Segment of the Proposed Pacific Pipeline, City of Los Angeles, California	Peak & Associates	1992	within
LA4215	Results of Cultural Resources Monitoring, L.A. Cellular Cell Site R104, Near West Third Street and South Grand Avenue, City and County of Los Angeles	Conkling, S.	1998	adjacent
LA4263	General Services Administration Federal Center: Archaeological Assessment Report Phase	Padon, B.	1986	within
LA4448	Section 106 Documentation for the Metro Rail Red Line East Extension in the City and County of Los Angeles, California	Anonymous	1994	within
LA4742	Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA 263-01, County of Los Angeles, California	Lapin, P.	1999	within
LA4836	Phase I Archaeological Survey Along Onshore Portions of the Global West Fiber Optic Cable Project	Science Applications International Corporation	2000	adjacent
LA5093	Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA 679-11, County of Los Angeles, CA	Duke, C.	1999	within

Table 4-1. Prior Cultural Resources Studies Within or Adjacent to the Direct APE

SCCIC Report No.	Study	Author	Year	Proximity to Direct APE
LA5098	Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA-226-01, County of Los Angeles, CA	Duke, C.	1999	adjacent
LA5200	Assessment of Archaeological and Paleontological Sensitivity on the Proposed California Department of Transportation District 7 Headquarters Replacement Project	Warren, K. <i>et al.</i>	2001	within
LA5447	Archaeological Monitoring Report: 911 Dispatch Center First and Los Angeles Streets	Schmidt, J.	1999	within
LA5448	Cultural Resource Assessment for AT&T Wireless Services Facility Number R299.1, County of Los Angeles	Duke, C.	2000	within
LA5451	The VA Outpatient Clinic Project	Padon, B.	unknown	within
LA6351	Nextel Communications CA-7837 A/Onizuka 332 2 nd Street, Los Angeles, California	Earthtouch, LLC	2001	within
LA6375	Highway Project to Close Vignes Street On-Ramp and the Hewitt Street on/off ramps to US 101 and to construct new on/off ramps to the south at Garey Street in the City of Los Angeles	Slyvia, B.	2002	adjacent
LA6396	An Archaeological Assessment of the Proposed Verizon Wireless Grand Avenue, East Los Angeles Unmanned Cellular Telecommunications Site to be Located at 601 West 5 th Street, Los Angeles County, California 90071	Tetra Tech, Inc.	2001	adjacent

Table 4-1. Prior Cultural Resources Studies Within or Adjacent to the Direct APE

SCCIC Report No.	Study	Author	Year	Proximity to Direct APE
LA6424	Cultural Resource Assessment Cingular Wireless Facility No. SM 140-01, Los Angeles County, California	Duke, C.	2002	adjacent
LA6435	Cultural Resource Assessment for Pacific Bell Mobile Services Facility LA679-11, County of Los Angeles, California	Duke, C.	1999	adjacent
LA6463	A Section 106 Historic Preservation Review of the Proposed Verizon Wireless Grand Avenue East Los Angeles Unmanned Cellular Telecommunications Site to be Located at 601 West 5 th Street, Los Angeles, CA 90071	Tetra Tech, Inc.	2002	adjacent
LA7178	Report on Cultural Resources Mitigation and Monitoring Activities Fluor/Level (3) Los Angeles Local Loops	Unknown	2001	within
LA7527	Caltrans Statewide Historic Bridge Inventory Update Tunnels	Feldman, J. <i>et al.</i>	2006	within
LA7533	Archaeological/Paleontological Monitoring at 3 rd Street and San Pedro	McKenna, J.	2004	adjacent
LA7547	Phase I Archaeological Survey/Class III Inventory for the Hall of Justice Study Area, Los Angeles, Los Angeles County, California	Whitely, D.	2003	adjacent
LA 7558	Archaeological Monitoring Report Alameda Street Improvements	Hale, A. and Scott, S.	2004	within
LA7733	Cultural Resources Records Search Results and Site Visit for Cingular Wireless Candidate LSA0739 (811 Wilshire), 811 Wilshire Boulevard, Los Angeles, Los Angeles County, California	Bonner, W.	2006	within

Table 4-1. Prior Cultural Resources Studies Within or Adjacent to the Direct APE

SCCIC Report No.	Study	Author	Year	Proximity to Direct APE
LA8515	Historical Evaluation Report for the Downtown Bus Maintenance and Inspection Facility, Los Angeles, California	Wuellner, M.	2005	adjacent
LA8516	3 rd and San Pedro Archaeological Monitoring (Addendum)	McKenna, J.	2004	adjacent
LA8541	Cultural Resource Records Search Results and Site Visit for Cingular Telecommunications Facility Candidate LA-057-01, (EL-005-01), DWP Equipment Yard, 433 East Temple Avenue, Los Angeles, Los Angeles County, California	Bonner, W.	2005	within
LA8910	Archaeological Monitoring Report Mangrove Parking Lot Project, Los Angeles	Messick, P. and Hale, A.	2007	within

4.2.2 Previously Recorded Archaeological Resources within 0.25-mile Radius of Project APE

Section 4.2.2, Table 4.2, and Table 4-3 removed to protect confidential locations of archeological resources.

Section 4.2.2, Table 4.2, and Table 4-3 removed to protect confidential locations of archeological resources.

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Section 4.2.2, Table 4.2, and Table 4-3 removed to protect confidential locations of archeological resources.

4.2.3 Historic Maps

A review of historic maps, including Sanborn Fire Insurance Maps, indicate a long and varied occupation history within the project Direct APE. Generally speaking, Los Angeles expanded from the original plaza (near today's N. Los Angeles and W. Arcadia Streets) to the west and south, and subsequently to the north and east. In terms of the current project, the city's development proceeded from the northeast to the southwest ends of the direct APE.

Sanborn maps from 1888 show nearly every parcel in the direct APE developed with commercial or residential buildings. The heaviest development is shown in the part of the direct APE between Alameda Street and Hill Street. Numerous commercial buildings such as hotels, banks, restaurants, and government buildings were located within this part of the direct APE. The western and southern parts of the direct APE, primarily along 2nd Street between Hill and Flower Streets and on Flower Street between 2nd and 7th Streets, were less heavily developed. Parcels within this part of the direct APE contained one or two buildings, primarily private residences, on large lots or were not developed at all. Street alignments for Flower and Temple Streets differ from their current alignments. The 1888 Sanborn shows Flower Street extending further north to Temple Street and Temple Street ending at Main Street.

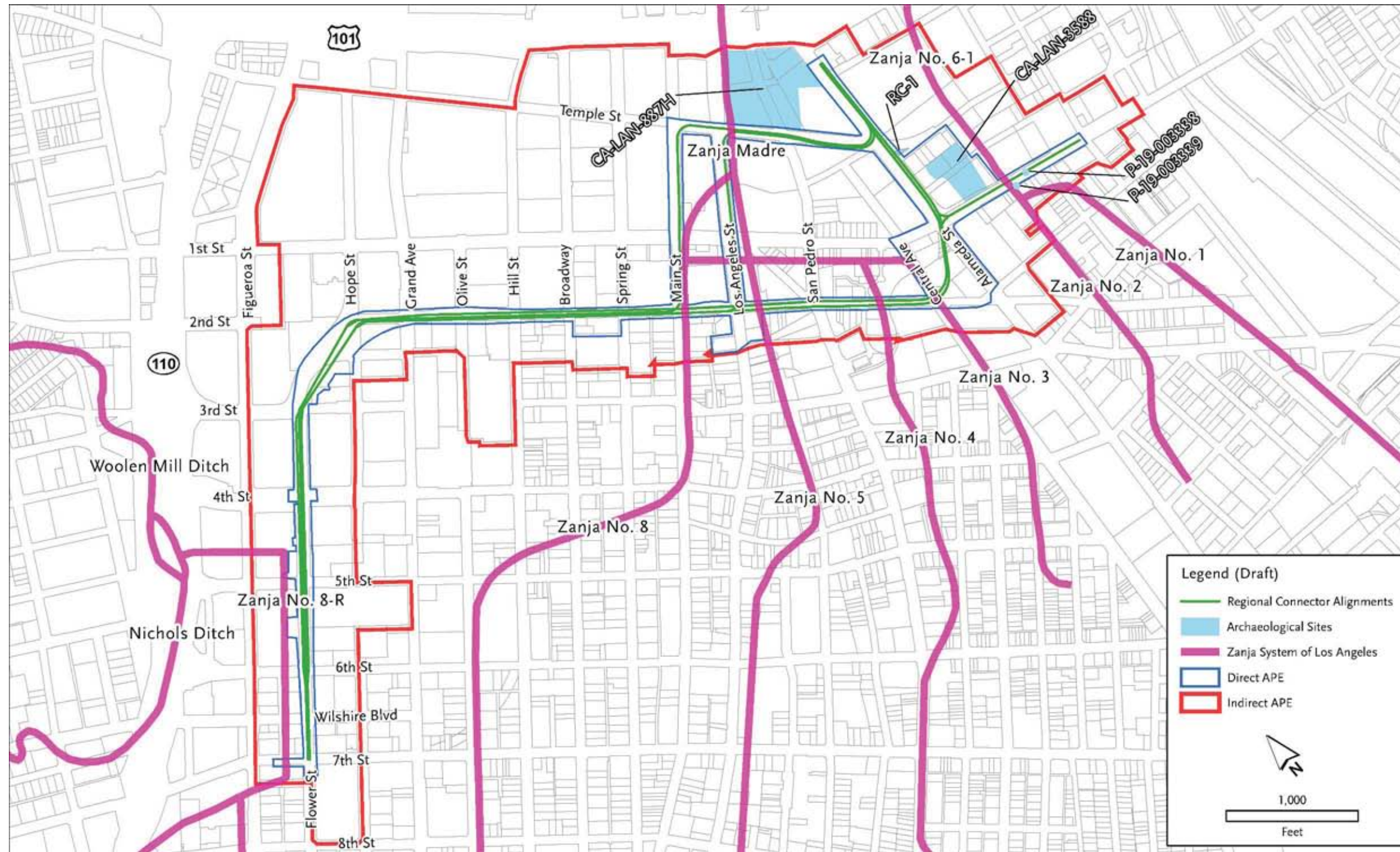
Sanborn Maps from 1951 show the direct APE between Alameda and Hill Streets continuing as an area dense with commercial and government buildings. The parts of the direct APE along 2nd Street between Hill and Flower Streets and on Flower Street between 2nd and 7th Streets are shown as more developed but continue to be primarily a residential area containing numerous apartment buildings and private residences.

A review of historic maps indicates that the route of the zanjas, Los Angeles' original domestic and irrigation water system, cross the direct APE in numerous locations. The original water system consisted of the main ditch, the Zanja Madre, and several branch ditches that flowed south and southwest into the city and beyond. A ca. 1880 map of the zanja system (reproduced in Gumprecht 1999) indicates that the route of the Zanja Madre and Zanjas 3, 4, 5, and 8 cross the project area in the northeastern part of the project direct APE. In addition, route of the West Branch Zanja 8R crosses the southwestern part of the direct APE.

Figure 4-1 depicts the approximate layout of the Los Angeles zanja system in 1880 in relation to the direct APE. This overlay is a digitization of Gumprecht's (1999:72) map of the system, which is based on a tracing of H.J. Stevenson's 1876 map of Los Angeles. The digitization uses the latest georeferencing tools (ArcGIS 9.3) to overlay Gumprecht's map on current (2009) County of Los Angeles parcel data. However, street alignments have changed, often dramatically, and the zanjas have been altered (moved, changed, or destroyed) to an unknown extent over the last 130 years. The margin of error inherent to Gumprecht's and Stevenson's maps is also unknown. Finally, these data have not been verified archaeologically within the direct APE. Consequently, Figure 4-1 should be thought of as an informed approximation of the location of the zanjas, but not as an "as built" plan of their current alignments.

4.3 Sacred Lands Files Search

SWCA initiated a Sacred Lands File Search for the project on February 3, 2009. SWCA contacted the California Native American Heritage Commission (NAHC) by letter to request a review of the Sacred Lands File. The NAHC responded on February 9, 2009, and stated that there are Native American cultural resources present in the project area and provided a list of Native American groups and individual contacts for Los Angeles County.



Source: Gumprecht 1999

Figure 4-1. Archaeological Resources within Direct APE including the Los Angeles Zanja System (Approximate Alignment)

4.4 Archaeological Survey

4.4.1 Survey Methods

SWCA Archaeologists John Dietler and Gini Austerman conducted an intensive-level archaeological survey of the original 1.8-mile-long direct APE on March 16, 2009. SWCA Archaeologist Robert Ramirez conducted an additional survey on April 7, 2009, to account for revisions in the project direct APE. Dr. Dietler conducted another survey of the additional 0.1 mile length of alignment where the Fully Underground LRT Alternatives differ from the previously analyzed Underground Emphasis LRT Alternative on January 7, 2010 of the portions of the direct APE associated with the Fully Underground alternatives. The archaeologists conducted pedestrian surveys using parallel transects spaced no more than 10 m (32.8 feet) apart. For most of the direct APE, this amounted to walking along paved sidewalks, either singly or in pairs. The archaeologists paid special attention to areas with exposed soil, which consisted primarily of planters and other landscaped areas.

SWCA archaeologists inspected the direct APE for the presence of archaeological deposits where ground visibility and access was possible. They took digital photographs of each street within the direct APE. All field notes, digital photographs, and records related to the current study are on file at SWCA's South Pasadena office. At the conclusion of the project, these materials will be transitioned to Metro for archiving.

4.4.2 Survey Results

Ground visibility was extremely poor (less than 5 percent) throughout most of the direct APE due to the presence of buildings, pavement, and/or landscaping.

Three areas of the direct APE were inaccessible due to the presence of construction site fences. These included sidewalks in the following locations:

- Northeast corner of parcel at 2nd Street and Spring Street (Assessor's Parcel Number [APN] 5149008032; see Figure E-5 in Appendix E)
- Parcel at 2nd Street and Main Street (APN 5149001902; see Figure E-5 in Appendix E)
- Parcel at Alameda Street between Temple Street and Ducommun Street (APN 5173006900; see Figure E-7 in Appendix E)

Numerous planters and unpaved areas that afforded fair to good (20–70 percent) visibility are present within the APE. These areas contained modern trash and the occasional un-diagnostic brick fragment. Planters and unpaved areas are present at the following locations:

- Parcels at Flower Street between 4th Street and 3rd Street (APN 5149001902; see Figure E-3 in Appendix E)

- Parcels and medians along W. General Thad Kosciuszko Way and Flower Street between 3rd Street and S. Grand Street (APNs 5151014033, 5151004911, 5151004912, 5151004913; see Figures E-3 through E-5 in Appendix E)
- Parcel at Los Angeles Street south of 2nd Street (APN 5161026035; see Figure E-6 in Appendix E)
- Parcels on 2nd Street between Central Avenue and Alameda Street (APNs 5161018007, 5161018011; see Figure E-6 in Appendix E)
- Parcels on Alameda Street between 2nd Street and 1st Street (APNs 5161018011, 5161018020, 5163001088; see Figure E-6 in Appendix E)
- Parcels at Los Angeles Street and Temple Street (APNs 5161013904, 5161014901; see Figure E-7 in Appendix E)
- Parcels on 1st Street between Alameda Street and Garey Street (APNs 5173011901, 5173011901; see Figure E-8 in Appendix E)

SWCA archaeologists encountered a single archaeological site within the direct APE, RC-1. This resource is described below. The five previously recorded archaeological sites (CA-LAN-887H, CA-LAN-3588, P-19-003338, P-19-003339, and P-19-003097) within the direct APE were encountered during ground-disturbing construction activities associated with earlier projects. They were not visible during this pedestrian survey.

Portions of Section 4.4.2 removed to protect confidential locations of archeological resources.

Portions of Section 4.4.2 removed to protect confidential locations of archeological resources.

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