3.4

CULTURAL RESOURCES

3.4.1 Introduction

This chapter describes the environmental and regulatory setting for cultural resources, as well as the impacts on cultural resources that would result from the proposed Project and the mitigation measures that would reduce these impacts. Cultural resources customarily include archaeological resources, ethnographic resources, and those of the historic built environment (architectural resources). Though not specifically a cultural resource, paleontological resources (fossils pre-dating human occupation) are considered here because they are discussed in Appendix G of the State CEQA Guidelines (Environmental Checklist Form), within the context of Section V, Cultural Resources.

CEQA Guidelines Section 15120(d) prohibits an EIR from including information about the location of archaeological sites or sacred lands: "No document prepared pursuant to this article that is available for public examination shall include…information about the location of archaeological sites and sacred lands." Therefore, the specific locations of archaeological sites have been omitted from this chapter, and the cultural resources technical reports are a confidential appendix to this document.

Mitigation has been proposed to reduce significant impacts on archaeological and paleontological resources to level-than-significant levels. After mitigation, construction and operation of the proposed Project would not result in a significant and unavoidable impact on cultural resources.

3.4.2 Environmental Setting

The proposed project site is generally bounded by Lagoon Avenue to the west, Broad Avenue to the east, C Street to the north, and Banning's Landing to the south. The site includes the Waterfront Red Car and California Coastal Trail linkages beginning in the west at Swinford Street, moving along Front Street to John S. Gibson

Boulevard, and then along Harry Bridges Boulevard until it reaches Avalon Boulevard in the east. See Figure 2-2 for a map of the proposed project area.

3.4.2.1 Physical Setting

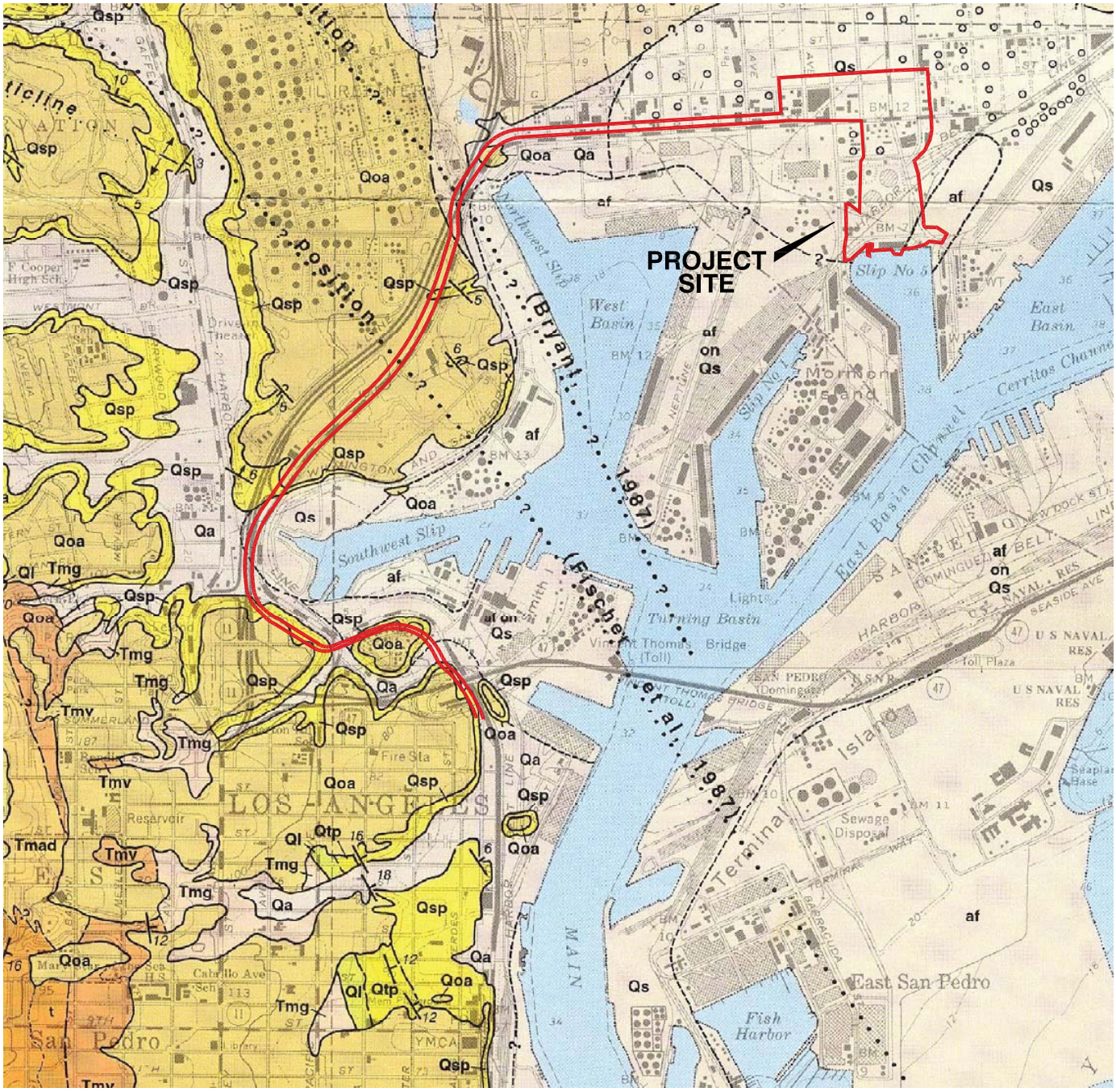
3.4.2.1.1 Geology and Soils

The proposed project area is located within the Los Angeles Basin, a broad, level expanse of land comprising more than 800 square miles that extends from Cahuenga Peak south to the Pacific coast, and from Topanga Canyon southeast to the vicinity of Aliso Creek. Prior to historical settlement of the area, the plain was characterized by extensive inland prairies and a lengthy coastal strand, with elevations approximately 500 feet above mean sea level. The Los Angeles plain 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 also once covered many portions of the area. To the west, the coastal region encompasses approximately 375 square miles of varied terrain. West of Topanga Canyon the terrain is rugged; the steep, westward slopes of the Santa Monica Mountains reach 1,000 feet or more in elevation, except where stream-cut ravines and canyons drain onto narrow beaches at the water's edge. From Topanga Canyon southward to the Palos Verdes Peninsula, a distance of roughly 22 miles, the coast is flat and level; extensive marshlands once existed near the mouth of Ballona Creek in the area now known as Playa del Rey. The terrain becomes rugged once again as the coast follows Palos Verdes Peninsula for a distance of approximately 12 miles before reaching San Pedro Bay, which in prehistoric times was characterized by extensive mud flats and sand bars (Hamilton et al. 2004; McCawley 1996).

West of the proposed project area, the Palos Verdes Peninsula is composed primarily of marine sedimentary rocks that have been uplifted about 1,300 feet within the past 1 million years. The Palos Verdes Hills consist of a Jurassic-age metamorphic basement complex (Catalina Shist) that is overlain by about 3,000 feet of sedimentary rock formations of Miocene, Pliocene, and Pleistocene age (Woodring et al. 1946). The Miocene rocks (light-colored, well-bedded mudstones, siltstones, and shales) are underlain by older metamorphic rocks of the Catalina Schist. These rocks extend under the Los Angeles Harbor and form the base under the marine sediments (Schell et al. 2003).

Geologic deposits underlying the proposed project area consist of Holocene-age, near-shore, marine and non-marine deposits, including beach, estuary, tidal flat, lagoon, shallow-water bay sediments, and shoreline terrace deposits (Figure 3.4-1). These younger alluvial deposits are overlain in many places by artificial fill materials, as land has been built up during the historic development of the Port.

As mapped by Dibblee (1999), surficial sediments within the proposed project area consist primarily of Quaternary deposits that are comprised of beach sediments ranging from sand to cobble-boulder gravel.



REFERENCE: 1999, THOMAS DIBBLEE, JR., GEOLOGIC MAP OF THE PALOS VERDES PENNINSULA AND VICINITY, MAP #DF-70.

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Figure 3.4-1
Surface Geology in the Project Vicinity
Wilmington Waterfront Development Project

In the Avalon Waterfront District soils consist primarily of Quaternary soils except in the southeastern corner where they are comprised of artificial fill. However, fill materials are sometimes difficult to differentiate from natural materials because both are essentially made up of the same materials, but the fill was just redeposited (Schell et al. 2003).

The eastern extent of the Waterfront Red Car Line/California Coastal Trail along Harry Bridges Boulevard is also underlain by these Holocene beach sediments and artificial fill.

The western extent of the Waterfront Red Car Line/California Coastal Trail, west of Figueroa along John S. Gibson Boulevard, is underlain by Quaternary alluvium, Quaternary older alluvium, and Pleistocene-age offshore marine deposits of San Pedro Sand. The San Pedro Sand was deposited during the middle Pleistocene and dates to approximately 500,000 to 200,000 years ago (Kirby and Demere 2007).

Pleistocene-age San Pedro Sand is mapped at the surface between the Northwest Slip and the Southwest Slip, and in patches near the Vincent Thomas Bridge. These deposits are of fossil bearing age, and are of scientific interest if intact.

Although the present configuration of the Port partly reflects the natural arrangement of the landscape, filling and dredging activities have formed an extensive network of wharves and shipping channels along the waterfront. The Los Angeles–Long Beach Harbor was once a low-lying coastal marsh generally referred to as either the Wilmington Lagoon or San Pedro Creek. The lagoon had a complex network of estuaries, stream channels, tidal channels, sand spits, beaches, and marshy inlands. (Schell et al. 2003). Around 11,000 years ago, a general warming trend, often referred to as the Altithermal, began in California (Carbone 1991; Arnold 1991). The Altithermal resulted in a rise in sea levels, which had an enormous impact on drainage patterns and the type and availability of food sources in various regions. During the Early Holocene (10,000 to 6,600 years ago), rapid sea level rise markedly altered land areas along the California coast. As a result of marine encroachment, large portions of the continental shelf were submerged. Therefore, archaeological sites located along the modern coast are, in some cases, far removed from Early Holocene shorelines. Furthermore, it is likely that most archaeological sites associated with the Early Holocene along the southern mainland coast were destroyed or obscured by sea level advance and sedimentation (Carbone 1991).

3.4.2.1.2 Vegetation

Prior to modern development, the dominant vegetation community in the proposed project area consisted of coastal saltmarsh. Coastal saltmarsh communities are comprised of perennial graminoids and succulent forbs. Dominants include glasswort (*Salicornia virginica*) and cordgrass (*Spartina foliosa*) (Kuchler 1977). At the time of this study the proposed project area was covered in ruderal and ornamental vegetation.

3.4.2.2 Prehistoric Setting

The prehistoric occupation of southern California is divided chronologically into several temporal phases or horizons, as presented on Table 3.4-1, based on the work of William J. Wallace (Moratto 1984). Horizon I, or the Early Man Horizon, began at the first appearance of people in the region (perhaps approximately 11,000 years ago) and continued until about 5000 BC. Although little is known about these people, it is assumed that they were semi-nomadic and subsisted primarily on game.

Horizon II, also known as the Millingstone Horizon or Encinitas Tradition, began around 5000 BC and continued until about 1500 BC. The Millingstone Horizon is characterized by widespread use of milling stones (manos and metates), core tools, and few projectile points or bone and shell artifacts. This horizon appears to represent a diversification of subsistence activities and a more sedentary settlement pattern. Archaeological evidence suggests that hunting became less important and that reliance on collecting shellfish and vegetal resources increased (Moratto 1984).

Horizon III, the Intermediate Horizon or Campbell Tradition began around 1500 BC and continued until about AD 600–800. Horizon III is defined by a shift from the use of milling stones to increased use of mortar and pestle, possibly indicating a greater reliance on acorns as a food source. Projectile points become more abundant and, together with faunal remains, indicate increased use of both land and sea mammals (Moratto 1984).

Horizon IV, the Late Horizon, which began around AD 600–800 and terminated with the arrival of Europeans, is characterized by dense populations; diversified hunting and gathering subsistence strategies, including intensive fishing and sea mammal hunting; extensive trade networks; use of the bow and arrow; and a general cultural elaboration (Moratto 1984).

Table 3.4-1. William J. Wallace's Chronological Horizons for Prehistoric Cultures)

Horizon	*Time Period*	*Description*
Horizon I/Early Man	11000 BC to 5000 BC	First appearance of humans in the region
Horizon II/Millingstone Horizon	5000 BC to 1500 BC	Widespread use of millingstone (manos, metates), representing a more sedentary settlement pattern
Horizon III/Intermediate Horizon	1500 BC to AD 600–800	Shift from use of millingstones to increased use of mortar and pestle and more projectile points
Horizon IV/Late Horizon	AD 600–800 to arrival of Europeans	Dense populations, diversified hunting, intensive fishing, and extensive trade networks
Source: Moratto 1984		

3.4.2.3 Ethnographic Setting

When Spanish explorers and missionaries first visited the southern coastal areas of California, the indigenous inhabitants of the Los Angeles area (the Tongva) were given the Spanish name "Gabrieliño." Gabrieliño/Tongva territory included the watersheds of the San Gabriel, Santa Ana, and Los Angeles Rivers; portions of the Santa Monica and Santa Ana Mountains; the Los Angeles Basin; the coast from Aliso Creek to Topanga Creek; and San Clemente, San Nicolas, and Santa Catalina Islands. The Gabrieliño language is classified as belonging to the Takic family (or "Cupan"), Uto-Aztecan stock, and is subdivided into four or more separate dialects (Shipley 1978). The proposed project area is in the region where the Fernandeño dialect of the Gabrieliño language was spoken. The names Gabrieliño and Fernandeño refer to the two major missions established in Gabrieliño territory: San Gabriel and San Fernando (Bean and Smith 1978).

The Gabrieliño/Tongva inhabited some 50 to 100 permanent villages in fertile lowlands along streams and rivers and in sheltered areas along the coast at the time of European contact. The larger permanent villages most likely had populations averaging 50 to 200 persons. Sedentary villages also had smaller satellite villages located at varying distances; these remained connected to the larger villages through economic, religious, and social ties (Bean and Smith 1978). Gabrieliño villages contained four basic types of structures. Houses were circular and domed, made of tule mats, fern, or carrizo (Kroeber 1925; Bean and Smith 1978). The Gabrieliño sweathouses were small, circular earth-covered buildings. Villages may have included menstrual huts and open-air ceremonial structures made with willows inserted wicker fashion among willow stakes (Bean and Smith 1978).

Ethnographic information indicates that the Gabrieliño occupied the area between the Palos Verdes Peninsula and the Los Angeles River as evidenced by the number of recorded village sites in each of these areas. McCawley (1996:56) provides Gabrieliño place names for the peninsula, including *Chaawvenga, Xuuxonga, Toveemonga, Aataveanga, Kiinkenga, Toveemonga,* and *Haraasnga.* McCawley also provides information for the village sites of *Swaanga* and *Ahwa Anga* as located along the Los Angeles River closest to its junction with the Pacific Ocean. These villages were occupied as late as the 1700s and early 1800s as evidenced by notations in the baptismal registers of Mission San Gabriel (McCawley 1996). *Swaanga* was documented as one of the larger, more substantial village sites (Reid 1852; McCawley citing Reid 1996). However, there is some discrepancy as to the actual location of the village. McCawley (1996) cites Reid's (1852) notation that *Swaanga* was located at "Suang-na" suggesting that this was still a recognizable place by 1852. A local San Pedro historian (Silka 1993:12) provides a specific location for *Suang-na* as the side of the hill above what is now Anaheim Street between the Harbor Freeway and Gaffey Street. Silka adds that the village was located near a crossing of major Native American trails, which today is located at the intersection of Gaffey and Anaheim Streets, Vermont Avenue and Palos Verdes Drive North, commonly called Five Points. McCawley (1996) cites Reid (1852:8), stating that *Chaawvenga* is located on "Palos Verdes." McCawley also cites Jose Zalvidea, stating that the name *Tsauvinga* applies to San Pedro and that the village of *Xuuxonga* was located on the shore below San Pedro (in Harrington 1986:R102 F384). As documented, none of

the recorded village sites are located within the proposed project area. However, given their proximity to the proposed project area, it was likely used by inhabitants of some or all of these villages

The Gabrieliño/Tongva had a rich and varied material culture. Technological and artistic items included shell set in asphaltum, carvings, painting, an extensive steatite industry, baskets, and a wide range of stone, shell, and bone objects that were both utilitarian and decorative.

Gabrieliño/Tongva subsistence was based on a composite hunting and gathering strategy that included large and small land animals, sea mammals, river and ocean fish, and a variety of vegetal resources. Generally, Gabrieliño settlements were created at the intersection of several ecozones. The majority of the population drifted as families to temporary hillside or coastal camps throughout the year, returning to the central location on ritual occasions or when resources were low and it was necessary to live on stored foods.

Offshore fishing was accomplished from boats made of pine planks sewn together and sealed with asphaltum or bitumen. Much of the fishing, shellfish harvesting, and fowling took place along the ocean shoreline or along freshwater courses. Sea mammals were taken with harpoons, spears, and clubs. River and ocean fishing was undertaken with the use of line and hook, nets, basket traps, spears, and poisons (Hudson and Blackburn 1982).

Land animals were hunted with bow and arrow and throwing sticks, and were trapped or clubbed. Smaller animals such as rabbits and ground squirrels were driven with grass fires and taken with deadfall traps. Seasonal grass fires may have had the additive effect of yielding new shoots attractive to deer. Burrowing animals could be smoked from their lairs.

Transportation of plants and other resources was accomplished through the use of burden devices such as coiled and woven baskets and hammock carrying nets commonly made from grass and other plant fibers.

The Gabrieliño/Tongva were apparently first contacted by Europeans in 1542 when Juan Rodríguez Cabrillo entered the area. Following subsequent Spanish visits to the region, colonization began in 1769, precipitating the establishment of Missions San Gabriel (1771) and San Fernando (1797). Due in part to the introduction of Euro-American diseases and the harsh effects of mission life, the Gabrieliño population and culture suffered a gradual deterioration. Following the secularization of the missions, most surviving Gabrieliño became wage laborers on the ranchos of Mexican California. In the early 1860s, a smallpox epidemic nearly wiped out the remaining Gabrieliño. The combination of disease, forceful reduction, and poor diet contributed to the disappearance of the Gabrieliño as a culturally identifiable group in the 1900 federal census (Bean and Smith 1978). However, persons of Gabrieliño descent have continued to live in the Los Angeles area to the present time.

3.4.2.4 Historic Setting

3.4.2.4.1 Spanish Exploration, Settlement, and Early Trade

Beginning in the sixteenth century, Spanish explorers sailed along the coast of California, starting with Juan Rodríguez Cabrillo in 1542. At the time of his voyage, Cabrillo named the San Pedro Bay the Bahia de los Fumos (McCawley 1996; Silka 1993). In 1602, Sebastian Vizcaino explored the coast of California and developed a detailed map of the coastline. Vizcaino's survey data created some confusion about two new names for Bahia de los Fumos. For many years the particular saint's day on which Vizcaino visited San Pedro Bay was an issue (Silka 1993). The bay was thus referred to as both San Pedro, in honor of Saint Peter, Bishop of Alexandria, and Ensenada de San Andres, in honor of Saint Andrew. However the confusion was resolved in 1734 by cosmographer Cabrera Bueno in his description of Vizcaino's visit, referring to the body of water as the San Pedro Bay, which has since remained the official name (Silka 1993).

In the eighteenth century the Spanish colonized present-day California, establishing a tripartite system consisting of missions, presidios, and pueblos that lasted from 1769 to 1822 (Bean and Rawls 1968). Under both Spanish and Mexican governments, missions were permitted to occupy and use land for the benefit of their neophytes; but they could not own land. Twenty-one missions were eventually established from San Diego to Sonoma, separated by a single day's journey (Hoover et. al 1990; Gudde 1998).

Under Spanish rule, merchant vessels were prohibited from trading directly at any California port other than Monterey. The annual supply ship sailed from San Blas, Mexico, and delivered its cargo to the presidios, where it was distributed to the missions and pueblos. However, the supplies provided by Spain from this single ship were insufficient for the needs of the growing population. As a result, as early as 1805 unauthorized trading occurred when an American ship traveled into the bay and found a ready market for European-manufactured and Oriental goods—with cattle hide and tallow serving as the primary currency of exchange (Silka 1993).

During the Spanish occupation of California, a series of land grants were also established. Although typically referred to as "Mexican ranchos", many of the original grants were founded prior to Mexican independence. One example is the Rancho San Pedro, which was granted to Juan Jose Dominguez in 1784 by California governor Pedro Fages and encompassed the land around what was to become the Port of Los Angeles (Robinson 1939).

Upon Dominguez's death in 1809, the land passed to his nephew Cristobal Dominguez, a soldier stationed at San Juan Capistrano (Silka 1993). During Cristobal's tenure in the service, the rancho was left in the care of Manuel Guiterrez, its long-time manager and executor of Juan Dominguez's will. In his will, Juan Jose also granted Guiterrez grazing rights. During Cristobal's absence, Guiterrez eventually assumed rights of ownership and extended the grazing right to Jose Dolores Sepulveda in 1810 (Gaffey 2001; Silka 1993). Sepulveda, who called his

stake the Rancho de los Palos Verdes, was ordered to vacate by Governor Pablo Sola in 1817—the year when Cristobal Dominguez attempted to claim his inheritance. Sepulveda believed that he was legally entitled to the Rancho de los Palos Verdes.

3.4.2.4.2 Mexican Independence

Mexico proclaimed its independence from Spain in 1821and became a federal republic in 1824, with both Baja and Alta California classified as territory (Starr 2005). Through its federal constitution, the United Mexican states attempted to recreate itself as a federated republic modeled on the United States. However, the Mission system, an imperialist remnant, proved incompatible with a republican system of government and culminated in the passage of the Secularization Act of 1833 by the Mexican Congress (Bean and Rawls 1993; Starr 2005). Although California's governor at the time of secularization, José Figueroa, intended for the lands to be repatriated to the indigenous population, his manifesto was never realized as his untimely death combined with a new social institution, the land grant rancho, prevented the neophytes from ever recovering mission properties.

Between 1835 and 1846, more than six hundred land grants were made in California by the Mexican government. The dons dominated the economy and defined the society of Mexican California (Robinson 1948; Starr 2005). These men, often referred to as "Californios," practiced an agricultural pattern that included mixed stock raising and commercial agriculture on their vast landholdings. Thousands of native inhabitants, separated from their missions and stripped of their lands, were forced to seek wage labor on the ranchos, many becoming accomplished vaqueros (Jelinek 1999; Starr 2005).

During this period the legal battle between Dominguez and Sepulveda over the Rancho San Pedro and Palos Verdes sustained. In 1827, Governor Figueroa made the Sepulveda's' a provisional concession of Rancho Los Palos Verdes. However, it wasn't until 1846 that Governor Pio Pico confirmed Sepulveda's right to Rancho (Robinson 1939; Silka 1993).

3.4.2.4.3 Commercial Hide Trade

The year Mexico proclaimed independence from Spain, California ports were officially opened to foreign trade. That same year the firm of McCulloch, Hartnell and Company succeeded in contracting with the missions for cattle hides and tallow, and the company was permitted to build warehouses at Monterey and San Pedro. In 1823, in the area that is now known as the Fort MacArthur Middle Reservation, the firm constructed an adobe hide warehouse where they managed cattle hides obtained from the San Gabriel and San Fernando Missions. In 1829, the hide warehouse was sold to the San Gabriel Mission. Upon secularization of the missions in 1833, ownership of the Hide House was acquired by Abel Stearns, who established himself in business at the pueblo. The Hide House came to be known as Casa de San Pedro and business flourished through the 1830s, although the region around San Pedro remained largely uninhabited. In

1835, Richard Henry Dana landed at San Pedro and described the region as isolated, a fact that is supported by the 1836 and 1844 census records, which record 75 and 28 people, respectively, living on the Rancho San Pedro (Silka 1993). The hide business flourished through the 1830s, although the region around San Pedro remained largely uninhabited. By 1830, San Pedro was the leading west coast center of hide production, the primary export of the Missions and, later, the Ranchos (Queenan 1986).

3.4.2.4.4 American Period and Experimental Capitalism

With the granting of statehood in 1848, San Francisco was quickly established as the Port of Entry for California and all imported goods destined for Los Angeles had to be transported from there. In order to maintain economic independence and viability, Los Angles had San Pedro also designated as an official Port of Entry in 1853. With ranching still the primary industry in southern California, the port at San Pedro remained underused. In addition, the combination of a rocky shoreline and a shallow harbor made accessibility challenging for ships.

Local entrepreneurs and economic boosters Phineas Banning and Augustus W. Timms capitalized upon the Port's new status. Banning, an entrepreneur from Delaware who arrived in the Los Angeles area in 1851, became the manager of Hide House and eventual partner of David W. Alexander; Timms, a German immigrant who purchased the Sepulveda landing in 1852, instigated a fierce competition for the local commission and freighting opportunities.

By this time, land disputes between Mexican ranchers and disgruntled forty-niners erupted. In an effort to try their hand at farming, unsuccessful miners squatted on rancho lands and demanded rights to them from the federal government. Later that year, Congress passed the Land Act of 1850, which placed the burden of proving title upon the Californios (Spanish speaking inhabitants of Alta California). Both the Dominguez and Sepulveda families' claims to their ranchos were confirmed by the Board of Land Commissioners. However, the determinations were appealed in court, and although the Dominguez family successfully fought the challenges and received the patent for Rancho San Pedro in 1858, the Sepulveda family came to be plagued by a series of lawsuits instigated from within as well as outside of the family (Silka 1993). Ultimately, the combination of legal wrangling and the decimation of the cattle industry led the Californios to sell their landholdings.

3.4.2.4.5 New San Pedro

During the 1850s, Phineas Banning became the leader in lighterage and transportation. However, winds and storms in the unprotected harbor cost Banning losses of valuable shipments and forced him to consider another location from which to operate his enterprise. In 1858, Banning formed the firm of Banning & Company with David W. Alexander as a silent partner. However, after a short period, Banning took over sole leadership. That same year Banning and a team of investors including: J.G. Downey, Benjamin Wilson, William Sanford, Henry Myles, and Joseph

Lancaster Brent purchased 2,400 acres of estuary shore on the Dominguez Rancho San Pedro from Manuel Dominguez, and platted a town that they named New San Pedro (Gaffey 2001; McDowell 1993; Silka 1993). The partners divided up lots throughout the newly platted township, although Banning was also granted an additional 35-acre portion at the foot of Canal Street known as "Banning's Reservation" and eventually "Banning's Landing" (LeCouvrer N. D.; McDowell 1993). Banning constructed docks, warehouses, a lumber yard, and stocked it with a fleet of shallow-bottomed boats to ferry goods and passengers from ships anchored outside the bay. He purchased stagecoaches and wagons to carry passengers and freight from San Pedro to Los Angeles, San Bernardino, and even as far as Yuma and Salt Lake City. In July of 1858, 100 invited guests watched as the first cargo of merchandise was delivered to the newly built wharf (Marquez and de Turenne 2007).

While the new harbor location was offered a measure of protection from wind and storms by Rattlesnake Island, much of the acreage was under water at the time of purchase. In 1850, Captain Amos Fries of the U.S. Army Corps of Engineers described what would become the new harbor location as:

> Wilmington Lagoon begins near Deadman's Island, a sand, clay and rock Promontory some fifty feet high and less than two acres in extent, located about three-quarters of a mile nearly due east of the Government Reservation. The Lagoon is generally low land, overflowed at high tide, but largely mud-flats at low tide, extending northward and eastward distances of three to four miles from Deadman's Island. In all there are some 1,360 acres in the Lagoon. About one mile north of Deadman's Island there were two or three channels leading to Wilmington having from two to six feet of water at low tide, though across the present entrance, west of the island, there were generally depths of only one to three feet (Weinman and Stickel 1978 citing *Out West* 1907).

Banning was able to carve a small, shallow working harbor from the vast slough by utilizing mud scows to dig the channel and hand pumps to siphon the water from the submerged land.

3.4.2.4.6 The Civil War Comes to Town

As the Civil War erupted in 1861, political and military attention from both sides turned to California with its strategic harbors and abundant mineral wealth. Confederate strategists were aware of the strong southern sympathies of many residents of southern California. Many public officials and prominent business leaders were Southerners and it seemed plausible that California might secede should a war develop. Aware of the dangers of secession and the possibility of an internal invasion by southern forces, the Department of War established a series of military camps throughout the west, including a camp in New San Pedro near Banning's Wharf (McDowell 1993). In addition to providing protection in the event of an attempted attack, the military presence also helped control Confederate agitators and supplied staff close to the harbor for receiving supplies and training volunteers. The encampment near Banning's Wharf was officially designated as "Camp Drum" in honor of Lieutenant Colonel Richard Coulter Drum, who had provided major

assistance in establishing the camp. Camp Drum became the military headquarters for southern California in 1862, under the command of Colonel James Henry Carleton (McDowell 1993).

During the winter of 1861–1862, record rainfall flooded the low-lying Camp Drum, signifying the need for more permanent facilities. As a result, Banning donated a 60-acre portion of his landholdings to the federal government for the construction of the Wilmington Drum Barracks (California Historical Landmark No. 169 and Los Angeles City Historic-Cultural Monument No. 21). The Drum Barracks was the main staging area for troops bound for posts all over the West as well as a depot for arms, equipment, and supplies. The post was abandoned in 1870, and a few years later the land was transferred back to Banning. Eventually, the property was subdivided and the buildings gradually deteriorated or were demolished, except for the officer's quarters, which now house the Drum Barracks museum (McDowell 1993).

In 1863, Banning transferred a second land title to the government for construction of a large depot near the wharf on his 35-acre reservation. A few years later, he again transferred additional lots near the wharf to the government for military use. The wharf and depot location offered a convenient port with existing warehouses and transportation system. The depot was originally located "…on the southwest corner of today's A Street and Avalon Boulevard, it covered 5.38 acres with a frontage of 270 feet on Canal Street (Avalon Boulevard) and extended west almost 900 feet to present Fries Avenue. The depot consisted of a quartermaster's office and a warehouse facing Canal Street, shops and stables along each side, and a 270 by 70-foot, two-story forage barn at the rear on pilings to protect the fodder during high tides" (McDowell 1993:32).

In total, Banning conveyed 66 acres to the government during the war effort. Local military occupation proved a successful financial strategy for Banning, who managed the transportation of military goods and provisions and eventually accumulated a majority of the shipping business from San Pedro. Further prosperity was achieved via the thousands of soldiers stationed at the Drum Barracks who supported the local economy. Banning established the first telegraph, newspaper, and post office to the harbor area. At this time, New San Pedro was renamed Wilmington, in honor of Banning's Delaware roots (Marquez and de Turenne 2007; McDowell 1993; Silka 1993).

3.4.2.4.7 Industrialization

Banning realized that Wilmington would not become a successful port without breakwater protection. He also understood that a rail line was essential to the economic development of the port and community. Without an active railroad, competing communities, including San Diego and Anaheim, could potentially siphon large amounts of trade from both inland and coastal routes (Olesen 1982). Los Angeles was already losing international trade to Asia, which was carried almost entirely by foreign ships to other ports on the Pacific coast (Weinman and Stickel 1978).

Banning successfully petitioned Congress to appropriate the necessary funds to construct a 6,700-foot sea-wall connecting Rattlesnake and Deadman's Islands and for construction of a lighthouse at Point Fermin. In 1871, San Pedro's first federal dredging project was undertaken, and the combination of the sea wall and dredging project proved transformative. Instead of anchoring outside the harbor and using smaller boats to move cargo ashore, the Main Channel, now with a 10-foot clearance at low tide, allowed ships to navigate directly to the wharfs. By the 1890s, the depth had increased to more than 15 feet, adequate for the lumber schooners that made up the majority of the large harbor traffic (Marquez and de Turenne 2007).

In 1869, Banning initiated the construction of the first railroad in southern California, seven years before the Southern Pacific (SP) Railroad would connect Los Angeles to the East Coast via rail. The Los Angeles and San Pedro Railroad operated between Los Angeles and Wilmington and represented the first reliable means of moving cargo from ships coming into San Pedro. In 1876, Banning sold his interests in the Los Angeles and San Pedro Railroad to the "Big Four" (Collis Huntington, Leland Stanford, Mark Hopkins, and Charles Crocker) as an inducement to the Southern Pacific Railroad to put Los Angeles on its main line (Weinman and Stickel 1978; Silka 1993; Vickery 1982). Soon after the purchase, the Southern Pacific extended its Los Angeles-San Pedro Railroad on pilings across the Wilmington Lagoon, to a new terminal near old Timms Landing. By the 1880s, tracks and wharves covered the tidelands up to about present-day First Street (Weinman and Stickel 1978).

With the establishment of a railroad and the completion of the sea-wall connecting Rattlesnake and Deadman's Islands, the efforts of Phineas Banning were realized. All this stimulated a two-way flow of passengers and merchandise. The population of Wilmington began to solidify from a combination of disgruntled 49ers, Civil War veterans, and various passengers on both commercial and non-commercial vessels. In 1872, Wilmington was incorporated and by 1874, Wilmington's population was approximately 600, although the number would temporarily swell during steamer days when passengers were ferried in from the coastal steamers anchored off San Pedro Point, the headland of Cabrillo Beach (Olsen 1982; Silka 1993).

The population explosion in southern California in the 1880s and the extension of the railroad throughout the southwest increased the importance of the harbor as it provided an economic base on which the harbor could grow. The local newspaper, the *Wilminton Enterprise* (later *The Enterprise*), established in 1904 described the animated scene at the foot of Canal Street where the wharf was situated. Seamen and stevedores are described unloading schooners and lighters as ship and train passengers were arriving and departing (Olesen 1982). Like residents of neighboring San Pedro, laborers were employed to discharge ship's cargoes. Workers also found employment loading rock or sand ballast in outbound vessels, repairing ship components, and performing construction work on docks, breakwaters, jetties, and railroad lines (Gaffey 2001).

With improved rail transportation, thousands of people immigrated to Los Angeles, and the increased population brought a need for more construction and living supplies, much of which came from ships destined for San Pedro's shores. The demand for lumber, coal, and other goods spurred an increase in merchant vessels in

San Pedro Bay. This, in turn, created a demand for longshoremen, carpenters, shipfitters, laborers, merchant mariners, railroad workers, and men working supporting businesses such as shipyards. The town provided lodging and entertainment for seamen interested in spending their small salaries of $25 to $35 per month. Many of the men who chose to remain in San Pedro and Wilmington were of Scandinavian, Italian, and Portuguese descent (Gaffey 2001).

3.4.2.4.8 Transportation

Pacific Electric Railway

The sleepy village at El Pueblo de Nuestra Señora Reina de los Ángeles sobre el Río Porciúncula had been founded in 1781, but even in the post Civil War era the population was small and the land area covered only the original four leagues (roughly the distance a man or a horse can travel in an hour). The City of Los Angeles is unique in world history in that it owes its growth to the evolution and perfection of the streetcar.

Real estate speculators in the 1870s began to lay out animal powered traction lines, suddenly bringing cheap agricultural land within the distance that a man could reasonably travel from home to work and home again in a single day. Animal traction was soon joined by capital intensive cable cars able to climb the hilly terrain and wide river at downtown Los Angeles. Before the investors could recoup their capital, the cable and horsecar systems were soon supplanted by electric traction. Electric street railways and long-distance electric interurbans were relatively cheap to construct and operate, and the technology was well perfected by the turn of the twentieth century.

In 1901 Henry E. Huntington, nephew of Southern Pacific magnate Collis P. Huntington, incorporated the Pacific Electric (PE) Railway capitalized with a not insubstantial $100 million in cash. Huntington's first line was built between downtown Los Angeles and downtown Long Beach, followed almost immediately by extensions into the two ports. Huntington had made his own fortune running a number of railroads for his uncle, and he built the Pacific Electric to the engineering standards of any Class 1 American mainline railroad. This meant that in addition to offering first class passenger transportation to further profits from real estate development (the Huntington Land Company), and power and water profits (the Huntington-owned Southern California Edison Company), the PE could haul freight from the Port. After raising and spending a second $100 million on further expansions, the PE was taken from Huntington family control in 1911 by none other than E.H. Harriman of the Southern Pacific and merged with seven other major regional electric traction empires to form a new and vastly bigger Pacific Electric Railway—the world's largest system with over 1200 route miles just in Southern California. All of this construction and merger activity left the PE with no less than five lines into the Port, two of which passed through the proposed project site. During WWII due to oil, gas, and tire rationing, the PE saw its heaviest passenger traffic in its entire 60 year history. A new line was hurriedly built by the United States Maritime Commission to bring war workers to Terminal Island to build

Liberty Ships. The PE built and operated this line under contract using second-hand equipment sourced from parent company SP's electric operations in the San Francisco Bay area. At the war's end, the cars and line were virtually given to the PE, which operated them until the final abandonment of service.

Passenger trains of the Long Beach-San Pedro line (via Wilmington) stopped running in 1949; trains of the Catalina Express service and those used by the San Pedro via Dominguez line ceased operation in December 1958.

The San Pedro via Dominguez and West Basin Lines

The Southern Pacific Railroad utilized long pile trestles over the tidelands that comprised what is today's West Basin. These trestles precluded all use of the West Basin by seagoing vessels and were much maligned by those interested in developing the West Basin. In mid-1907 the War Department ordered the construction of drawbridges of the double leaf bascule type to replace the trestles. Pacific Electric meanwhile requested a franchise to extend its tracks around the Bay, but action on the application was deferred. Things were at a standstill for several years as far as the bridges were concerned, but in 1911 the matter was resolved when one of the largest single-span drawbridges was constructed. The bridge was 187 feet long and afforded a clear channel of 185 feet for ships. It was of the type known as a "Strauss" trunnion and was sufficiently wide to accommodate two tracks. By this time the Pacific Electric was owned by the Southern Pacific, and the two former rivals were able to share the new span into San Pedro. Only the westerly track was electrified; therefore, PE had only a single track line across the bridge. From February 1942 to February 1947 the Coast Guard ordered the bridge to remain in the raised position in case an enemy attack might immobilize it and trap ships inside the West Basin. All PE trains were routed over the West Basin line during this time. In September 1955 a ship hit the bridge and it was declared too dangerous to use; it was removed soon after. (Heller 2007)

The San Pedro via Dominguez line had been in service since 1904 and followed the same route as the Long Beach line south through Watts and Compton to Dominguez Junction. From Dominguez Junction south the line extended to Wilmington station. From Wilmington the line continued through an industrial district and over the Southern Pacific's bascule-type bridge into San Pedro. From Dominguez Junction south, the line paralleled Alameda Street to just north of the Pacific Coast Highway, then veered in a straight line toward Wilmington. At East Wilmington the Long-Beach-San Pedro line joined, and at Anaheim Boulevard the Catalina Pier A Street line branched off. The Wilmington Station was reached at Avalon Boulevard.

From the intersection of the private way and Wilmington-San Pedro Road (Avenue "B," Wilmington), no fewer than three routes existed:

- the original route, which was on a mile-long trestle over marsh land;
- the route via the San Pedro drawbridge, built in 1911; and
- the West Basin Line, built by the PE Land Company in 1910.

Of these, the direct route via the drawbridge was by far the most important and more used; only during World War II (when the bridge had to remain open) and after its removal in 1955 was the West Basin Line route used by this line. The San Pedro Line survived Pacific Electric and Metropolitan Coach Lines ownership only to fall victim to the Los Angeles Metropolitan Transit Authority (LAMTA); due to a great decrease in patronage the LAMTA ordered the rail service to give way to buses. The conversion took place on December 7, 1958.

The second route followed a longer land route around the West Basin and remains intact today, although on a modified alignment. Formerly known as the West Basin Line, this route is a heavily traveled freight railroad corridor paralleled by streets with heavy truck volumes. From the Wilmington Station at Avalon Boulevard, the West Basin Line followed a meandering course along B Street to Figueroa Street, then veered its two tracks slightly to the west onto a private way alongside Wilmington-San Pedro Road, which it followed (joining the San Pedro via Torrance line near Channel Street) to Gaffey Street, then via a twisting route to 1st Street and a junction with the San Pedro via Dominguez line.

At B Street the West Basin Line branched off, continuing to Pacific Dock where it crossed the Southern Pacific's bascule-type bridge; then it entered San Pedro over a long double-track trestle, once again sharing track with the West Basin Line at 1st Street, and continued on to its terminus, the PE San Pedro Station at 5th Street. Electrified tracks continued to the Outer Harbor, but only local passenger service was operated beyond the PE Station.

Harbor Belt Line

Freight traffic to and from the Harbor typically consisted of canned goods, coke, sand, sulfur, lumber, wire, iron and steel, citrus fruits, bananas, and a great variety of manufactured products. For a number of years Pacific Electric was the dominant carrier at the harbor, but from a high of 51% of total carloads handled in 1924 it fell to 26% by 1938, mainly due to the establishment of the Harbor Belt Line Railroad.

In order to provide equal access to the harbor for all railroads (the Santa Fe had been frozen out) in 1929 a joint agency was formed that would operate the pooled trackage of the City and railroads as a single unit, run by an organization separate and distinct from those of the four railroads (PE, SP, Union Pacific, and Atchison, Topeka and Santa Fe Railway). Thus the Harbor Belt Line Railroad was begun, starting operations on June 1, 1929, the net result of which was the rise of the Santa Fe as a power at the Port, mostly at the expense of PE.

In addition to traffic to and from the harbor, other major originating points for freight on the San Pedro line are Watson, Dominguez Junction, and Compton. Both Watson and Dominguez are important oil centers, while the Compton traffic is of a general nature

3.4.2.4.9 Expansion

As the City and the Port at Los Angeles grew during the late nineteenth and early twentieth centuries, the U.S. War Department studied its existing defensive posture on the West Coast. Two panels of military experts, the Endicott Commission in 1885 and the Taft Commission in 1905, made recommendations for coastal defense, primarily through a system of large gun batteries. Initially, no defensive positions were established at San Pedro Bay; rather, coastal defenses focused on San Francisco Bay, which had the largest ports on the West Coast during the late nineteenth and early twentieth centuries. However, after formal establishment of the Port of Los Angeles in 1907, War Department planners realized the need for facilities in San Pedro. In 1888, San Pedro was incorporated and took over the local lead of the port (Baker 1982). In 1909, San Pedro and Wilmington consolidated with Los Angeles in order to fund municipal services and development of the harbor (Marquez and de Turenne 2007; Silka 1993). The consolidation occurred during the completion of the Panama Canal, which would bring a windfall of commerce to the harbor. The new harbor commission spent $5.5 million on new wharfs, warehouses, railroad spurs, and docks.

The City of Los Angeles built the first Municipal piers at Wilmington in 1914, making it the center of harbor activity. Two years later, improvements at Fish Harbor provided safe anchorage for fishing boats, sites for canneries, and housing for a multi-ethnic population of workers, including people of Japanese, Italian, Mexican, and Eastern European descent.

Despite the previous use of the Port for the shipment of goods both into and out of California, it was not until 1915 that the Port completed its first warehouse. It was the completion of this building that symbolized the Port's transition from a small poorly equipped landing to a significant seaport able to handle deep-sea ships with varied cargo (Queenan 1986). The transshipment of cargo during this era was a very different process from the current system of containerization. The movement of cargo required a series of labor and space intensive steps that in turn required certain buildings and facilities to ensure the most efficient and economical process. Raw or finished goods would be transported via train or truck from the distributor to the port terminal. Cargo destined for international or West Coast markets arrived at the Port of Los Angeles from across the southeast and southwest, and via the Panama Canal from the entire eastern seaboard. If the goods arrived in sufficient quantity to justify immediate shipment, they would be loaded into one of the transit sheds located directly adjacent to the wharves. When the ship arrived, the goods would be manually transferred from the transit sheds into the cargo hold of the ship. The same process in reverse would occur at the destination.

Improvements to transportation systems in the harbor area also facilitated the growth of trade. By 1917, a vast railroad network existed around the harbor and the Los Angeles region, allowing for the efficient transfer of goods across the country (San Buenaventura Research Associates 1992).

World War I changed the principal uses of the Port considerably. The United States Navy, wishing to establish a significant presence on the Pacific coast, took possession of a portion of the harbor and used it as a training and submarine base.

During the war, the Port was one of the chief sources of employment for area residents. Shipbuilding enterprises, including Southwestern Shipbuilding Company, Los Angeles Shipbuilding and Drydock Corporation, and Ralph J. Chandler Shipbuilding, began turning out vessels by the dozens for the war effort. By 1918 four shipbuilding yards located within the harbor attracted contracts worth over $115 million and employed over 20,000 people. The Port of Long Beach, established only two years before the onset of the war, offered the only Southern California shipping and shipbuilding competition to the Port of Los Angeles.

Following the end of World War I in 1918, the Port was increasingly used for the importation of lumber and other types of raw materials. As in the prewar period, approximately 98% of the inbound cargo consisted of lumber to satisfy the demand for housing and factories caused by the rapid growth of the Los Angeles area (Matson 1920). In exports, crude oil was the biggest product passing through the Port in the post-war years. The end of the war also generally meant the end of restrictions to trade. Although lumber and crude oil represented the largest volume of commodities to pass through the Port at that time, Los Angeles featured almost all types of industry, and new facilities were developed to handle products such as cotton, borax, citrus crops, and steel.

3.4.2.4.10 Recreation

In addition to industrial facilities, the early twentieth century also saw the development of recreation at the Port. Rattlesnake Island was converted into Brighton Beach, a major vacation resort, and was quickly followed by improvements at Point Fermin. In 1893, the Banning Company, now managed by Phineas Banning's three sons, purchased Catalina Island and founded the Catalina Yacht Club. The Banning Company also created the Wilmington Transportation Company in 1884 to provide regular crossing of passengers and goods between the mainland at the "Water Street Wharf" and Catalina Island (Board of Harbor Commissioners 1920; Channel Crossings 2006). In 1919, William Wrigley, of chewing-gum fame, purchased Catalina Island from the Banning Company for 3 million dollars. Wrigley also purchased the Wilmington Transportation Company and reinvented transport between the island and the mainland. Reinvented as the Catalina Island Steamer Terminal, Wrigley rehabilitated and constructed a series of steamers including the *Avalon*, *Cabrillo*, and the *Catalina* to make the journey to and from the mainland (Channel Crossings 2006; Marquez and de Turenne 2007). Wrigley also remodeled the existing warehouse "so as to provide every facility and convenience for the handling of passengers and freight" (Board of Harbor Commissioners 1920:56).

Wrigley's son, Philip, developed an airline that transported vacationers from the Wilmington Terminal dock at Berth 185 to the Hamilton Cove airport just offshore of Catalina Island. The amphibious Douglas Dolphin seaplanes flew across the channel 38,000 times, carrying more than 200,000 passengers (Marquez and de Turenne 2007).

3.4.2.4.11 World War II

During World War II, the Port of Los Angeles, including Wilmington Harbor, as one of the closest major ports to the Pacific Theatre of Operations, was fully involved in defense activities. The US Navy immediately assumed control over all ship operations after the Japanese attack on Pearl Harbor in 1941. An official Point of Embarkation was established near the intersection of Fries and Water Streets and Port facilities were turned over to the war effort. Ship building at the Port increased dramatically and over 90,000 ship workers were employed locally. Even contentious labor relations were put on hold after organized labor declared a "no-strike" pledge for the duration of the war (Queenan 1986). Between 1941 and 1945, ship and aircraft production facilities in the harbor area worked day and night to produce more than 15 million tons of war equipment. Hundreds of thousands of military and civilian personnel shipped out through San Pedro in support of the war effort and returned through it when their tasks were done (Shettle 2003).

3.4.2.4.12 Post WW-II Containerization

In 1945, defense contracts were cancelled and shipyards laid off thousands of workers. The Navy relinquished its control over shipping operations in the Port, and the harbor returned to its peacetime patterns (Silka 1993). Following the war, LAHD launched a broad restoration program. Many of the facilities in the harbor required maintenance that had been delayed during the war years. Although the adjacent Long Beach Harbor conducted its own improvements while battling subsidence (the sinking of the land from the many years of oil extraction), LAHD improved a number of its buildings and removed many temporary wartime buildings (Queenan 1986). New and extended breakwaters allowed for increased berths and terminals. By 1953, cargo through the Port exceeded 26 million tons in 4,707 vessels (Silka 1993).

Containerization was introduced in 1958 when the vessel *Hawaiian Merchant* made the first shipment of containers from the Port, beginning a revolution in cargo transport. Containerization is an integrated system of transport in which goods are shipped in standardized (20- or 40-foot-long), sealable metal boxes, designed for easy placement on compatible truck beds, railcars, and ships. Advantages of containerization include reduction of the labor force necessary to load shipments, decreased loading and unloading time, and decreased loss via theft or damage. Additional efficiencies arise from the integration of transport by truck, train, and ship. The primary disadvantage is the large capital outlay necessary to produce the new ships, cranes, rail cars, truck trailers, and Port facilities designed to fit the containerization system.

Modernization and infrastructure changes continued to transform the geography of the waterfront, including the building of the Vincent Thomas Bridge in 1963 and the dredging of the West Basin to 35 feet in 1964. By 1965, a leading edge, intermodal container transfer facility was opened. Three years later, total cargo hit a new peak at over 28 million tons. International shipment through the Port increased during the latter half of the twentieth century as ocean-going vessels grew too large to negotiate

the Panama Canal. Using a land-bridge system, shippers could transfer materials from Pacific region sources to Atlantic region markets by unloading at the Port of Los Angeles and trans-shipping via truck or train to vessels waiting at east coast ports (Queenan 1986).

3.4.2.5 Site-Specific Methodology

3.4.2.5.1 Records Search

Archaeology

ICF Jones & Stokes cultural resources staff conducted a records search at the South Central Coastal Information Center of the California Historical Resources Information System located at California State University, Fullerton, on April 8, 2008. The records search included a review of all recorded cultural resources within a 1-mile radius of the proposed project area. In addition, a review of historic registers was conducted including: *California Historical Landmarks, the National Register of Historic Places, California Register of Historical Resources, California Points of Historical Interest, California Inventory of Historic Resources, California Place Names,* and *Los Angeles Historic-Cultural Monuments*.

According to the records search, no known prehistoric and/or historical archaeological sites are located within the proposed project area. However, the records search indicates that the project area is sensitive for both prehistoric and historical archaeological resources. Sixteen archaeological sites have been previously identified within a 1-mile radius of the proposed project area (see Table 3.4-2). All of these sites are located at least 1 mile from the Avalon Waterfront District and the Avalon Development District. However, nine of the sixteen archaeological sites have been recorded within less than ¼ mile of the proposed Waterfront Red Car Line/California Coastal Trail (CA-LAn-116, -146, -147, -150, -283, -285, -2135H, -2873, and -2874). Of these 9 sites, CA-LAN-150 is located adjacent to the California Coastal Trail, CA-LAN-283 is located 0.06 of a mile from California Coastal Trail and CA-LAn-2135H is located approximately 0.04 of a mile from the California Coastal Trail. Descriptions of the nine sites located less than ¼ of a mile from the CCT are provided following Table 3.4-2. While a majority of these sites would not be impacted by the proposed Project, they provide a general reference and understanding of the nature and types of archaeological sites previously found in the vicinity of the proposed project area. However, because previously identified sites CA-LAn-150 and/or CA-LAn-283 are located within such close proximity to the proposed project area, potential impacts on these two sites are discussed in detail in this section.

Table 3.4-2. Previously Identified Archaeological Resources within a One-Mile Radius of the Project Area

Site Number	*Resource Type*	*Relationship to Project Area(PA)*	*Notes*
CA-LAn-91	Shell midden	0.71 mile from PA	N/A
CA-LAn-116	Unknown	0.12 mile from PA	N/A
CA-LAn-146	Shell midden, possibly natural shell.	0.05 mile from PA	Note in file indicates site was destroyed prior to 1977. No evidence of site found during ICF Jones & Stokes monitoring from 2006 to 2008
CA-LAn-147	Shell midden	0.15 mile from PA	N/A
CA-LAn-148	Shell midden	0.39 mile from PA	N/A
CA-LAn-149	Shell midden, possibly natural shell.	0.15 mile from PA	Note in file indicates site was destroyed prior to 1964.
CA-LAn-150	Refuse heap	Adjacent to PA on east side of CCT	Note in file states site was destroyed by earthmoving activities prior to 1964.
CA-LAn-283	Shell midden & lithic scatter	0.06 mile from PA	Salvage excavation conducted in 1968 at Vincent Thomas Bridge
CA-LAn-284	Shell midden & lithic scatter	0.36 mile from PA	N/A
CA-LAn-285	Village site, shell midden,	0.10 mile from PA	Note in file indicates site was destroyed prior to 1964.
CA-LAn-287	Lithic scatter	0.34 mile from PA	N/A
CA-LAn-789	Shell midden & lithic scatter	0.44 mile from PA	Site tested in 1989, determined to be paleontological location.
CA-LAn-2135H	Los Angeles Union Oil Refinery	0.04 mile from PA	N/A
CA-LAn-2873	Lithic scatter	0.16 mile from PA	N/A
19-002874	Lithic scatter	0.39 mile from PA	N/A
19-002875	Shell midden & lithic scatter	0.37 mile from PA	N/A

CA-LAn-116

No site description is provided in the site record. The site location is described as 1/8th of a mile northeast of corner of Cabinet Drive and Capitol Drive in San Pedro. A handwritten note on the record states that the site is located ¾ of a mile from the Bixby Slough. The site was recorded by H. Eberhart in 1952 based on notes from N.C. Nelson.

CA-LAn-146

Recorded in 1912 by N.C. Nelson and described as a refuse heap consisting of pectin, abalone, oyster, and clamshells. CA-LAN-146 measured 75 feet by 150 feet with an estimated depth of 3 feet. A note in the Information Center's files dating to 1977 stated that CA-LAN-146 appeared to be completely destroyed by grading activities associated with the construction of the cruise terminal parking lot that currently covers the area.

Of primary concern is confusion regarding the location of CA-LAN-146. At the time of recordation, the site's location was described in relation to land formations and portions of the built environment; these have been significantly altered by construction projects over the past century. Urban and industrial development and re-development in San Pedro over the past century has included the removal of extensive amounts of soil in portions of the project area. In addition, there is the possibility that both CA-LAN-145 and CA-LAN-146 may have been fossil shell localities instead of archaeological sites. This is especially true in the case of CA-LAN-146, which may correspond to Arnold's (1903) "Lumberyard" paleontological site (Knudson 1982).

From 2004 to 2008, ICF Jones & Stokes conducted archaeological monitoring for the Port of Los Angeles *Waterfront Gateway* project. The monitoring efforts focused on both the identification of CA-LAn-146 as recorded by the regional information center (based on Nelson's notes) and the identification of subsurface historical archaeological deposits associated with a Mexican colonia, locally recognized as *Mexican Hollywood*. Native American monitoring of the project area was conducted by Mr. Anthony Morales, Chairman of the Gabrieliño/Tongva San Gabriel Band of Mission Indians. While intact trash deposits associated with *Mexican Hollywood* were identified during monitoring, no subsurface evidence of CA-LAn-146 was identified. The monitoring report for this project is in production by ICF Jones & Stokes.

CA-LAn-147

Recorded in 1912 by N. C. Nelson, CA-LAn-147 is described as a refuse heap. No specific site dimensions or contents were provided in the site record. Nelson stated that most of the refuse (site) was removed during the grading of the straight boulevard running from Pt. Fermin past San Pedro to Wilmington.

CA-LAn-149

Recorded in 1912 by N. C. Nelson, CA-LAn-149 is described as a refuse heap. Nelson notes that despite the fact that nearby residents informed him that they believe the site, like others in the immediate vicinity, are of natural original, he argued the site is characteristic shellmound material with soil interdispersed throughout the matrix, and argues that this is likely a prehistoric site despite any lack of associated artifacts.

CA-LAn-150

In 1912, N. C."Nels" Nelson recorded CA-LAn-150 as a refuse heap (shell midden) measuring 600 by 75 feet and "located at the western end of the Wilmington Lagoon on the bluff at the left hand side of Wilmington Road." Nelson estimated the site depth at 4 feet and noted that no associated artifacts were observed. Nelson had established himself as one of the foremost experts in the identification and stratigraphic analysis of shell middens along the California coast. In northern California, his work on the substantial shellmounds of the coastal region yielded extensive archaeological data (Nelson 1910; Willey and Sabloff 1993). Unfortunately, the same level of study and analysis has not been conducted on the shell midden sites identified by Nelson in southern California (Erlandson and Colton 1991).

A note in the site record file dating from 1981 stated that CA-LAn-150 appeared to be completely destroyed as a result of earthmoving activities subsequent to 1964 (Dillon 1981). However, because no subsurface investigation was conducted at CA-LAn-150 prior to the reported earthmoving activities, it is not possible to use the information from the 1912 site record to determine the exact location, horizontal extent, or depth of the site. In addition, the 1981 note does not provide a description of the methods the author used to make the determination that the site was completely destroyed. Therefore, it cannot be determined using the information currently available whether any portion of CA-LAn-150 remains intact and if any identified deposits would meet significance criteria.

CA-LAn-283 (San Pedro Harbor Site)

The San Pedro Harbor Site was a large shell midden on the eastern slope of the Palos Verdes Peninsula overlooking what are now the West Basin and the Southwest Slip of the San Pedro Harbor. The site was first recognized in 1939 by D. L. True who designated it as Torrance 8; it was re-surveyed in 1960 by Paul Chace. The site was located on a terrace approximately 120 feet above sea level, and the midden averaged 30 inches deep over an area of approximately six acres (Butler 1974).

In 1968, archaeology students from California State University, Long Beach and an archaeology crew from the California Department of Parks and Recreation conducted salvage excavations at prehistoric site CA-LAn-283, the San Pedro Harbor Site, during the construction of an extension of the Vincent Thomas Bridge that connected the bridge to the Harbor Freeway. The excavators recovered a substantial amount of artifacts that indicated the site was occupied initially during the Millingstone Horizon (ca. 8000–3500 BP), through the Intermediate Period (ca. 3500–1200 BP) and into the Late Prehistoric Period, with a termination date of sometime between AD 1000 and AD 1500 (Desautels 1968). In addition to recovering a large number of artifacts, an unusual cogged stone with a platform base and vertical side notching at regular intervals was also identified (Desautels 1968; Butler 1974).

Although 57% (n=98) of the 172 five-by-five foot pits excavated revealed disturbance related to urban development, CA-LAn-283 yielded important scientific information relevant to the prehistory of coastal southern California. Laboratory

analysis of the artifacts indicated that the site exhibited a long period of repeated seasonal occupation, broad resource exploitation, and an easily accessible supply of Monterey Chert for chipped stone implements. The overall assemblage indicates that the site might represent a primary subsistence village of a centrally based, wandering community.

3/CA-LAn-285

This site was recorded in 1939 by F. H. Racer as a village site consisting of a shallow shell midden composed primarily of pectin. Associated artifacts included: worked shell ornaments, scarce amount of shell beads, several mutates, three manos, two double-pointed, chipped, flint arrowheads, and several cobble spheres. At the time of recordation, the site was being utilized for flora (flower) cultivation although no assessment of disturbance to the site was provided.

3/CA-LAn-2135H

This site was recorded in 1993 as the location of the Los Angeles Union Oil Refinery, which was constructed in 1917. The site encompasses 424 acres and consists primarily of tanks, refinery and maintenance facilities, office structures, utilities, and roads.

3/CA-LAn-2837

This site was recorded in 2001 as a low density lithic scatter with unknown size and boundaries and little research potential. The artifacts were identified during grading monitoring and the site was determined destroyed by grading for the Port of Los Angeles's Distribution Center.

Historic Architectural Resources

A cultural resources record search was conducted at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) located at California State University, Fullerton on April 8, 2008. The record search included a review of all recorded cultural resources within a half-mile radius of the proposed project area. In addition, a review of historic registers was conducted including: California Historic Landmarks (CHL), the National Register of Historic Places (NRHP), California Register of Historic Resources (CRHRs), California Points of Historical Interests (PHI) and California Historic Resources Inventory (HRI).

According to the record search, there are 33 cultural resources sites, 19 built environment resources, and 16 archaeological sites located within the half-mile radius of the proposed project area; however, none of the listed architectural resources are within the proposed project boundary. The CHL lists two properties located within a half-mile radius of the proposed project area: CHL #380/19-174912 Site of the Home of Diego Sepulveda; and CHL#894 S.S. Catalina, original location

at the Port of Los Angeles, Catalina Island Terminal, Berth 96, new location at the Ensenada Harbor, Ensenada, Mexico.

There were no NRHPs, CRHRs, or PHIs recorded within a half-mile radius of the proposed project area.

Another source consulted was *Los Angeles: An Architectural Guide* by David Gebhard and Robert Winter (2003. There are no historical resources, within the proposed project boundary, identified in the guidebook.

3.4.2.5.2 Field Surveys

Paleontology

Published and unpublished geologic and paleontologic literature was reviewed to document each rock unit exposed at the proposed project site and the types of fossil remains the rock unit has produced locally. No field survey of the proposed project site was conducted because the site is covered by extensive development, or is underlain by non-fossiliferous artificial fill or undisturbed strata that are too young to contain fossilized remains.

Archaeology

A Phase I pedestrian survey of portions of the proposed project area was conducted by ICF Jones & Stokes archaeologists on several occasions over the Spring and Summer of 2008. The survey area was confined to portions of the proposed project area where construction-related direct impacts are anticipated as a result of the proposed Project. This includes the Railroad Green portion of the Avalon Development District, the visible ground/open space within the Avalon Waterfront District and Avalon Development District Area B, and portions of the California Coastal Trail. The field survey resulted in the identification of six cultural resources.

Historic Architectural Resources

A field investigation was conducted on April 2 and May 14, 2008, to identify existing buildings within and adjacent to the proposed project area that meet the 50-year age criterion for evaluation. The team of architectural historians conducted the site analysis, applying the California Register of Historical Resources Criteria for Evaluation. For consideration as a potential historical resource, a property must be shown to be significant under one or more of the three criteria for evaluation:

- Criterion 1 consideration is for a property that may be eligible under an association with events that made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.

- Criterion 2 consideration is for a property that may be eligible through its association with the lives of persons important to local, California, or national history.
- Criterion 3 consideration is for a property that may be eligible if it embodies distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic value.

For this field investigation and site analysis, architectural historians evaluated proprieties under Criterion 3, which is defined as a building having distinctive architectural design characteristics, a unique construction type, that represents the work of a master, or possess high artistic value. For identifying resources under Criterion 1, which is defined as a building having significance because of its association with an important event, an oral interview with Hank and Jane Osterhoudt, curators of the Wilmington Historical Society, was conducted. For association with an important person (Criterion 2), building permits were reviewed, data was searched within the California Index[1], and an oral interview with Hank and Jane Osterhoudt was conducted. The Osterhoudts explained that there are no existing buildings 50 years of age or older within the proposed project area that are associated with important events or persons, other than the previously identified listed resources (see Tables 3.4-3 through 3.4-7). No other additional research was conducted to identify potential historical resources under Criteria 1 or 2.

3.4.2.5.3 Archival Research

Archaeology and Historic Architecture

Archival research consisted of a review of primary and secondary documents available at the Wilmington and San Pedro Bay Historical Societies and the Los Angeles Public Library, the photo archives at the Port, regional prehistoric and ethnographic materials on file at ICF Jones & Stokes, and the following:

- Sanborn fire insurance maps (1888, 1891, 1902, 1908, 1921, 1950, 1969)
- Historic topographic maps (1896, 1925, 1944, 1951,1964)
- LAHD port annual reports (1918-1920, 1924-1925, 1925-1926, 1926-1927)
- U.S. Coast Survey Map of the California Coast (1859)
- Historic Aerial Photographs (LAPL, LAHD, Wilmington Historical Society)
- General Land Office Plat Maps (1859. 1862, 1867)
- Birds Eye View (lithograph) of Wilmington (1880)
- Historical Assessment of 236 North Avalon, 131 North Avalon, and 133 North Avalon Boulevards, Wilmington, California, by ICF Jones & Stokes

[1] California Index (LA Public Library): indexes information about people, places, and events that have had a significant impact on life in Southern California.

- Historical Assessment of Bekins Warehouses, Wilmington, California, by ICF Jones & Stokes
- Historical Assessment of National Polytechnic College of Engineering and Oceaneering Wilmington, California, by ICF Jones & Stokes

Archival research has demonstrated that a majority of the proposed project area was extensively developed by the nineteenth century and may contain significant historical archaeological deposits that are representative of multiple periods of occupation. Specifically, the Wilmington Waterfront portion of the proposed project area was once the location of Phineas Banning's Landing, which was the center of his early commercial activities and efforts that led to the development of the Port.

In addition, the Avalon Development District and the Avalon Triangle Park portions of the proposed project area are located in what was historically Wilmington's downtown area during the middle/late nineteenth century into the twentieth century as the community began to expand. This area contained a variety of public buildings, storefronts, and boarding houses (Sanborn 1885, 1888, 1891, 1900, 1907, 1913, 1921, 1950).

Paleontology

A review was conducted of relevant geotechnical reports and geological maps, and unpublished paleontological reports prepared for projects in Los Angeles Harbor. This approach was followed in recognition of the direct relationship between paleontological resources and the geologic formations within which they are enclosed. By knowing the geology of a particular area and the fossil productivity of particular formations that occur in that area, it is possible to predict where fossils will or will not be encountered (Kirby and Demere 2007).

Figure 3.4-1 distinguishes recent deposits, both fill and beach sediments, in relation to older Quaternary deposits, including Older Alluvium and the San Pedro Sand. These Older Alluvium deposits and the San Pedro Sand are known to be fossil-bearing. This figure permits inferences to be drawn as to the nature of the subsurface in any given area and has been used for the impact analysis. Surface sediments are present throughout the Avalon Waterfront District and Avalon Development District as well as eastern extent of the Waterfront Red Car Line/California Coastal Trail from Avalon Boulevard along Harry Bridges Boulevard, are underlain by Holocene-age beach sediments and artificial fill. These are young sediments with a low potential to contain fossil resources. The depth at which older deposits with a high potential to contain paleontological resources are present beneath these younger sediments is not known and cannot be determined from this surface mapping.

The western extent of the Waterfront Red Car Line/California Coastal Trail west of Figueroa Street along John S. Gibson Boulevard to Swinford Street is underlain by Quaternary alluvium, Quaternary older alluvium, and Pleistocene-age offshore marine deposits of San Pedro Sand. The Pleistocene-age San Pedro Sand is mapped at the surface between the Northwest and Southwest Slips, and in patches near the

Vincent Thomas Bridge. These deposits are of fossil-bearing age, and are of scientific interest.

3.4.2.5.4 Native American Correspondence

ICF Jones & Stokes contacted the Native American Heritage Commission (NAHC) on June 4, 2008, to request a search of their sacred lands file and a list of Native American representatives to contact for additional information. The NAHC responded on June 5, 2008, stating that no known sacred lands are located within or adjacent to the proposed project area. The NAHC also provided a list of seven Native American representatives to be contacted for information on the proposed project area. ICF Jones & Stokes sent a letter describing the proposed Project to each representative. The responses are contained in Appendix E.

ICF Jones & Stokes received an email response from Mr. John Tommy Rosas, Tribal Administrator for the Tongva Ancestral Territorial Tribal Nation (TATTN). Mr. Rosas stated that the TATTN objects to the proposed Project as it is located on indigenous tribal lands (Rosas pers. comm.). ICF Jones & Stokes responded by email asking for additional information and clarification of the TATTN's concerns regarding cultural resources and/or resources of importance to Native Americans within the proposed project area. No response has been received. Mr. Rosas as well as the NAHC will be included in the standard mailing list of this project to solicit further comments and communication.

ICF Jones & Stokes was also contacted by Mr. Anthony Morales, Chairman of the Gabrieliño/Tongva San Gabriel Band of Mission Indians, via telephone. Mr. Morales stated that the proposed project area was traditionally utilized by the Gabrieliño and requested that he be contacted should the proposed Project warrant monitoring by Native Americans. In addition, he requested that he be contacted in the event that subsurface archaeological deposits and/or human remains are unearthed during ground disturbing activities (Morales pers. comm.).

3.4.2.6 Site-Specific Setting

3.4.2.6.1 Archaeological Resources Identified

According to the record search, no known prehistoric and/or historical archaeological sites are located within the proposed project area. However, 16 archaeological resources have been previously identified within a 1-mile radius of the proposed project area, all of which are located at least 1 mile from the areas where direct impacts through construction activities are anticipated: the Avalon Waterfront District and the Avalon Development District. No human remains have been reported from any of these 16 archaeological sites.

However, 9 of the 16 archaeological sites have been recorded within less than ¼ mile of the proposed Waterfront Red Car Line/California Coastal Trail (CA-LAn-116, -146, -147, -150, -283, -285, -2135, -2873, -2874). Of these nine sites, one (CA-LAn-2135H) is located approximately ⅛th of a mile from the proposed Waterfront Red Car Line/California Coastal Trail, and 2 prehistoric sites (CA-LAn-150 and CA-LAn-283) are located adjacent to the proposed Project's location.

A field survey of portions of the proposed project area was conducted by ICF Jones & Stokes archaeologists. The survey area was confined to portions of the proposed project area where construction-related direct impacts are anticipated as a result of the proposed Project. This includes the Railroad Green portion of the Avalon Development District, visible ground/open space within the Avalon Waterfront District, and portions of the California Coastal Trail. The field survey resulted in the identification of six cultural resources. Impact CR-1 will discuss whether the following resources are considered significant prehistoric or historic archaeological resources within the context of CEQA (see also section 3.4.3.1.1).

Avalon Development District

One cultural resource, ICFJSA-NS-1, was identified within the Railroad Green portion of the Avalon Development District.

ICFJSA-NS-1/Pacific Electric Railway

This resource consists of three abandoned segments of Pacific Electric Railway track. The tracks are standard gauge, which is the gauge to which approximately 60% of the world's existing railway lines are built. The distance between the inside edges of the rails of standard gauge track is 1,435 millimeters (4 feet, 8½ inches). Intact 8-inch redwood ties of unknown length are visible only at Segments 1 and 3; ties vary according to standard railroad construction practices of the time. Also in evidence are standard switches and curves for rail sidings, bolted splice joints, and railroad spikes. Evidence was also noted of heavy braided steel wire ground return loops welded at each rail joint, a feature unique to electric railroads such as the Pacific Electric. Overall length of exposed track segment varies; portions of the alignment have been covered by modern asphalt paving and were not surveyed due to lack of accessibility (primarily from locked security fences).

Avalon Waterfront District

Five cultural resources were identified within the Avalon Waterfront District portion of the proposed project area.

ICFJSA-NS-2/Harbor Belt Line Railroad

This resource consists of operational railroad line segments currently utilized by the Harbor Belt Line railroad. The tracks are standard gauge. Intact 8-inch redwood ties of varying lengths are visible. While this track is more or less on the original, historic, alignment of the Southern Pacific into San Pedro (now Union Pacific), the original right-of-way easement in this section was 200 feet wide. A tank farm has encroached somewhat on this easement, and some of the more recent Harbor Belt track was in the same vicinity and the track has been realigned to support modern operating conditions. It is therefore difficult to determine exactly where the original track alignment was within this corridor. Currently, this segment of track forms one of the main leads into the Pacific Harbor Lines Pier A Yard complex and is in active service (Signor pers. comm.)

ICFJSA-NS-3/Drainage Swale

This resource is a possible drainage swale comprised of rectangular, granitic stones of varying sizes sealed in place with concrete. The width of the segment measures 18 inches (four courses wide) and is situated within the road gutter on the north side of North Water Street. Although no other portions were visible during the survey, it is possible that modern asphalt paving covers additional, intact sections.

ICFJSA-NS-4/Pacific Electric Railway "Channel Track"

This resource consists of one 18-foot and one 20-foot segment of the "channel rail" track used by the Pacific Electric to access the Catalina Steamer Dock located at Berths 184–185 at the foot of Avalon Boulevard on Slip 5. Although the segments are partially covered in asphalt and appear disconnected, the alignment may be intact under the existing roadway. Both segments are standard gauge.

This Pacific Electric line was built from a junction with the San Pedro via Dominguez PE Line at Anaheim Street and McFarland Avenue, Wilmington, via McFarland Avenue and a private way to the Catalina Terminal on Water Street, a distance of approximately 1.19 miles. It was placed in service in March 1920, coincident with the opening of the new Catalina Dock. It operated continuously (except for a period during World War II when the island was closed) during summer sessions until October 12, 1958. The track was 90-pound rail on redwood ties, with gravel ballast on unpaved portions; those portions in McFarland Avenue and Water Street were 90-pound rail on redwood ties, gravel ballast, and asphalt paving. As was the custom, "channel rail" was used in street running. Two tracks at the Catalina Dock on Water Street each held six large interurban cars.

Considerable freight traversed the line, all of which was operated by Harbor Belt Line after June 1929, and the track on Water Street was used to access certain industries in the area. With the abandonment of the San Pedro-Dominguez Line on December 8, 1958, this line was also closed to passenger service. It appears that some, or all of this line was in place as late as 1981, but it is unclear when the rest of the line was dismantled. Portions of the former private right-of-way northeast of the

resource site are now occupied by DAS, an automobile import storage facility (Signor pers. comm.).

ICFJSA-NS-5 Water Street Wharf /Catalina Steamer Terminal

This resource consists of a 306-foot concrete and wood post foundation for the Water Street Wharf that eventually supported the Catalina Steamer Terminal. The Water Street Wharf/Catalina Steamer Terminal Wharf and warehouse were demolished in the early 1990s by the LAHD (Hagner pers. comm. 2008). Today, all that remains of the wharf is a concrete and wood post foundation along the waterfront of Berth 185. The foundation is presently 7½ feet below grade/the existing sidewalk. The concrete matrix contains numerous cobbles, possibly from a local riverine source. Remnants of wood support posts are visible at intervals along the alignment. In general, the wood support posts measure 1 foot in diameter, although other sizes were noted. The posts are placed 7½ feet from one another on average. The top width of the concrete measures 2 feet while the base, which extends at an angle underwater, is estimated to measure 18 feet.

ICFJSA-NS-6/Stacked Stone Breakwater

This resource consists of a hand-stacked stone breakwater sealed with concrete mortar. The breakwater consists of eight courses of brick and measures approximately 4 to 5 feet throughout the length of the structure. Directly above the breakwater, and continuing for the entire length of the structure, is a second 3-foot tall (grayish) wall constructed of reinforced, poured concrete. A third concrete wall measuring 3.5 feet, and painted white at the time of recordation, rests on top of the other two walls and also extends along the entire length of the structure.

Approximately 2 feet in front of the western end of the breakwater is a second, smaller breakwater comprised of polypropelene bags filled with cement. The remainder of the stone and cement breakwater is protected by adjacent riprap. A ceramic pipe sealed in 2 feet of brick and concrete was identified embedded near the western end of the structure. The ceramic pipe had an inside diameter of 8 inches and an outside diameter of 10 inches. It appeared that the pipe and surrounding brick and concrete were placed within the wall after it was constructed, possibly to replace an earlier runoff or waste disposal system. Two additional metal pipes were identified embedded in the wall at the east end of the structure.

3.4.2.6.2 Historic Architectural Resources Identified

For the purposes of this draft EIR, all buildings, structures, objects, landscape elements, and other features that could be considered historical resources are evaluated in light of each of the above five definitions under CEQA. Each definition is described in more detail below, along with a listing of those historical resources on, adjacent to, near, or historically related to the proposed project site that meet any of the definitions. If a historical resource meets more than one definition, it is listed only once, under the first applicable definition category.

Definition 1—Listed in the California Register

There are several ways in which a resource can be listed in the California Register, which are codified under 14 CCR 4851:

- A resource can be listed in the California Register by the State Historical Resources Commission.
- If a resource is listed in or determined eligible for listing in the NRHP, it is automatically listed in the California Register.
- If a resource is a California State Historical Landmark, from No. 770 onward, it is automatically listed in the California Register.

Table 3.4-3 identifies one historical resource adjacent to the proposed project area that is currently listed in the California Register.

Table 3.4-3. Historical Resources Adjacent to the Project Study Area Currently Listed in the California Register

Name	*Location*	*Status*	*Date Status Determined*
Harbor Generating Station	161 N. Island Avenue	NRHP eligible by Office of Historic Preservation (OHP), CRHR listed	February 9, 2004

Definition 2—Determined Eligible for the California Register

There are no historical resources on, adjacent to, or near the proposed project site that are known to have been determined eligible for the California Register by the State Historical Resources Commission.

Definition 3—Listed in a Local Register of Historical Resources

A property listed in a local register of historic resources is considered an historical resource for the purposes of CEQA. By definition, "local register of historic resources" is a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution. The City of Los Angeles has two such designations: Historic-Cultural Monuments (HCMs) and Historic Preservation Overlay Zones.

Table 3.4-4 identifies one historical resource that is listed in a local register of historical resources.

Table 3.4-4. Historical Resources Listed in a Local Register of Historical Resources Outside the Project Area of Effect

Name	*Location*	*Status*	*Date Status Determined*
Masonic Temple (composed of two buildings side by side).	221–227 N. Avalon Boulevard	Los Angeles Historic Cultural Monument No. 342	Declared January 22, 1988

Definition 4—Identified as Significant in an Historical Resources Survey

According to Section 15064.5(a)(2) of the CEQA Guidelines, a resource "identified as significant in an historical resource survey meeting the requirements [set forth in] section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant."

A resource identified as significant in an historical resource survey may be listed in the California Register if the survey meets all of the following criteria:

1. The survey has been or will be included in the State Historic Resources Inventory.
2. The survey and the survey documentation were prepared in accordance with office [of Historic Preservation] procedures and requirements.
3. The resource is evaluated and determined by the office [of Historic Preservation] to have a significance rating of Category 1 to 5 on DPR Form 523.
4. If the survey is five or more years old at the time of its nomination for inclusion in the California Register, the survey is updated to identify historical resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource.

Table 3.4-5 presents historical resources that were identified as significant in a survey.

Table 3.4-5. Historical Resources Determined Significant or Analysis Pending in a Historical Resources Survey

Name	*Location*	*Survey*	*Statement of Significance*
Wilmington Iron Works	432 W. C Street	HRG Survey (2006)	"The Wilmington Iron Works building is a good example of the small industrial buildings erected around the Wilmington Waterfront during the early decades of the twentieth century. It is representative of the increasingly diversified industrial economy surrounding the harbor area during its development into an important national and international port."
Bekins Storage Property	245 N. Fires Avenue and 312–316 W. C Street	Jones & Stokes Survey (2007a)	The Bekins building at 245 North Fries Avenue is a unique example of storage warehousing built in Los Angeles during the early years of the twentieth century. The multi-story structure retains considerable integrity and evokes the historic period of significance from when it was built. Located adjacent to the Pacific Electric tracks along North Fries Avenue, the warehouse still reflects the character of the neighboring structures used for warehousing and light industry, and its historic use has remained essentially the same. The structure has undergone minimal interior alterations and virtually no exterior alterations. The integrity of design, location, workmanship, and feeling of this building make it eligible for consideration for the California Register under Criterion 3 as well as a Los Angeles Historic-Cultural Monument.
233 N. Avalon Boulevard	233 N. Avalon Boulevard	HRG Survey (2006)	"233 North Avalon is a rare example of multi-unit residential buildings from the early decades of the twentieth century. This building most likely provided housing for local workers and merchant seamen. Further research of this property may reveal additional information on the social history and housing of Waterfront workers." (FINDING SUBJECT TO CHANGE, PENDING FURTHUR RESEARCH)
Coastal Recovery Center	117 Harry Bridges Boulevard	HRG Survey (2006)	"A good example of an industrial building from the early decades of the twentieth century, the structure exemplifies the size, scale and design of the utilitarian port infrastructure." (FINDING SUBJECT TO CHANGE, PENDING FURTHUR RESEARCH)
National Polytechnic College of Engineering and Oceaneering	272 S. Fries Avenue	Jones & Stokes Survey (2007c)	The National Polytechnic College of Engineering and Oceaneering building does not appear to satisfy the requirements for eligibility in the National Register of Historic Places or the California Register of Historic Resources. National Polytechnic College of Engineering and Oceaneering may be potentially eligible for consideration as a Los Angeles Historic-Cultural Monument. While each of the occupants have made some interior changes that would preclude National Register or California Register designation, the National Polytechnic College of Engineering and Oceaneering may still qualify under the Cultural Heritage Ordinance of the City of Los Angeles as a structure that exemplifies or reflects special elements of the City's architectural and marine history.
Note: Some resources are pending further research and evaluation by the lead agency to determine historical resource eligibility (see note in Statement of Significance). Until proved otherwise, the analysis assumes resources under study are historically significant.			

Definition 5—Determined Significant by the Lead Agency

The fifth and final category of historical resources covers those that are determined significant by a lead agency. This usually occurs during the CEQA compliance process, such as the preparation of an EIR. According to Section 15064.5(a)(3) of the CEQA Guidelines, "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record." Generally, a resource is considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (PRC SS5024.1, 14 CCR 4852).

Table 3.4-6 lists one historical resource that was identified to be significant, by the Lead Agency, within the proposed project site.

Table 3.4-6. Historical Resource Determined to be Significant by the Lead Agency

Name	*Location*	*Criteria for Eligibility*
Wilmington Iron Works Building	432 West C Street	"This structure is a good example of the small industrial buildings constructed in support of local crafts and trades such as boat building, small manufacturing and fishing at the Port of Los Angeles in the early decade of the twentieth century. The original building permit lists the date of construction as September 26, 1927. While the building has sustained some alteration with a change in cladding and roofing from the original corrugated iron, and window loss along the north elevation, its footprint and original configuration are still intact, conveying its significance as a small industrial facility. Within the context of the development of Wilmington as an important location for industry at the Port of Los Angeles, the building is *eligible for the California Register of Historical Resources under Criterion 1:* Association with events that have made a significant contribution to the broad patterns of local or regional history and warrants a 3CS Status Code: "appears eligible for the California Register as an individual property through survey evaluation."

Wilmington Iron Works Building

The Wilmington Iron Works Building, located at 432 West C Street, is a one-story industrial building that was constructed in 1927. The building has been re-clad with rough textured stucco and features a decorative parapet on the primary (north) façade. The primary elevation consists of a wood garage door that has been replaced, which

includes a walkthrough entrance with windows above. This elevation retains a pair of six-over-six original wood frame windows in a wood surround to the east of the garage opening; an aluminum sliding window is centered within the parapet. Windows were most likely located east of the garage door but have been covered by the stucco.

Within the context of the development of Wilmington as an important location for industry at the Port of Los Angeles, the building is eligible for the California Register of Historical Resources under Criterion 1: Association with events that have made a significant contribution to the broad patterns of local or regional history and warrants a 3CS Status Code "appears eligible for the California Register as an individual property through survey evaluation."

3.4.3 Applicable Regulations

The proposed Project is not associated with any federal agencies or undertakings; therefore, it is not subject to the Section 106 process and review, or regulatory federal regulations. The lead local agency for the proposed Project is the LAHD. No other federal agencies, such as the Federal Transit Administration (FTA), have been identified as being involved with the proposed Project. In addition, there are no identified federal undertakings that will be associated with the proposed Project.

3.4.3.1 State

3.4.3.1.1 Archaeological Resources

CEQA Guidelines define a significant cultural resource as "a resource listed in or eligible for listing in the California Register of Historical Resources" (PRC Section 5024.1). A resource may be eligible for inclusion in the CRHR if it meets any one of the following criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of important historical figures.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic value.
4. It has yielded, or may be likely to yield, important prehistoric or historic information.

If an archaeological resource does not fall within the definition of an historical resource, but does meet the definition of a *unique archaeological resource* (PRC 21083.2), then the site must be treated in accordance with the special provisions for such resources. An archaeological resource will be *unique* if it:

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

Should an archaeological resource be determined potentially eligible for listing in the CRHR based on one or more of the criteria, the integrity of the resource then comes into question. For archaeological resources integrity is most commonly defined as the ability to address important research questions outlined in a formal research design. For prehistoric and historic archaeological sites, integrity of location, materials, and association are generally most crucial. To address important research topics, archaeological deposits usually must be in their original location, retain depositional integrity, contain adequate quantities and types of materials in suitable condition to address important research topics, and have a clear association. Associations may be defined at different social scales (household or specific activity, region, or even city) and across various temporal spans (brief or longer term). Cultural sites that have been affected by ground-disturbing activities such as grazing, off-road vehicle use, trenching, and vandalism often lack the integrity to answer important questions. This is because spatial or depositional relationships have been lost, deposits or sites from widely different periods and associations have been mixed, or the contents of the deposits have been skewed by selective removal of materials.

Even without a formal determination of significance and nomination for listing in the CRHR, the lead agency can determine that a resource is potentially eligible for such listing to assist in determining whether a significant impact would occur. The fact that a resource is not listed in the CRHR, or has not been determined eligible for such listing, and is not included in a local register of historic resources does not preclude an agency from determining that a resource may be a historical resource for the purposes of CEQA.

3.4.3.1.2 Native American Human Remains

The disposition of Native American burials is governed by Section 7050.5 of the California Health and Safety Code, and PRC Sections 5097.94 and 5097.98, and falls within the jurisdiction of the Native American Heritage Commission (NAHC). Section 7052 of the Health and Safety Code establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historical or archaeological interest located on public or private lands, but specifically excludes the landowner. PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, or historical, resources located on public lands.

3.4.3.1.3 Paleontological Resources

For purposes of CEQA, paleontological resources are treated as cultural resources. The CEQA Environmental Checklist (CEQA Guidelines Appendix G), under the Cultural Resources heading, includes the question would the project "Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature." PRC Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands." PRC Section 30244 requires reasonable mitigation of adverse impacts on paleontological resources from development on public land. Penal Code Section 623 spells out regulations for the protection of caves, including their natural, cultural, and paleontological contents. It specifies that no "material" (including all or any part of any paleontological item) be removed from any natural geologically formed cavity or cave.

3.4.3.1.4 Historic Architectural Resources

CEQA Guidelines Section 15064.5(a.3) and California PRC Section 21084.1 define the criteria used to determine the significance of cultural resources, characterized as "historic resources" as follows:

> Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (PRC SS5024.1, Title 14 CCR,, Section 4852).

CEQA Guidelines (Section 15064.5(b) (revised October 26, 1998) state that "a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." To this end, the Guidelines list the following definitions:

1. Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
2. The significance of an historical resource is materially impaired when a project:

    A. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

B. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

C. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

PRC Section 21083.2(j) states that an historical resource is a resource listed in, or is determined to be eligible for listing in, the California Register of Historical Resources, or listed in a local register of historical resources, or deemed significant pursuant to criteria identified in PRC Section 5024.1(g) defined above, unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant. The fact that a resource is not listed in, or is determined not to be eligible for listing in, the California Register of Historical Resources, not included in a local register of historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 does not preclude a lead agency from determining whether the resource may be an historical resource. CEQA Guidelines Sections 15064.5 and 15126.4 guide the evaluation of impacts on prehistoric and historic archaeological resources. Section 15064.5(c) provides that, to the extent an archaeological resource is also a historical resource, the provisions regarding historical resources apply. These provisions endorse the first set of standardized mitigation measures for historic resources by providing that projects following the Secretary of the Interior's Standards for Treatment of Historic Properties be considered as mitigated to a less-than-significant level.

3.4.3.2 Regional and Local

3.4.3.2.1 Archaeological Resources

City guidelines for the protection of archaeological resources are set forth in Section 3 of the General Plan of the City of Los Angeles Conservation Element, which, in addition to compliance with CEQA, requires the identification and protection of archaeological sites and artifacts as a part of local development permit processing. Specifically, Los Angeles Municipal Code section 91.106.4.5 states the following:

> The building department shall not issue a permit to demolish, alter or remove a building or structure of historical, archaeological or architectural consequence if such building or structure has been officially designated, or has been determined by state or federal action to be eligible for designation, on the National Register of Historic Places, or has been included on the City of Los Angeles list of historic cultural monuments, without the department having first determined whether the demolition, alteration or removal may result in the loss of or serious

damage to a significant historical or cultural asset. If the department determines that such loss or damage may occur, the applicant shall file an application and pay all fees for the California Environmental Quality Act Initial Study and Check List, as specified in Section 19.05 of the Los Angeles Municipal Code. If the Initial Study and Check List identifies the historical or cultural asset as significant, the permit shall not be issued without the department first finding that specific economic, social or other considerations make infeasible the preservation of the building or structure.

3.4.3.2.2 Ethnographic Resources

Relative to ethnographic resources, the *L.A. CEQA Thresholds* (2006) states: "Consider compliance with guidelines and regulations such as the California Public Resources Code." No specific local regulations mandating the protection of ethnographic resources exist.

3.4.3.2.3 Paleontological Resources

City guidelines for the protection of paleontological resources are specified in Section 3 of the City of Los Angeles General Plan Conservation Element. The policy requires that the City's paleontological resources be protected for research and/or educational purposes. It mandates the identification and protection of significant paleontological sites and/or resources known to exist or that are identified during land development, demolition, or property modification activities.

3.4.3.2.4 Historic Architectural Resources

City guidelines for the protection of historic architectural resources are also set forth in Section 3 of the General Plan of the City of Los Angeles Conservation Element (see Section 3.4.3.2.1, "Archaeological Resources," above for details).

Five types of historic protection designations apply in the City: (1) Historic-Cultural Monument designation by the City's Cultural Heritage Commission and approved by the City Council; (2) placement on the California Register of Historical Resources or (3) the National Register of Historic Places (1980 National Historic Preservation Act); (4) designation by the Community Redevelopment Agency (CRA) as being of cultural or historical significance within a designated redevelopment area; and (5) classification by the City Council (recommended by the planning commission) as an Historic Preservation Overlay Zone (HPOZ). These designations help protect structures and support rehabilitation fund requests (City of Los Angeles 2001b).

The City Cultural Heritage Commission (CHC) was established by ordinance in 1962 to protect and/or identify architectural, historical, and cultural buildings; and structures and sites of importance in the City's history and/or cultural heritage. The CHC has designated over 700 sites as Historic-Cultural Monuments, including

historic buildings, corridors (tree-lined streets), and geographic areas. Historical resources may also include resources listed in the State Historic Resources Inventory as significant at the local level or higher, and those evaluated as potentially significant in a survey or other professional evaluation (City of Los Angeles 2001b). The HPOZ provision of the zone code, Los Angeles Municipal Code (LAMC) Section 12.20.3, was adopted in 1979, and was amended in 2001. It contains procedures for designation and protection of areas that have structures, natural features, or sites of historic, architectural, cultural, or aesthetic significance. HPOZ areas contain significant examples of architectural styles characteristic of different periods in the City's history. No area within the Port has been designated as part of an HPOZ (City of Los Angeles 2001b).

The significance of an historical resource is also based on (1) whether the site has been coded by the Department of Building and Safety with a Zoning Instruction number in the 145 series (which indicates prior identification of the property as historic); (2) whether the resource has been classified as historic in an historical resources survey conducted as part of the updating of the Community Plan, the adoption of a redevelopment area, or other planning project; (3) whether the resource is subject to other federal, state, or local preservation guidelines; (4) whether the resource has a known association with an architect, master builder, or person or event important in history such that the resource may be of exceptional importance; and (5) whether the resource is over 50 years old and a substantially intact example of an architectural style significant in Los Angeles (*L.A. CEQA Thresholds Guide* 2006).

City of Los Angeles Historic-Cultural Monument Designation

In the City of Los Angeles, resources may be designated as Historic-Cultural Monuments under Sections 22.120, et seq., of the LAMC. An historical or cultural monument is defined as:

> "[A]ny site (including significant trees or other plant life located thereon), building or structure of particular historic or cultural significance to the City of Los Angeles, such as historic structures or sites in which the broad cultural, political, economic or social history of the nation, state or community is reflected or exemplified, or which are identified with historic personages or with important events in the main currents of national, state or local history, or which embody the distinguishing characteristics of an architectural-type specimen, inherently valuable for a study of a period style or method of construction, or a notable work of a master builder, designer, or architect whose individual genius influenced his age."

City of Los Angeles Historic Preservation Overlay Zones

HPOZs are essentially locally designated historic districts or groupings of historical resources. Under the HPOZ ordinance (LAMC Section 12.20.3), to be significant, structures, natural features, or sites within the involved area or the area as a whole must meet one or more of the following criteria:

(A) have substantial value as part of the development, heritage or cultural characteristics of, or is associated with the life of a person important in the history of the city, state, or nation;

(B) are associated with an event that has made a substantial contribution to the broad patterns of our history;

(C) are constructed in a distinctive architectural style characteristic of an era of history;

(D) embody those distinguishing characteristics of an architectural type or engineering specimen;

(E) are the work of an architect or designer who has substantially influenced the development of the City;

(F) contain elements of design, details, materials or craftsmanship which represent an important innovation;

(G) are part of or related to a square, park or other distinctive area and should be developed or preserved according to a plan based on a historic, cultural, architectural or aesthetic motif;

(H) owing to its unique location or singular physical characteristics, represent an established feature of the neighborhood, community or City; or

(I) retaining the structure would help preserve and protect an historic place or area of historic interest in the City.

3.4.4 Impact Analysis

3.4.4.1 Methodology

Impacts on cultural resources from the proposed Project were evaluated by determining whether demolition or ground disturbance activities would affect areas that contain or could contain any archaeological or historical sites listed in or eligible for listing in the NRHP or the CRHR, that are designated as a City of Los Angeles Historic-Cultural Monument or that are included within a City of Los Angeles HPOZ, or that are otherwise considered a unique or important archaeological resource under CEQA (City of Los Angeles 2006). A project that follows the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* or the Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (Weeks and Grimmer 1995) would be considered as mitigated to a level of less than significant. Impacts on paleontological resources were evaluated similar to buried archaeological resources, that is, by determining whether ground disturbance activities would affect areas that contain or could contain any a unique paleontological resource or site or unique geologic feature.

Furthermore, the impact analysis assumed that the proposed Project would comply with all applicable local, state, and federal laws, including those mentioned in the following paragraphs.

The disposition of Native American burials is governed by Section 7050.5 of the California Health and Safety Code, and PRC Sections 5097.94 and 5097.98, and falls within the jurisdiction of the Native American Heritage Commission (NAHC). Section 7052 of the Health and Safety Code establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historical or archaeological interest located on public or private lands, but specifically excludes the landowner. PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological or historical resources located on public lands.

If human remains are discovered or recognized during site preparation, grading, or construction, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County coroner has been informed and has determined that no investigation of the cause of death is required. If the remains are determined by the coroner to be of Native American origin, the descendants will be identified and notified through the Native American Heritage Commission.

If the remains are of Native American origin:

a. the descendants of the deceased Native Americans will make a recommendation to the person responsible for the excavation work as to the means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, as provided in Public Resources Code 5097.98. Upon discovery of human remains, the landowner shall ensure that the immediate vicinity is not damaged or disturbed until specific conditions are met through discussions with the descendents regarding their preferences for treatment (PRC 5097.98 as amended); or

b. if the Native American Heritage Commission is unable to identify a descendant, or the descendant fails to respond within 48 hours after being notified by the commission, the landowner is required to reinter the human remains and to protect the site where the remains are reinterred from further and future disturbance.

According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner will contact the California Native American Heritage Commission.

3.4.4.2 Thresholds of Significance

The *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006) provides specific thresholds of significance to address potential impacts on cultural resources resulting from implementation of a project. The proposed Project would have a significant impact on cultural resources if it would:

CR-1: Disturb, damage, degrade a known prehistoric and/or historical archaeological resource resulting in a reduction of its integrity or significance as an important resource

CR-2: Disturb, damage, degrade an unknown prehistoric and/or historical archaeological resource resulting in a reduction of its integrity or significance as an important resource

CR-3: Disturb, damage, or degrade unknown human remains.

CR-4: Result in the permanent loss of, or loss of access to, a paleontological resource of regional or statewide significance.

CR-5: Result in a substantial adverse change in the significance of an historical resource, involving demolition, relocation, conversion, rehabilitation, alteration, or other construction that reduces the integrity or significance of important resources on the site or in the vicinity.

3.4.4.3 Impacts and Mitigation

3.4.4.3.1 Proposed Project

Impact CR-1: Construction of the proposed Project would not disturb, damage, or degrade a known prehistoric and/or historical archaeological resource resulting in a reduction of its integrity or significance as an important resource.

Excavation and trenching, as well as other ground-disturbing actions, have the potential to damage or destroy significant archeological resources within the proposed project area. Archaeological resources were analyzed for the following components of the proposed Project: the project-level impact analysis for the Railroad Green and commercial portion of the Avalon Development District, the Avalon Waterfront District; the California Coastal Trail, and the program-level impact analysis for the remaining portions of the Avalon Development District, the Avalon Triangle Park, and the Waterfront Red Car Line.

Avalon Development District

Proposed project infrastructure improvements and enhancements within the Avalon Development District include the potential development of industrial and commercial space, a 1-acre park located on the vacated Railroad Green, and adaptive reuse of the historic 14,500-square-foot Bekins Storage property for a Waterfront Red Car Museum. Several streets would be vacated or realigned. Archival research has indicated that this portion of the proposed project area is located within the center of the historic community of Wilmington. In addition, the following historic resource would be eligible for inclusion in the California Register of Historical Resources:

ICFJSA-NS-1/Pacific Electric Railway

Three segments of the Pacific Electric tracks were identified in the Railroad Green portion of the proposed project area and are eligible for inclusion in the California Register of Historical Resources by meeting Criteria 1, 2, and 3 as follows:

1. Southern California's regional settlement and patterns of urban topography can be laid to the development and routes of the Pacific Electric Railway. The line segment through Wilmington connected the Los Angeles Harbor and town site of San Pedro with the rest of the City of Los Angeles, brought millions of tourists to the docks of the Catalina Steamers, and ferried World War II workers to and from ship building and aircraft plants during the conflict. *Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage*.
2. The Pacific Electric Railway was the culmination of the life work of Henry Edwards Huntington and his vision of developing Southern California along a network of high-speed steel-railed routes. This line is also important for its role in fulfilling the dream of William Wrigley Jr., the chewing gum magnate. He owned Catalina Island from 1919 until his death in 1932. The Wrigley family placed the island in trust with the Catalina Island Conservancy in 1972, and Wrigley played an instrumental role in the history of Catalina Island, bringing improvements such as public utilities, new steamships, a hotel, the Casino building, and extensive plantings of trees, shrubs and flowers. Nearly every visitor to Catalina began and ended their trip with rides on the "Big Red Cars" of the Pacific Electric. *Associated with the lives of important historical figures.*
3. The Pacific Electric Railway was an electric railway. Although it shares conventional steel rails set at a U.S. standard gauge of 4 foot, 8½ inches, the rails feature a special rail bond made by welding large diameter braided steel cables to each rail at each rail joint. This bonding allowed the rails to be the ground return circuit of a 600v DC electrical power system that was clean, quiet, and energy efficient. Power for the system was primarily renewable hydroelectric; the cars and locomotives emitted no local noise or air pollution; and by means of regenerative braking they were able to convert potential energy and the weight of the cargos and passengers back into electricity for use elsewhere on the system. *Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic value.*

Because this resource is eligible for listing in the CRHR, it is recommended that the original tracks be kept in place and worked into the landscape scheme for the new park and promenade contemplated as part of the proposed Project. Removal of the tracks would constitute a significant impact to this historical resource.

Potential for subsurface historical archaeological deposits

Archival and historic map research (Sanborn1885, 1888, 1900, 1907, 1913, and 1921) indicates portions of the proposed project area, specifically the commercial portion of the Avalon Development District Area B, is located within historic Wilmington. Banning's development of shipping in the 1880s attracted people to the area to fill the new employment needs. Businesses to service this new population established themselves in the area now proposed for the commercial development. The types of services in this area included a boardinghouse, a Chinese laundry, and a public hall (Sanborn 1885, 1888). The delineation of businesses on historic maps indicates the area has a very high potential for extant subsurface archaeological deposits. Proposed project–related demolition of existing structures, utilities, and landscape features in the area has the potential to encounter and disturb these deposits. Disturbance of any deposits that have the potential to provide data important in history regarding consumerism, class and ethnicity, urban geography, and labor relations would be considered significant under CEQA. Implementation of Mitigation Measure MM CR-3 below would reduce potential impacts on archaeological resources associated with the commercial portion of the proposed project to less-than-significant levels.

Avalon Waterfront District

Proposed project features and improvements in the Avalon Waterfront District include a waterfront promenade with restaurant/visitor-serving retail development, a pedestrian bridge and observation tower, 61,100 square feet of new viewing piers of which approximately 17,880 square feet would be replacement existing piers (netting approximately 43,000 square feet of new area), two floating docks totaling 5,870 square feet for transient boats (Phase I), and a 10-acre landscaped bridge providing the Wilmington Community safe access to the waterfront. Five cultural resources have been identified in this portion of the proposed project area:

ICFJSA-NS-2/Harbor Belt Line Railroad

Currently, this segment of track forms one of the main leads into the Pacific Harbor Line's Pier A Yard complex and is in active service. While this track is more or less on the original, historic, alignment of the Southern Pacific into San Pedro (now Union Pacific), it must be remembered that the right-of-way easement in this section is 200 feet wide. A tank farm has encroached somewhat on this easement. Also some of the more recent Harbor Belt track was in the same vicinity, and the track has been realigned to support modern operating conditions. Because of this, it is difficult to determine exactly where the original track alignment was within this corridor. In addition, the track structure itself has been recently upgraded with heavy rail of recent vintage.

The track does not appear to be associated with any persons or events that would qualify for listing under Criteria 1 or 2. Furthermore, the track segment does not rise to the level of historical significance because it does not possess a distinctive architectural design characteristic or unique construction type, nor does it represent the work of a master or possess high artistic value under Criterion 3. Finally, the resource does not appear to contain any potential to answer important questions in prehistory and/or history and therefore is not eligible under Criterion 4 (Signor pers. comm.). Therefore, ICFJSA-NS-2 is not considered a significant historic archaeological resource.

ICFJSA-NS-3/Drainage Swale

This resource appears to have undergone alterations that include asphalt paving. The drainage swale does not rise to the level of historical significance because it does not possess a distinctive architectural design characteristic or unique construction type, nor does it represent the work of a master or possess high artistic value under Criterion 3. Furthermore, the drainage swale does not appear to be associated with any persons or events that would qualify for listing under Criteria 1 or 2. Finally, the resource does not appear to contain any potential to answer important questions in prehistory and/or history and therefore is not eligible under Criterion 4. Therefore, ICFJSA-NS-3 is not considered a significant historic archaeological resource.

ICFJSA-NS-4/Pacific Electric Railway "Channel Track"

This resource consists of one 18-foot and one 20-foot segment of the "channel rail" track used by the Pacific Electric to access the Catalina Steamer Dock located at Berths 184–185 at the foot of Avalon Boulevard on Slip 5. The Pacific Electric tracks within the proposed project area are eligible for inclusion in the CRHR by meeting Criteria 1, 2 and 3 as follows:

1. Southern California's regional settlement and patterns of urban topography can be laid to the development and routes of the Pacific Electric Railway. The line segment through Wilmington connected the Los Angeles Harbor and town site of San Pedro with the rest of the City of Los Angeles, brought millions of tourists to the docks of the Catalina Steamers, and ferried World War II workers to and from ship building and aircraft plants during the conflict. *Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.*
2. The Pacific Electric Railway was the culmination of the life work of Henry Edwards Huntington and his vision of developing Southern California along a network of high-speed steel-railed routes. This line is also important for its role in fulfilling the dream of William Wrigley Jr., the chewing gum magnate. He owned Catalina Island from 1919 until his death in 1932. The Wrigley family placed the island in trust with the Catalina Island Conservancy in 1972, and Wrigley played an instrumental role in the history of Catalina Island, bringing improvements such as public utilities, new steamships, a hotel, the Casino building, and extensive plantings of trees, shrubs and flowers. Nearly every visitor to Catalina began and ended their trip with rides on the 'Big Red Cars' of the Pacific Electric. *Associated with the lives of important historical figures.*

3. The Pacific Electric Railway was an electric railway. Although it shares conventional steel rails set at a U.S. standard gauge of 4 foot, 8½ inches, the rails feature a special rail bond made by welding large diameter braided steel cables to each rail at each rail joint. This bonding allowed the rails to be the ground return circuit of a 600v DC electrical power system that was clean, quiet, and energy efficient. Power for the system was primarily renewable hydroelectric; the cars and locomotives emitted no local noise or air pollution; and by means of regenerative braking they were able to convert potential energy and the weight of the cargos and passengers back into electricity for use elsewhere on the system. *Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic value.*

Because this resource is eligible for listing in the CRHR, it is recommended that the original tracks be kept in place and worked into the landscape scheme for the Railroad Green park as part of the proposed Project. Prior to mitigation, the proposed project impact on ICFJSA-NS-4 would be significant. Implementation of Mitigation Measure MM CR-2 below would reduce impacts to less than significant.

ICFJSA-NS-5 Water Street Wharf/Catalina Steamer Terminal Wharf

The Water Street Wharf/Catalina Steamer Terminal Wharf and warehouse were demolished in the early 1990s by the LAHD. Today, all that remains of the wharf is a concrete and wood post foundation along the waterfront of Berth 185. This resource was previously evaluated for eligibility for listing in the NRHP by McKenna et al. (1994) as part of a cultural resources investigation conducted at Banning's Landing for the Port's proposed *Banning's Landing Waterfront Access and Office Development Project*. The research in McKenna et al.'s report specifically focused on the history of development of the Wilmington Basin, including Slip 5, in the 19th and 20th centuries. In addition to researching the history of development of Slip 5, McKenna attempted to address the potential for a resource locally known as "Banning's Wall" to be located in Slip 5. According to the report, the concrete wall located behind the Water Street Wharf was constructed after 1913, as part of the general improvements to this portion of the port. Although the wall is over 50 years, it was determined not eligible for listing in local, state, or federal registers. ICF Jones & Stokes concurs with this determination and extends the evaluation to include the remnant of the wharf as it appears the wall was constructed in tandem with the improved Water Street Wharf in the early 20th century. Although the resource is eligible for listing under Criteria 1 and 2 for its association with important historical persons (H. Banning [son of Phineas] and William Wrigley Jr.) and important historical events (development of recreation at the Port of Los Angeles and Catalina Island), it does not retain the integrity to convey its period of significance. The resource does not appear eligible under Criterion 3 as it does not possess a distinctive architectural design characteristic or unique construction type, nor does it represent the work of a master or possess high artistic value. Finally, the resource does not appear to contain any potential to answer important questions in prehistory and/or history and therefore is not eligible under Criterion 4. Therefore, no additional work is recommended.

ICFJSA-NS-6/Stacked Stone Breakwater

Although McKenna et al.'s 1994 study included an evaluation of the concrete wall located directly west of the stacked stone breakwater (part of ICFJSA-NS-5), the report did not specifically address the stacked stone breakwater. During historical research, interviews with members of the local historical society determined that the breakwater was referred to as "Banning's Wall." Therefore, ICF Jones & Stokes researched the possibility that the stacked stone breakwater was a remnant of an earlier occupation, and possibly associated with Phineas Banning and/or the Banning Company at Banning's Landing. Specific research methods included oral interviews with the local historical societies, a review of published literature on the history of Banning's enterprises, and review of historic maps and LAHD engineers' plans. In addition, previous research conducted by McKenna (1994) was reviewed.

Research did not indicate an association of the wall with Phineas Banning, the Banning family, or the Banning company. The research did find that the general area of Berth 186 was not developed until 1919. By 1927, the wharf (boat landing) was gone and the area directly north was referred to as a park. In 1942, a new boat landing was designed and in 1943 the Harbor Department constructed a public restroom building. During World War II, the Water Taxi Company transported workers from Berth 186 to the Cal Shipyards and to various sport-fishing excursions (personal communication Wilmington Historical Society). This research indicates the stone wall could be a remnant of the dyke placed across the mouth of the Wilmington Basin in 1918, which encouraged the development of Berth 186 by the Los Angeles Harbor Department. It is also possible that the stacked stone breakwater is representative of later developments at Berth 186, including the taxi and sport-fishing.

Therefore, although the resource is over 50 years old, it does not rise to the level of significance as it cannot be clearly demonstrated to be associated with any important events in history (Criterion 1) or individuals (Criterion 2). For a resource to be eligible under Criterion 2 it must clearly be associated with a significant person and documentation must support the association. It also needs to be the best resource to reflect the person's contributions in their fields of endeavor. Phineas Banning made significant contributions in the areas of transportation, commerce, and community development when he built his wharf and expanded the Port. These efforts resulted in accessibility for larger ships and more trade. He is further recognized for initiating the construction of the first railroad in Southern California which was the first reliable means of moving cargo from ships coming into San Pedro. Extant resources associated with these achievements will better represent Banning's contributions to California history. The stone breakwater does not clearly represent Banning's contributions within the larger historic context of the harbor's development. Furthermore, resources eligible under Criterion 2 must also retain integrity from the period of its significant association. If this resource were directly linked to Banning, it does not retain integrity to the 1870s, its period of significance. The resource has been altered and changed over time and can no longer convey any possible historical association with Banning. It no longer retains integrity of design, setting, materials, and workmanship which would be the key aspects to understand the significance of the stone breakwater. The resource does not appear eligible under Criterion 3 as it

does not possess a distinctive architectural design characteristic or unique construction type, nor does it represent the work of a master or possess high artistic value. Finally, the resource does not appear to contain any potential to answer important questions in prehistory and/or history and therefore is not eligible under Criterion 4. Therefore, ICFJSA-NS-6 is not considered a significant historic archaeological resource.

Potential for Subsurface Historical Archaeological Deposits

In addition to the six cultural resources identified during the field survey of this portion of the proposed project area, archival research has indicated the potential for subsurface historical archaeological deposits associated a Civil War Government Depot at Banning's Landing within the Avalon Waterfront District portion of the proposed project area. Because of the potential of encountering associated subsurface deposits, impacts would be considered significant for the purposes of CEQA, implementation of MM CR-4 will reduce this impact to less-than-significant.

Avalon Triangle Park

At the program level, the proposed Project includes extending the Port Plan boundary and PMP boundary to Harry Bridges Boulevard, which would include the Avalon Triangle Park, resulting in a corresponding retraction of the Wilmington-Harbor City Community Plan boundary. No physical changes are proposed in this area.

Waterfront Red Car Line/California Coastal Trail

At the program level, the proposed Project includes extension of the Waterfront Red Car Line and, and at the project-level, the continuation of the California Coastal Trail from Avalon Boulevard to Swinford Street. The eastern portion of the Waterfront Red Car Line/California Coastal Trail extends from Avalon Boulevard along Harry Bridges Boulevard. The western portion of the Waterfront Red Car Line/California Coastal Trail extends west of Figueroa Street along John S. Gibson Boulevard to Swinford Street. The California Coastal Trail alignment is entirely within the existing Public Right-of-Way and is mostly paved over with sidewalk for pedestrian use. The Waterfront Red Car Line's exact alignment is unknown and thus discussed programmatically.

According to the records search, the Waterfront Red Car Line/California Coastal Trail portions of the proposed project area are sensitive for both prehistoric and historical archaeological resources. Sixteen archaeological sites have been previously identified within a 1-mile radius of the proposed alignment. Nine of the sixteen archaeological sites have been recorded within less than ¼ mile of the proposed alignment (CA-LAn-116, -146, -147, -150, -283, -285, -2135H, -2873, and -2874). Of these nine sites, CA-LAN-150 is located adjacent to the alignment, CA-LAN-283 is located 0.06 of a mile from the alignment, and CA-LAn-2135H is located approximately 0.04 of a mile from the alignment. CA-LAN-150 is the only previously recorded site located adjacent to the current alignment, along the western side of John S. Gibson Blvd. within a paved parking lot utilized by the West Basin

Container Terminal, which currently serves China Shipping, Yang Ming, K-Line, Cosco, Hanjin, Sinotrans, Zim (Berths 121–131).

In 1912, N. C."Nels" Nelson recorded CA-LAn-150 as a refuse heap (shell midden) measuring 600 by 75 feet and "located at the western end of the Wilmington Lagoon on the bluff at the left hand side of Wilmington Road." Nelson estimated the site depth at 4 feet and noted that no associated artifacts were observed.

According to the Phase I Historical Resources Study (ICF Jones & Stokes 2008), the Phase I pedestrian survey of this portion of the proposed project area did not result in the identification of any portion of CA-LAN-150 on the surface. In addition, a note in the site record file dating from 1981 stated that CA-LAn-150 appeared to be completely destroyed as a result of earthmoving activities subsequent to 1964 (Dillon 1981). However, because no subsurface investigation was conducted at CA-LAn-150 prior to the reported earthmoving activities, it is not possible to use the information from the 1912 site record to determine the exact location, horizontal extent, or depth of the site. In addition, the 1981 note does not provide a description of the methods the author used to make the determination that the site was completely destroyed. Therefore, it cannot be determined using the information currently available whether any portion of CA-LAn-150 remains intact and if any identified deposits would meet significance criteria.

CA-LAn-283 is a significant prehistoric habitation site that was partially salvage excavated in 1968 during the construction of the Vincent Thomas Bridge. The excavators recovered a substantial amount of artifacts that indicated the site was occupied initially during the Millingstone Horizon (ca. 8000–3500 BP), through the Intermediate Period (ca. 3500–1200 BP) and into the Late Prehistoric Period, with a termination date of sometime between AD 1000 and AD 1500 (Desautels 1968). In addition to recovering a large number of artifacts, an unusual cogged stone with a platform base and vertical side notching at regular intervals was also identified. CA-LAn-283 yielded important scientific information relevant to the prehistory of coastal southern California. Laboratory analysis of the artifacts indicated that the site exhibited a long period of repeated seasonal occupation, broad resource exploitation, and an easily accessible supply of Monterey Chert for chipped stone implements. The overall assemblage indicates that the site might represent a primary subsistence village of a centrally based, wandering community. Although no evidence of the site was encountered during the Phase I pedestrian survey (ICF Jones & Stokes 2008), the possibility exists that subsurface deposits may be present in this portion of the proposed project area.

While the extent of development and re-development indicates a low potential to encounter subsurface archaeological deposits associated with CA-LAN-150 and/or CA-LAn-283 during ground disturbing activities, implementation of Mitigation Measure MM CR-4 would reduce impacts on potentially significant archaeological resources associated with the CCT portion of the proposed project to less-than-significant levels. In addition, because the Waterfront Red Car Line portion of the proposed project was analyzed programmatically, implementation of Mitigation Measure MM CR-1 would reduce future impacts in this portion of the proposed project area.

Impact Determination

Because proposed changes to the Avalon Triangle Park portion of the project is limited to administrative changes resulting from various planning document boundary adjustments, the identification of cultural resources in these areas was confined to the records search, correspondence with interested parties, and archival research. Likewise, because the exact placement of the Waterfront Red Car Line is not known at the time of this study, the identification of cultural resources in these areas was confined to the records search, correspondence with interested parties, and archival research.

Archival research has indicated that the proposed Avalon Development District is located within the center of the historic community of Wilmington. Therefore, future developments in this area have the potential to temporarily unearth and permanently destroy sensitive historical archaeological resources associated with the early development of Wilmington. Impacts on archaeological resources related to proposed project construction in the Avalon Development District would be significant. The Phase I historical resources study (ICF Jones & Stokes 2008) has resulted in the identification of six cultural resources within the proposed project area: ICFJSA-NS-1/Pacific Electric Railway, ICFJSA-NS-2/Harbor Belt Line Railroad, ICFJSA-NS-3/Drainage Swale, ICFJSA-NS-4/Pacific Electric Railway "Channel Track", ICFJSA-NS-5 Water Street Wharf /Catalina Steamer Terminal, and ICFJSA-NS-6/Stacked Stone Breakwater. Of these resources, only ICFJSA-NS-1 (Pacific Electric Railway) was determined significant (eligible for listing in the CRHR). Impacts on this resource would be considered significant without mitigation.

Within the Avalon Waterfront District, excavation and trenching, as well as other ground-disturbing actions, have the potential to damage or destroy significant historical archeological resources associated with (1) Phineas Banning, Banning's Landing, and the early development of the port; and (2) a portion of Banning's Landing utilized by Northern forces during the Civil War for a depot to supply forces at the Drum Barracks. It is recommended that these areas be avoided during construction to avoid impacts on significant archaeological resources. Without mitigation, a significant impact would occur.

Because there appears to be a high potential to encounter subsurface historical archaeological deposits associated with important themes and individuals in history (Banning's Landing and the Civil War) within the Avalon Waterfront District portion of the proposed project area, the proposed Project could potentially adversely impact historical resources under CEQA. CEQA provides explicit guidelines for the treatment of archaeological sites whether those sites are known or have a high probability to be located within a project area. According to Section 15126.4 (b)(3), public agencies should consider (1) preserving sites in place, (2) conducting data recovery which requires the preparation and adoption of a data recovery plan prior to any excavation, or (3) determining that, based upon archaeological testing or existing studies, all scientifically consequential information has been gleaned from the site and that the determination is documented in the environmental document.

No physical changes are proposed at the Avalon Triangle Park site. Extending the boundary of the Port Plan to Harry Bridges Boulevard, which would include the Avalon Triangle Park site (and retracting the Wilmington Harbor-City Plan boundary), would have no impact on archaeological resources.

Any excavation operations for the Waterfront Red Car Line/California Coastal Trail have the potential to temporarily unearth and permanently destroy sensitive archaeological resources. Impacts on archaeological resources in this area would be significant.

Mitigation Measures

MM CR-1: Conduct Future Cultural Resources Studies along the Waterfront Red Car Line

The analysis of cultural resources along the Waterfront Red Car Line is in the program level of analysis. Archival research indicates that archaeological resources may be located within the Waterfront Red Car Line proposed project area. According to the records search, **t**wo prehistoric sites (CA-LAn-150 and CA-LAn-283) are located adjacent to the proposed Waterfront Red Car Line location and one archaeological site, CA-LAn-2135H, is located less than ⅛th of a mile from the proposed approximate alignment. In addition, archival and historic map research has indicated the potential for subsurface archaeological deposits associated with the early development of Wilmington within the Avalon Development District and the Waterfront Red Car Line.

Therefore, LAHD will ensure that, prior to final design approval for affected parcels, a qualified archaeologist will be retained to perform additional Phase I level archaeological surveys and research to determine the potential for prehistoric and historical archaeological deposits within these portions of the proposed project area in accordance with professional standards and guidelines.

MM CR-2: Incorporate the Tracks into the Design Plan

The proposed Project will incorporate the Pacific Electric Railway (PERy) tracks into the project design in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Weeks and Grimmer 1995). A substantial portion of the track will be preserved in place, which may include compatible alterations consistent with original PERy practice and intent. Examples of such alternations include raising or lowering track elevation to maintain its relationship to adjacent grade or removing or relocating sections to make repairs, fill in gaps, or to realign the public right-of-way. Where it is determined portions of the track will be reconnected, rail bonding shall be repaired and trackwork will be executed by an experienced railway construction contractor. Portions of the track where in place preservation is not feasible, such as the track within the Waterfront Red Car Line and California Coastal Trail alignment, will be statically incorporated into the Railroad Green Park landscape and hardscape design by a qualified landscape architect so as to memorialize the historical significance of

the PERy. Any portion of the track not incorporated into the park design will be preserved for reuse in a storage facility determined suitable for long-term preservation.

MM CR-3: Develop and Implement Historical Resources Treatment Plan Prior to Demolition and/or Ground Disturbing Activities

Disturbance of these archaeological deposits would be considered a significant impact under CEQA, which would require mitigation. Avoidance and/or preservation in place is the preferred mitigation for archaeological deposits. However, when this is not possible, the excavation of archaeological deposits to recover the data they contain is also appropriate (Section 15126.4 (b)(3)). Such data recovery excavation requires careful planning in the form of a Treatment Plan. Prior to any ground-disturbing activities and/or demolition, a treatment plan would be developed and implemented. This document would address areas where potentially significant historical archaeological deposits are likely to be located within the proposed commercial portion of the proposed project area. The treatment plan would also include methods for: (1) archaeological monitoring during demolition of existing buildings, (2) subsurface testing after demolition, and (3) data recovery of archaeological deposits. A detailed historic context that clearly demonstrates the themes under which any identified subsurface deposits would be determined significant would be included in the document as well as anticipated artifact types, artifact analysis, report writing, repatriation of human remains and associated grave goods, and curation. Implementation of Mitigation MM CR-3 would reduce potential impacts on archaeological resources associated with the commercial portion of the proposed project to less-than-significant levels.

MM CR-4: Develop an Archaeological and/or Native American Research Design and Treatment Plan

The Phase I historical resources study (ICF Jones & Stokes 2008) has identified a low potential for historical archaeological deposits associated with a Civil War-era Government Depot within a portion of the Wilmington Waterfront District. In addition, the Phase I historical resources study identified a low potential for prehistoric archaeological deposits associated with CA-LAN-150 and CA-LAN-283. However, because there is potential for ground-disturbing activities to impact potentially CRHR and/or NRHP-eligible historical archaeological deposits, the following steps will be taken prior to any ground-disturbing activities:

- A research design and treatment plan will be generated that would address areas where potentially significant archaeological deposits are likely to be located within this portion of the project area and clearly demonstrates the themes under which any deposits would be determined significant.
- LAHD will require at least one pre-field meeting with environmental management staff, project engineers, construction contractors, and construction inspectors to discuss protocols and procedures related to treatment of identified archaeological resources.
- A qualified archaeologist shall monitor all ground-disturbing activities in the vicinity of the Government Depot within the Wilmington Waterfront District

portion of the project area. The qualified archaeological monitor will have demonstrated knowledge of, and experience with the treatment of historical archaeological resources.

- A qualified archaeologist and Native American monitor will monitor all ground-disturbing activities within the vicinity of CA-LAn-150 and CA-LAn-283 along the California Coastal Trail portion of the proposed project area. The qualified archaeologist will have demonstrated knowledge of, and experience with, the treatment of prehistoric archaeological resources.
- Due to potentially hazardous soil conditions associated with the DWP facility (as included in the project description), a safety plan will be generated in conjunction with the LAHD that addresses all issues associated with contamination and remediation. It is further recommended that the qualified archaeological monitor also be 40-hour Hazwoper certified.
- In the event that subsurface deposits are identified during monitoring, ground disturbing activities will halt within 100 feet of the find to allow the qualified archaeologist to assess the find(s) and determine if treatment of the resource(s) is required.

Residual Impacts

With implementation of mitigation measures MM CR-1, MM CR-2, MM CR-3, and MM CR-4, impacts on known or suspected archaeological resources would be less than significant.

Impact CR-2: Construction of the proposed Project would not disturb, damage, or degrade an unknown prehistoric and/or historical archaeological resource resulting in a reduction of its integrity or significance as an important resource.

Excavation and trenching, as well as other ground-disturbing actions, have the potential to damage or destroy previously unidentified, significant archeological resources within the proposed project area. Archaeological resources were analyzed for the five components of the proposed Project: the project-level impact analysis for the Railroad Green portion of the Avalon Development District, the Avalon Waterfront District, and the California Coastal Trail; and the program-level impact analysis for the remaining portions of the Avalon Development District, the Avalon Triangle Park, and the Waterfront Red Car Line.

Impact Determination

Because portions of the site are covered by existing pavement, structures, or buildings that may be demolished at a future time, a field survey and/or soil testing at these locations was not feasible. However, based upon archival research and known archaeological resources in the area, it is likely unknown prehistoric and/or historical archaeological resources are contained with the ground. In most cases,

implementation of mitigation measures MM CR-1 and MM CR-3 would preclude the potential for a significant impact. However, in the event these mitigation measures do not identify all archaeological resources in the area and construction activities commence, any unidentified resources would have the potential to be destroyed. Impacts on unidentified archaeological resources would be significant.

Mitigation Measures

MM CR-5: Stop Work if Previously Unidentified Resources Are Encountered during Ground Disturbing Activities

In the event that any artifact or an unusual amount of bone, shell, or nonnative stone is encountered during construction, work will be immediately stopped and relocated to another area. The contractor will stop construction within 100 feet of the exposed resource until a qualified archaeologist can be retained by the Port to evaluate the find (see 36 CFR 800.11.1 and CCR, Title 14, Section 15064.5(f)). Examples of such cultural materials might include concentrations of ground stone tools such as mortars, bowls, pestles, and manos; chipped stone tools such as projectile points or choppers; flakes of stone not consistent with the immediate geology such as obsidian or fused shale; historic trash pits containing bottles and/or ceramics; or structural remains. If the resources are found to be significant, they will be avoided or will be mitigated consistent with SHPO Guidelines. All construction equipment operators will attend a preconstruction meeting presented by a professional archaeologist retained by the Port that will review types of cultural resources and artifacts that would be considered potentially significant, to ensure operator recognition of these materials during construction.

Prior to beginning construction, the Port will meet with applicable Native American Groups, including the Gabrieliño/Tongva Tribal Council to identify areas of concern. In addition to monitoring, a treatment plan will be developed in conjunction with the Native American Groups to establish the proper way of extracting and handling all artifacts in the event of an archaeological discovery.

Residual Impacts

Implementation of mitigation measures MM CR-1 for the program-level portions of the proposed project and MM CR-5 for the project-level portions of the proposed project would reduce impacts to unknown resources to less than significant.

Impact CR-3: Construction of the proposed Project would not disturb, damage, or degrade unknown human remains.

The results of the proposed project technical analysis has indicated a low potential to encounter buried prehistoric and/or historic period human remains within the proposed project area. According to the Phase I historical resources study (ICF Jones & Stokes 2008) no known prehistoric burials have been encountered within a one-mile radius of the proposed project area. In addition, no historic period cemeteries have been documented within the proposed project boundaries. However, there is a possibility to encounter previously unidentified, buried human remains.

In the event human remains are discovered, the Port would be required to comply with state law which states that there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner is contacted and the appropriate steps taken pursuant to Health and Safety Code §7050.5 and Public Resource Code §5097.98.

Impact Determination

While the possibility of encountering unidentified buried human remains is low, the possibility cannot be ruled out. Impacts related to the possible disturbance, damage, or degradation of unknown human remains would be significant.

Mitigation

Implement MM CR-1, MM CR-3, MM CR-4, and MM CR-5 (see Impacts CR-1 and CR-2 for the full text of the mitigation measures).

Residual Impacts

Implementation of mitigation measures MM CR-1, MM CR-3, MM CR-4, and MM CR-5 would substantially reduce the potential of impacting unknown buried human remains. With mitigation, impacts would be less than significant.

Impact CR-4: The proposed Project would not result in the permanent loss of, or loss of access to, a paleontological resource of regional or statewide significance.

Excavation, trenching, and pile driving, as well as other ground-disturbing actions, have the potential to damage or destroy significant paleontological resources within the proposed project area. Paleontological resources were analyzed for the five components of the proposed Project: the project-level impact analysis for the Avalon Waterfront District, California Coastal Trail, and the Avalon Development District and the program-level impact analysis for Avalon Triangle Park and the Waterfront Red Car Line. Figure 3.4-1 depicts the surface geology in the proposed project vicinity.

Avalon Waterfront District

Proposed project features and improvements in the Avalon Waterfront District include a waterfront promenade with restaurant/visitor-serving retail development, a pedestrian bridge and observation tower, 44,000 square feet of new viewing piers, replacement of approximately 17,000 square feet of existing piers, two floating dock totaling 5,870 square feet for transient boats (Phase I), and a 10-acre landscaped bridge providing the Wilmington Community safe access to the waterfront. Excavation in the Avalon Waterfront District and removal of the LADWP oil tanks and remediation of the site would encounter Holocene-age sediments and artificial fill. The thickness of these overlying Holocene sediments, which are unlikely to contain paleontological resources, above geologic deposits that may contain

paleontological resources is not known. Any excavation operations within the LADWP Marine Tank Farm that reach underlying deposits of older Quaternary Alluvium or the San Pedro Sand have the potential to temporarily unearth and permanently destroy sensitive paleontological resources. These features would involve excavation for bridge footing in some areas, and for buildings and other structures.

Artificial fill materials presumably were derived from earlier channel dredging operations and were placed in such a way as to provide topographically high areas for development. No fossils of scientific interest are located in the artificial fill materials. Any organic remains have lost their original stratigraphic and geologic context due to the disturbed nature of the artificial fill materials.

In specific locations, during a proposed project-related excavation, the thickness of fill materials is as yet unknown, as is the thickness of the Holocene-age younger alluvium; therefore, depth of cover to buried geologic deposits that may contain paleontological resources is not known. Without comprehensive geotechnical reporting of subsurface conditions in areas of deep excavation, based on geotechnical boring, it is not possible to assess the extent (i.e., depth of sensitive units in comparison to depth of excavations) of proposed project impacts on paleontological resources. However, any excavation operations that reach underlying deposits of older Quaternary Alluvium or the San Pedro Sand have the potential to temporarily unearth and permanently destroy sensitive paleontological resources.

It is possible that pile-driving may impact paleontological resources. This impact is unlikely, however, due to the small impact footprint of pile-driving.

Avalon Development District

Proposed project infrastructure improvements and enhancements within the Avalon Development District include the potential development of industrial and commercial space, a 1-acre park located on the vacated Railroad Green, and adaptive reuse of the historic 14,500-square-foot Bekins Storage property for a Waterfront Red Car Museum. Several streets will be vacated or realigned.

In this area, near-surface excavations will encounter Holocene-age sediments and artificial fill, and, again, the depth to buried geologic deposits that may contain paleontological resources is not known. Any excavation operations within the Avalon Development that reach underlying deposits of older Quaternary Alluvium or the San Pedro Sand have the potential to temporarily unearth and permanently destroy sensitive paleontological resources.

Avalon Triangle Park

At the program level, the proposed Project includes extending the Port Plan boundary to Harry Bridges Boulevard, which would include Avalon Triangle Park, resulting in a corresponding retraction of the Wilmington–Harbor City Community Plan boundary. At the program level, this action will have no impact or effect on paleontological resources. However, future developments in this area have the

potential to temporarily unearth and permanently destroy sensitive paleontological resources.

In this area, near-surface excavations will encounter Holocene-age sediments and artificial fill, and, again, the depth to buried geologic deposits that may contain paleontological resources is not known. Any excavation operations within the Avalon Triangle Park that reach underlying deposits of older Quaternary Alluvium or the San Pedro Sand have the potential to temporarily unearth and permanently destroy sensitive paleontological resources.

Waterfront Red Car Line/California Coastal Trail

At the program level, the proposed Project includes extension of the Waterfront Red Car Line and, at the project level, the continuation of the California Coastal Trail from Avalon Boulevard to Swinford Street.

The eastern extent of the Waterfront Red Car Line/California Coastal Trail from Avalon Boulevard along Harry Bridges Boulevard is underlain by Holocene-age beach sediments and artificial fill. The thickness of these overlying sediments above geologic deposits that may contain paleontological resources is not known.

The western extent of the Waterfront Red Car Line/California Coastal Trail west of Figueroa Street along John S. Gibson Boulevard to Swinford Street is underlain by Quaternary alluvium, Quaternary older alluvium, and Pleistocene-age offshore marine deposits of San Pedro Sand. The Pleistocene-age San Pedro Sand is mapped at the surface between the Northwest and Southwest Slips, and in patches near the Vincent Thomas Bridge. These deposits are of fossil-bearing age, and are of scientific interest if intact.

Any excavation operations for the Waterfront Red Car Line/California Coastal Trail that reach underlying deposits of older Quaternary Alluvium or the San Pedro Sand have the potential to temporarily unearth and permanently destroy sensitive paleontological resources.

Impact Determination

The geologic assessment and literature review demonstrate that excavation in association with development of the proposed Project has the potential to impact significant nonrenewable fossil resources. Excavation into undisturbed geologic deposits underlying the proposed project area, which include Quaternary alluvium, Pleistocene-age marine deposits of Palos Verdes Sand, and Pleistocene-age offshore marine deposits of San Pedro Sand, would potentially impact fossil resources. Construction of the proposed Project would result in significant impacts because of the potential to damage or destroy significant nonrenewable fossil resources.

Mitigation Measures

MM CR-6: Develop a Program to Mitigate Impacts on Nonrenewable Paleontologic Resources prior to Excavation or Construction of any Proposed Project Components.

This mitigation program will be conducted by a qualified vertebrate paleontologist and will be consistent with the provisions of CEQA, as well as the proposed guidelines of the Society of Vertebrate Paleontology. This program will include, but not be limited to:

1. Assessment of site-specific excavation plans to determine areas that will be designated for paleontological monitoring during initial ground disturbance.
2. Development of monitoring protocols for these designated areas. Areas consisting of artificial fill materials will not require monitoring. Paleontologic monitors qualified to Society of Vertebrate Paleontology standards will be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced if some of the potentially fossiliferous units described herein are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources.
3. Preparation of all recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils are essential in order to fully mitigate adverse impacts on the resources.
4. Identification and curation of all specimens into an established, accredited museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance (Scott and Springer 2003). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts on significant paleontologic resources is not considered complete until such curation into an established museum repository has been fully completed and documented.
5. Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate lead agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts on paleontologic resources to a level less than significant.

Residual Impacts

Implementation of mitigation measure MM CR-6 by a qualified vertebrate paleontologist would reduce impacts to less-than-significant levels.

Impact CR-5: The proposed Project would not result in a substantial adverse change in the significance of an historical resource, involving demolition, relocation, conversion, rehabilitation, alteration, or other construction that reduces the integrity or significance of important resources on the site or in the vicinity.

The following four properties are within the proposed Project's Area of Potential Effects (APE) that are listed in or determined eligible for the NRHP, the CRHR, and the Los Angeles Historic-Cultural Monument List.

- **Masonic Temple, 221–227 N. Avalon Boulevard, HCM No. 342**, **listed on the CRHR**. The proposed Project includes street and sidewalk landscaping along Avalon Boulevard. This new sidewalk landscaping could slightly obscure the primary east elevation of the building, but no impact would occur.
- **Bekins Storage Facilities, 245 N. Fires Avenue, CRHR eligible under Criterion 3.** The proposed Project includes street and sidewalk landscaping on the north and primary east elevation, and a railroad screen along the southeast elevation. The new street sidewalk landscaping, and railroad screen, may slightly obscure building elevations, but no impact would occur.
- **College of Engineering and Oceaneering, 272 S. Fries Avenue, HCM eligible.** The proposed Project includes landscaping and green lawn to be placed north of the building. No impact would occur.
- **Wilmington Iron Works Building, 432 West C Street, CRHR eligible under Criterion 1.** The proposed Project includes street and sidewalk landscaping along C Street and Lagoon Avenue. This new sidewalk landscaping could slightly obscure the west and north elevations of the building, but no impact would occur.

As discussed in the Methodology section, a rehabilitation project that follows the Secretary of the Interior's *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* or the Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (Weeks and Grimmer 1995) would be considered as mitigated to a level of less than significant. As part of the proposed Project, the Bekins Storage buildings would undergo rehabilitation in accordance with the Secretary of the Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*. While exact details of the rehabilitation are still being deliberated, rehabilitation consistent with these standards and guidelines would assure a significant impact would not occur from the rehabilitation process.

To accommodate the Avalon Boulevard alignment, the street would be straightened to a north–south axis into parcels with existing buildings. The straightening of Avalon Boulevard would require the demolition of three buildings, located in the Avalon Development District, that were found to be 50 years of age or older (listed in Table 3.4-7).

Table 3.4-7. Historical Resources Determined Not to Be Significant by the Lead Agency that Meet the 50-Year Age Criteria for Evaluation and Are Proposed for Demolition.

Address	*APN*	*Year Built*	*Recommendation*
133 N. Avalon Boulevard	7440-066-011	1947	Not eligible for CRHR under Criterion 3, and not eligible under Criteria 1 or 2, as identified by research and local historical society.
131 N. Avalon Boulevard	7440-006-012	1954	Not eligible for CRHR under Criterion 3, and not eligible under Criteria 1 or 2, as identified by research and local historical society.
115 N. Avalon Boulevard	7440-006-015	1957	Not eligible for CRHR under Criterion 3, and not eligible under Criteria 1 or 2, as identified by research and local historical society.

These structures were evaluated under the CRHR criteria by a professional architectural historian for potential eligibility under Criterion 3, which is defined as a building having distinctive architectural design characteristics, a unique construction type, that represents the work of a master, or that possesses high artistic value. For identifying resources under Criterion 1, which is defined as a building having significance because of its association with an important event, an oral interview with Hank and Jane Osterhoudt, curators of the Wilmington Historical Society, was conducted. For association with an important person (Criterion 2), building permits were reviewed, data searched within the California Index, and an oral interview with the Osterhoudts was conducted on May 14, 2008. They reported that they were unaware of any associations with important persons in regards to the three resources located along the 100 N. block of Avalon Boulevard.

No other additional research was conducted to identify potential historical resources under Criteria 1 or 2. These three buildings were found to be ineligible for CRHR consideration as historically significant resources, as discussed below.

133 N. Avalon Boulevard

The building located at 133 N. Avalon Boulevard is a one-story commercial facility, rectangular in plan. It was designed in a minimal-traditional style and is simplistic in plan. The building has a flat roof, and the elevations contain a stucco finish with a belt course located below the roof line. The primary façade, which faces east, features a wooden garage door and a picture window in a wood frame. There is an off-center inset entryway that provides primary access into the building through what appears to be a replaced door. To the north of the entrance on the primary elevation there are two smaller one-over-one double-hung wood-frame windows.

This building has undergone alterations that include refinishing with stucco and replacement of its primary entrance. It does not rise to the level of historical significance because it does not possess a distinctive architectural design characteristic or unique construction type, nor does it represent the work of a master or possess high artistic value under Criterion 3 of the California Register. Furthermore, this building is not associated with any persons or events that would qualify for listing in the California Register under Criteria 1 or 2.

131 N. Avalon Boulevard

The two buildings located at 131 N. Avalon Boulevard are one-story commercial facilities, rectangular in plan. The buildings are almost identical in their minimalist design and have been refinished in stucco. The primary façades, which face east, contain original casement windows in wood frames and a wood door, which has been replaced on the southern building. The northern building contains one-over-one double-hung wood frame windows. Both buildings feature a projecting cornice line that is located on all of the elevations below the flat roof. Circular vents are positioned below the cornice line and are located on all elevations.

These buildings have undergone alterations that include refinishing with stucco and replacement of primary entrances. They do not rise to the level of historical significance because they do not possess a distinctive architectural design characteristic or unique construction type, nor do they represent the work of a master or possess high artistic value under Criterion 3 of the California Register. Furthermore, the buildings are not associated with any persons or events that would qualify for listing in the California Register under Criteria 1 or 2.

115 N. Avalon Boulevard

The building located at 115 North Avalon Boulevard is a one-story commercial facility, rectangular in plan. The building is set back from the street, where it faces east. It contains a stucco finish and a flat roof, with a projecting roof line above the primary façade that has a series of slightly protruding vertical metal bands. The primary façade consists of a primary entrance that is accessed via a concrete step and covered from the cornice line protrusion. The door appears to be replaced and surrounded by concrete. It is flanked to the south on the main elevation by a band of projecting windows, below which is a garden wall composed of field stone. An elevation clad in field stone is to the north of the off-center entrance. The property line is bounded by a tall metal fence and there is asphalt between the subject building and Avalon Boulevard.

This building has undergone alterations that include the field stone cladding and a replaced primary entrance. It does not rise to the level of historical significance because it does not possess a distinctive architectural design characteristic or unique construction type, nor does it represent the work of a master or possess high artistic value under Criterion 3 of the California Register. Furthermore, this building is not associated with any persons or events that would qualify for listing in the California Register under Criteria 1 or 2.

Impact Determination

The proposed Project would not result in significant direct impacts on the following historical resources because the new development would be approximately 300 feet from the historical resources, and would not alter in an adverse manner those physical characteristics that convey their historical significance.

- Harbor Generating Station, 161 N. Island Avenue
- Masonic Temple, 221–227 N. Avalon Boulevard, HCM No. 342
- Bekins Storage Facilities, 245 N. Fires Avenue and 312–316 W. C Street, CRHR eligible under Criteria 3
- Wilmington Iron Works Building, 432 West C Street, HCM eligible.
- National Polytechnic College of Engineering and Oceaneering, 272 S. Fries Avenue, HCM eligible.

The proposed Project would result in less-than-significant indirect impacts on the following resources; however, the proposed Project does not materially alter in an adverse manner those physical characteristics that convey these historical resources' significance and that justify their eligibility for inclusion in the CRHR and HCM Lists:

- Masonic Temple, 221–227 N. Avalon Boulevard, HCM No. 342
- Bekins Storage Facilities, 245 N. Fires Avenue and 312–316 W. C Street, CRHR eligible under Criterion 3
- Wilmington Iron Works Building, 432 West C Street, HCM eligible

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.4.4.3.2 Summary of Impact determinations

Table 3.4-8 summarizes the impact determinations of the proposed Project related to Cultural Resources, as described in the detailed discussion in Section 3.4.4.3.1. Identified potential impacts may be based on Federal, State, or City of Los Angeles significance criteria, Port criteria, and the scientific judgment of the report preparers.

For each type of potential impact, the table describes the impact and impact determinations, describes any applicable mitigation measures, and notes the residual

impacts (i.e., the impact remaining after mitigation). Impacts, whether significant or not, are included in this table.

Table 3.4-8. Summary Matrix of Potential Impacts and Mitigation Measures for Cultural Resources Associated with the Proposed Project

Environmental Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.4 Cultural Resources			
CR-1: Construction of the proposed Project would not disturb, damage, or degrade a known prehistoric and/or historical archaeological resource resulting in a reduction of its integrity or significance as an important resource.	Significant	**MM CR-1: Conduct Future Cultural Resources Studies along the Waterfront Red Car Line** The analysis of cultural resources along the Waterfront Red Car Line is in the program level of analysis. Archival research indicates that archaeological resources may be located within the Waterfront Red Car Line proposed project area. According to the records search, **t**wo prehistoric sites (CA-LAn-150 and CA-LAn-283) are located adjacent to the proposed Waterfront Red Car Line location and one archaeological site, CA-LAn-2135H, is located less than ⅛th of a mile from the proposed approximate alignment. In addition, archival and historic map research has indicated the potential for subsurface archaeological deposits associated with the early development of Wilmington within the Avalon Development District and the Waterfront Red Car Line. Therefore, the LAHD will ensure that, prior to final design approval for affected parcels, a qualified archaeologist will be retained to perform additional Phase I level archaeological surveys and research to determine the potential for prehistoric and historical archaeological deposits within these portions of the proposed	Less than significant

Environmental Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
		project area in accordance with professional standards and guidelines. **MM CR-2: Incorporate the Tracks into the Design Plan** The proposed Project will incorporate the Pacific Electric Railway (PERy) tracks into the project design in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Weeks and Grimmer 1995). A substantial portion of the track will be preserved in place, which may include compatible alterations consistent with original PERy practice and intent. Examples of such alternations include raising or lowering track elevation to maintain its relationship to adjacent grade or removing or relocating sections to make repairs, fill in gaps, or to realign the public right-of-way. Where it is determined portions of the track will be reconnected, rail bonding shall be repaired and trackwork will be executed by an experienced railway construction contractor. Portions of the track where in place preservation is not feasible, such as the track within the Waterfront Red Car Line and California Coastal Trail alignment, will be statically incorporated into the Railroad Green Park landscape and hardscape design by a qualified landscape architect so as to memorialize the historical significance of the PERy. Any	

Environmental Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
		portion of the track not incorporated into the park design will be preserved for reuse in a storage facility determined suitable for long-term preservation. **MM CR-3: Develop and Implement Historical Resources Treatment Plan Prior to Demolition and/or Ground Disturbing Activities** Disturbance of these archaeological deposits would be considered a significant impact under CEQA, which would require mitigation. Avoidance and/or preservation in place is the preferred mitigation for archaeological deposits. However, when this is not possible, the excavation of archaeological deposits to recover the data they contain is also appropriate (Section 15126.4 (b)(3)). Such data recovery excavation requires careful planning in the form of a Treatment Plan. Prior to any ground-disturbing activities and/or demolition, a treatment plan would be developed and implemented. This document would address areas where potentially significant historical archaeological deposits are likely to be located within the proposed Commercial portion of the proposed project area. The treatment plan would also include methods for: (1) archaeological monitoring during demolition of existing buildings, (2) subsurface testing after demolition, and (3) data recovery of archaeological deposits. A detailed historic context that clearly demonstrates the themes under which any identified subsurface deposits would be determined significant	

Environmental Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
		would be included in the document as well as anticipated artifact types, artifact analysis, report writing, repatriation of human remains and associated grave goods, and curation. Implementation of Mitigation MM CR-3 would reduce potential impacts on archaeological resources associated with the Commercial portion of the proposed project to less-than-significant levels. **MM CR-4: Develop an Archaeological and/or Native American Research Design and Treatment Plan** The Phase I historical resources study (ICF Jones & Stokes 2008) has identified a low potential for historical archaeological deposits associated with a Civil War-era Government Depot within a portion of the Wilmington Waterfront District. In addition, the Phase I historical resources study identified a low potential for prehistoric archaeological deposits associated with CA-LAN-150 and CA-LAN-283. However, because there is some potential for ground-disturbing activities to impact potentially CRHR and/or NRHP-eligible historical archaeological deposits, the following steps will be taken prior to any ground-disturbing activities: ■ A research design and treatment plan will be generated that would address areas where potentially significant archaeological deposits are likely to be located within this portion of the project area and clearly demonstrates the themes under which any deposits would be determined	

Environmental Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
		significant. ■ LAHD will require at least one pre-field meeting with environmental management staff, project engineers, construction contractors, and construction inspectors to discuss protocols and procedures related to treatment of identified archaeological resources. ■ A qualified archaeologist shall monitor all ground-disturbing activities in the vicinity of the Government Depot within the Wilmington Waterfront District portion of the project area. The qualified archaeological monitor will have demonstrated knowledge of, and experience with the treatment of historical archaeological resources. ■ A qualified archaeologist and Native American monitor will monitor all ground-disturbing activities within the vicinity of CA-LAn-150 and CA-LAn-283 along the California Coastal Trail portion of the proposed project area. The qualified archaeologist will have demonstrated knowledge of, and experience with, the treatment of prehistoric archaeological resources. ■ Due to potentially hazardous soil conditions associated with the DWP facility (as included in the project description), a safety plan will be generated in conjunction with the LAHD	

Environmental Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
		that addresses all issues associated with contamination and remediation. It is further recommended that the qualified archaeological monitor also be 40-hour Hazwoper certified. ■ In the event that subsurface deposits are identified during monitoring, ground disturbing activities will halt within 100 feet of the find to allow the qualified archaeologist to assess the find(s) and determine if treatment of the resource(s) is required.	
CR-2: Construction of the proposed Project would not disturb, damage, or degrade an unknown prehistoric and/or historical archaeological resource resulting in a reduction of its integrity or significance as an important resource.	Significant	**MM CR-1, MM CR-3, MM CR-4** and **MM CR-5: Stop Work if Previously Unidentified Resources Are Encountered during Ground Disturbing Activities** In the event that any artifact or an unusual amount of bone, shell, or nonnative stone is encountered during construction, work will be immediately stopped and relocated to another area. The contractor will stop construction within 100 feet of the exposed resource until a qualified archaeologist can be retained by the Port to evaluate the find (see 36 CFR 800.11.1 and CCR, Title 14, Section 15064.5(f)). Examples of such cultural materials might include concentrations of ground stone tools such as mortars, bowls, pestles, and manos; chipped stone tools such as projectile points or choppers; flakes of stone not consistent with the immediate geology such as obsidian or fused shale; historic trash pits containing bottles and/or	Less than significant

Environmental Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
		ceramics; or structural remains. If the resources are found to be significant, they will be avoided or will be mitigated consistent with SHPO Guidelines. All construction equipment operators will attend a preconstruction meeting presented by a professional archaeologist retained by the Port that will review types of cultural resources and artifacts that would be considered potentially significant, to ensure operator recognition of these materials during construction. Prior to beginning construction, the Port will meet with applicable Native American Groups, including the Gabrieliño/Tongva Tribal Council to identify areas of concern. In addition to monitoring, a treatment plan will be developed in conjunction with the Native American Groups to establish the proper way of extracting and handling all artifacts in the event of an archaeological discovery.	
CR-3: Construction of the proposed Project would not disturb, damage, or degrade unknown human remains.	Significant	Implement **MM CR-1, MM CR-3, MM CR-4,** and **MM CR-5**	Less than significant
CR-4: The proposed Project would not result in the permanent loss of, or loss of access to, a paleontological resource of regional or statewide significance.	Significant	**MM CR-6: Develop a Program to Mitigate Impacts on Nonrenewable Paleontologic Resources prior to Excavation or Construction of any Proposed Project Components** This mitigation program will be conducted by a qualified vertebrate paleontologist and will be consistent with the provisions of CEQA, as well as the proposed guidelines of the Society of Vertebrate Paleontology. This program will include, but not be limited to:	Less than significant

Environmental Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
		1. Assessment of site-specific excavation plans to determine areas that will be designated for paleontological monitoring during initial ground disturbance. 2. Development of monitoring protocols for these designated areas. Areas consisting of artificial fill materials will not require monitoring. Paleontologic monitors qualified to Society of Vertebrate Paleontology standards will be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Monitoring may be reduced if some of the potentially fossiliferous units described herein are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources. 3. Preparation of all recovered specimens to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates. Preparation and stabilization of all recovered fossils are essential in order to fully mitigate adverse impacts on the resources. 4. Identification and curation of all specimens into an established, accredited	

Environmental Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
		museum repository with permanent retrievable paleontologic storage. These procedures are also essential steps in effective paleontologic mitigation and CEQA compliance (Scott and Springer 2003). The paleontologist must have a written repository agreement in hand prior to the initiation of mitigation activities. Mitigation of adverse impacts on significant paleontologic resources is not considered complete until such curation into an established museum repository has been fully completed and documented. 5. Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate lead agency along with confirmation of the curation of recovered specimens into an established, accredited museum repository, will signify completion of the program to mitigate impacts on paleontologic resources to a level less than significant.	
CR-5: The proposed Project would not result in a substantial adverse change in the significance of an historical resource, involving demolition, relocation, conversion, rehabilitation, alteration, or other construction that reduces the integrity or significance of important resources on the site or in the vicinity.	Less than significant	No mitigation is required	Less than significant

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3.4.4.4 Mitigation Monitoring

Table 3.4-9. Mitigation Monitoring for Cultural Resources

CR-1: Construction of the proposed Project would not disturb, damage, or degrade a known prehistoric and/or historical archaeological resource resulting in a reduction of its integrity or significance as an important resource..	
Mitigation Measure	**MM CR-1: Conduct Future Cultural Resources Studies along the Waterfront Red Car Line**
Timing	Prior to approval of the final map
Methodology	Require additional study for areas with a high sensitivity for archaeological resources
Responsible Parties	LAHD and contractor
Residual Impacts	Less than significant
Mitigation Measure	**MM CR-2: Incorporate the Tracks into the Design Plan**
Timing	Show in final design
Methodology	Incorporate historic tracks into the final design plan
Responsible Parties	LAHD and contractor
Residual Impacts	Less than significant
Mitigation Measure	**MM CR-3: Develop and Implement Historical Resources Treatment Plan Prior to Demolition and/or Ground Disturbing Activities**
Timing	Prior to any ground-disturbing activities
Methodology	Test for subsurface artifacts, develop a plan for treatment
Responsible Parties	LAHD, contractor, and consulting archaeologist
Residual Impacts	Less than significant
Mitigation Measure	**MM CR-4: Develop an Archaeological and/or Native American Research Design and Treatment Plan**
Timing	During any ground-disturbing activities in Vicinity of Government Depot Portion
Methodology	Monitor for subsurface artifacts
Responsible Parties	LAHD, contractor, and consulting archaeologist
Residual Impacts	Less than significant
CR-2: Construction of the proposed Project would not disturb, damage, or degrade an unknown prehistoric and/or historical archaeological resource resulting in a reduction of its integrity or significance as an important resource.	
Mitigation Measure	**MM CR-1** and **MM CR-5: Stop Work if Previously Unidentified Resources Are Encountered during Ground Disturbing Activities.**
Timing	During excavation if resources unearthed
Methodology	Stop work and implement treatment plan based on CR-1
Responsible Parties	LAHD, contractor, and monitoring archaeologist
Residual Impacts	Less than significant
CR-3: Construction of the proposed Project would not disturb, damage, or degrade unknown human remains.	
Mitigation Measure	Implement **MM CR-1, MM CR-3, MM CR-4, and MM CR-5.**
Timing	See above
Methodology	Monitor for human remains during construction
Responsible Parties	LAHD
Residual Impacts	Less than significant
CR-4: The proposed Project would not result in the permanent loss of, or loss of access to, a paleontological resource	

of regional or statewide significance.	
Mitigation Measure	**MM CR-6: Develop a Program to Mitigate Impacts on Nonrenewable Paleontologic Resources prior to Excavation or Construction of any Proposed Project Components.**
Timing	Prior to ground disturbing activities including excavation or construction
Methodology	Put a monitoring program into place and design a treatment plan if fossils are discovered
Responsible Parties	LAHD, contractor, and monitoring paleontologist
Residual Impacts	Less than significant

3.4.5 Significant Unavoidable Impacts

With the required mitigation, construction and operation of the proposed Project would not result in significant unavoidable impacts on cultural resources.