

7.3 CULTURAL RESOURCES

In accordance with California Energy Commission's (CEC) (1992, 1997, and 2006) regulations, this section describes the environmental effects of the construction and operation of the proposed project on cultural resources. Impacts are assessed for the 37-acre power plant site, construction laydown area, potable water line and access road corridor, and the proposed corridor for the natural gas pipeline right-of-way. Archaeological resources are discussed in further detail in the confidential technical report (URS, 2007) attached as Appendix K. Built environment resources are discussed in further detail in the confidential technical report (JRP, 2007) attached as Appendix K.

Cultural resources are defined as buildings, sites, structures, objects, or traditional cultural properties that may have historical, architectural, archaeological, cultural, or scientific importance.

The following sections document the efforts undertaken to determine whether cultural resources could be adversely affected by the implementation of the proposed project.

7.3.1 Affected Environment

A cultural resources survey of the proposed project site facility was completed. The State of California's Native American Heritage Commission (NAHC) was consulted, and Native American individuals identified by the NAHC were subsequently contacted. No significant cultural resources were identified within the proposed project's study area. The archaeological area of potential effects (APE) consists of the proposed power plant site and the offsite areas, where there will be new ground disturbing activity (Figure 7.3-1). The archaeological APE includes the footprint of all areas of ground disturbing activity.

The APE for historic and architectural (built environment) resources is shown on Figure 7.3-2. The architectural APE includes areas no less than ½ mile from the power plant site as well as the parcels that encompass these areas. The proposed aboveground linear features (transmission line) are located between four east-west running existing transmission lines (one row of steel towers on the south and two rows of wooden poles on the north, along with a second set of steel towers). Given this condition, the APE was not extended the additional minor distance to account for the transmission linear.

7.3.1.1 Natural Environment

The project is located in a portion of unincorporated Riverside County in southern California, approximately 8 miles north of the city of Palm Springs. The project is located in the northeastern portion of the Coachella Valley and is due east of the San Gorgonio Pass, which is formed between the base of the San Jacinto and San Bernardino Mountains.

Topographically, the San Gorgonio Pass area is characterized by narrow canyons, wide sandy flats, alluvial fans, and rocky outcrops. The proposed power plant site and associated facilities is located at approximately 1,000 feet above mean sea level (MSL), and is immediately adjacent to an ephemeral stream that flows through Garnet Wash and into the Whitewater River floodplain.

7.3.1.2 Prehistoric Background

The project area is localized within the northwestern limits of the Coachella Valley. The following paragraphs present an overview of the region's prehistoric chronology. The chronology has been refined further in those cases where reliable and academically accepted data have been collected. An overview of the prehistory of the Southern California region and the project area can be synthesized from Moratto (1984), Chartkoff and Chartkoff (1984), and Bean (1978). Local references specifically pertinent to the Project area also include Wilke (1978), Hooper (1920), and Bean (1972).

Earliest Evidence – Calico Hills

Some investigators have postulated hominid occupation in the California desert at Calico Hills, near Barstow, dating to the period between 200,000 to 500,000 Before Present (B.P.). Archaeologists have argued that lithics, which may be chopper/chopping tools, scrapers, blade cores, and blades/bladelets, are evidence of a very early human occupation at the site (e.g., Leakey et al., 1968, 1969, 1972; Schuiling, 1972, 1979). Moratto has indicated that the alleged “tools” appear to be naturally occurring ecofacts located in, and probably created by, the Yermo geologic formation (1984:41-48). No corroborative cultural or skeletal evidence of a similar age exists in the Americas.

The partial skeleton of “Los Angeles Man” was recovered near the Baldwin Hills area in the Los Angeles Basin. The remains had a fluorine content similar to that measured in imperial mammoth bones. The mammoth remains were located some 370 meters distant, but were within the same geological unit as the “Los Angeles Man” (Heizer and Cook, 1952; Moratto, 1984:53). Years later, the “Los Angeles Man” remains were dated, although only the cranium remained accessible, and the mammoth remains were not available (Dillon, 1990:6). The sample was small and produced a date (>23,600 B.P. UCLA, #1430) that was inconsistent with the earliest cultural evidence (circa 10,000 B.P.) from the Los Angeles Basin (cf. Chartkoff and Chartkoff, 1984:33-35; Moratto, 1984:53).

Saber-toothed cat bones from the Rancho La Brea tar pits with signs of “artificial” cut marks at oblique angles to the long axis were radiocarbon dated to $15,200 \pm 800$ B.P. (uncalibrated) (Moratto, 1984:54). However, contamination from asphaltum may have offset the radiocarbon date (Moratto, 1984:54). Also found in the Rancho La Brea tar pits, the “La Brea Woman” was recovered in association with a mano. The remains are assigned geologically to the Early Holocene and have a radiometric date of 9000 ± 80 B.P. (uncalibrated) (Berger, 1975; Dixon, 1999:130).

Early Holocene Period

The academic community generally accepts the “La Brea Woman” remains as the earliest confirmed paleo-indian evidence in the Los Angeles Basin. At 9000 ± 80 B.P. (uncalibrated) (Berger, 1975), this would make the “La Brea Woman” contemporaneous with the so-called “big game hunting tradition” found at that time across most of the North American continent (Willey, 1966:37-38; and cf. Dixon, 1999:45-89).

Early Holocene paleo-indian activities (circa 12,000 to 8,000 B.P.) within Southern California are substantiated, although there are relatively few occupational sites. The paleo-shoreline sites of Tulare Lake in the southern San Joaquin Valley have provided numerous diagnostic materials, including fluted projectile points (described as Clovis-like), scrapers, and chipped crescents (Moratto, 1984:81). The southern San Joaquin Valley fluted projectile points are associated with sites in the Mojave Desert and can be loosely classified into a Far Western Fluted Point Tradition, or simply, a Fluted Point Tradition (Riddell and Olsen, 1969; Moratto, 1984; Dixon, 1999).

Early Holocene finds are also typologically attributed to a Western Pluvial Lakes Tradition, often recognized as the Lake Mojave Stemmed Tradition, or simply the Stemmed Point Tradition (Moratto, 1984:90-96). In some areas, these finds appear coeval with the later development of the Fluted Point Tradition. These sites typically contain chipped stone crescents, graters, scrapers, choppers, perforators, and various fluted/stemmed points, and geographically appear along paleo-shorelines, piedmont zones of former grasslands, and in mountain pass areas associated with fossil lakes. Typically, the stemmed point tool kit also contains core/cobble tools, choppers, scraper plane tools, formed flake tools, crescents, and leaf-shaped ovate and lanceolate bifaces. Groundstones associated with these assemblages appear to have been more expedient and show evidence of variable use wear along both the edges and dorsal/ventral surfaces.

In Southern California, there are a number of isolated finds attributed to fluted point or stemmed point traditions. Although originally described by Bedwell (1970) as a subsistence-settlement pattern singularly adapted and focused on post-Pleistocene pluvial lakes, Great Basin investigations suggest a more complex response to changing environmental conditions. In Southern California, the Western Pluvial Lakes Tradition is culturally grouped into the San Dieguito Complex (Warren, 1967; Moratto, 1984).

Millingstone Period

In Southern California, the Millingstone Period, also called the Millingstone Culture, extends to at least 6,000 B.P. and probably as far back to 8,500 + B.P. (cf. Warren, 1968; Wallace, 1955). Hard seed processing became one of the major components of subsistence during this period. Overall, the economy was based on plant collecting, but was supplemented by fishing and hunting.

The Millingstone Horizon is typified by large, heavy ground stone milling tools such as deep basin metates and wedge-shaped manos, and large core/cobble choppers and scrapers. The portable manos and metates that characterize the Millingstone lithic assemblage were undoubtedly used as mobile processing equipment for collected plant materials. The reliance on this subsistence strategy and affiliated tools is further supported by the apparent scarcity of faunal remains at Millingstone sites. The flaked lithic tools trend toward a larger and cruder assemblage than the later periods. Projectile points and apparent hunting-type tools tend to be absent from Millingstone Culture assemblages. The so-called cogged stones, made by a characteristic pecking and grinding process, also appear in the Millingstone Horizon assemblages (Eberhart, 1961:361-370).

Millingstone Horizon sites are found from Santa Barbara to Los Angeles County, and into San Diego County, in both coastal and inland settings (Wallace, 1955; Leonard, 1971). Millingstone assemblage materials trend toward core/cobble tools and an abundance of ground stone implements (manos, metates), while projectile points tend to occur less frequently.

Intermediate Period

The Intermediate Period (Wallace, 1955) has also been called the “Hunting Period” or “Middle Horizon.” About 5,000 years ago, the Millingstone traditions, with their heavy reliance on vegetal food sources, began to gravitate more toward animal proteins and marine resources. Procurement of plants for caloric intake was not necessarily replaced in kind by game hunting, but rather the local Millingstone dietary regimen began to transition toward other/alternate resources. A higher percentage of projectile points and smaller chipped stone tools appear.

Late Prehistoric Period

Meighan (1954) originally characterized the Late Prehistoric Period in Southern California. The period probably began sometime around the B.C./A.D. transition, but probably expanded culturally around 500 A.D. with the introduction of the bow and arrow. The end of the period is recognized as the end of the 18th Century, when full implementation of the Spanish mission system took effect on the native Californian populations.

Certain indicators such as diagnostic shell beads and finely worked projectile points help identify many Late Prehistoric sites in Southern California, mainly near the coast, although many of the shells beads found their way inland through trade.

Prehistory of the Project Area

Between approximately 8,000 and 1,500 B.P., the stone tool assemblage derived directly from—and in many locations, appears quite similar to—the aforementioned stemmed point tradition (Meighan, 1959). However, there is an apparent increase in the presence of groundstone tools. Well-worn metates and manos suggest an increased dietary reliance on acorns, seeds, and other processed plant resources, and the dart and atlatl appear as projectile technology. In the project area, the primary cultural tradition attributed to this period derives from the Pinto Basin, at the eastern limits of present-day Joshua Tree National Monument. The Pinto Basin report, prepared by Elizabeth Campbell (Campbell, 1931; Campbell and Campbell, 1935), details the Pinto Basin Complex assemblage that includes leaf- and stemmed-shaped points, awls, leaf-shaped knives, choppers, hammerstones, small flat millings, and manos (Moratto, 1984:349-351). These typical Pinto Basin sites tend to occur near now-dried river courses, suggesting that at least some sites could be quite early.

It is assumed that material culture patterns observed and recorded in the ethnohistoric period emerged and developed during the span from 2,500 to 1,500 years B.P. The archaeological record for the Late Period reflects increasing cultural complexities. Heavily used mortars and pestles indicate intensive acorn and seed processing. Bow and arrow technology appears and suggests a gradual change in hunting strategies and resource exploitation, possibly in conjunction with a shift in the local climate. Large occupation sites, representing semi-permanent and permanent villages, appear. Artifacts attributed to this period include: freshwater and marine shell ornaments, ornaments and utilitarian implements of steatite and bone, obsidian from eastern California sources, and basketry. Projectile point typologies develop over time from Rose Spring, to Desert Side-notched and Cottonwood Triangular points.

By approximately 900 B.P., pottery appears in local Southern Californian archaeological assemblages. Large globular water vessels known as *ollas* were typical in the project area during the Late Period. These vessels, used to store water or to transport water across the desert, had narrow necks to keep the water from rapidly evaporating from the *olla* (Bean and Bourgeault, 1989:52-53). The arrival of pottery in the Coachella Valley, and the Southern California region, is attributed largely to the so-called Yuman culture. The presence of pottery in the Coachella Valley indicates cultural connections with Native American communities from the Southwest, where both utilitarian and ceremonial pottery flourished during the Late Period. In the project area, pottery such as Lower Colorado Buff Wares and Tizon Wares are common, but wares directly resultant from trade with Anasazi and Hohokam cultures also appear (Moratto, 1984:358-359).

7.3.1.3 Ethnographic Background

The proposed project is within the traditional ethnohistoric territory of the Cahuilla (Figure 7.3-3), although the Serrano occasionally ranged through parts of the San Gorgonio Pass and Coachella Valley (Kroeber, 1908:30-38). During the later ethnohistoric period, Chemehuevi also traversed areas of the Coachella Valley (Kroeber, 1908:30-38). The primary ethnographic references on the Cahuilla include Borrows (1900), Kroeber (1908), Hooper (1920), Bean (1972; 1978), Bean and Saubel (1962), and James (1960). The brief ethnography presented in this section has been synthesized from these references.

As noted in the last section, anthropologists assume a continuous Cahuillian presence in the area that extends from the late prehistoric period (Bean, 1972; Bean, 1978, Moratto, 1984:343-47). Numerous living Cahuilla also confirm this cultural continuity, through story-telling traditions and living memory (Dozier, 1998). The Cahuilla speak a Takic language, which is a Shoshonean division of the Uto-Aztecan language family (Swanton, 1952:481-482). Native speakers were located from Beaumont, in Riverside County, to the Salton Sea (Lake Cahuilla), including Whitewater Canyon, and the San Jacinto and Santa Rosa Mountains (Seiler, 1977:3-4). Seiler estimated that by the late 1970s, no more than a dozen fluent native Cahuillian speakers remained (Seiler, 1977:4).

Bean notes that the name “Cahuilla” possibly has a Spanish origin, although it is more likely derived from the Cahuillian word *káwiya*, meaning master or boss (1978:575). The term Cahuilla is also used to identify Lake Cahuilla, now commonly recognized as the Salton Sea, which is within the traditional boundaries of the group. The Western or Gorgonio Pass Cahuilla, a subdivision of the Cahuilla group, have traditional cultural properties and village sites in the general project area. Essentially, the Gorgonio Pass Cahuilla lived throughout the proposed project area.

Although use of pottery extended into the ethnohistoric period, many of the traditional pot makers were gone by the 1930s. Katherine Siva Saubel noted that her grandmother and her contemporaries probably did not pass on the tradition before they died (Dozier, 1998:129). In a few areas, the pottery traditions did carry over, possibly because of story telling, living memory, and supporting ethnohistoric records. On the Santa Rosa Reservation, a native Cahuillian still makes traditional *ollas* (Dozier, 1998:130-131). This globular-shaped vessel, used primarily to carry and store water, is typical of the ethnohistoric and Late Prehistoric periods throughout the Mojave Desert.

The Morongo Indian Reservation, located to the west of the proposed CPV Sentinel Energy Project (CPVS) site, was established by the U.S. government in 1876. From the time of establishment, the Morongo reservation inhabitants were from either Cahuilla or Serrano (traditionally from the San Bernardino Mountains and the southern Mojave Desert) groups. Chemehuevi from the lower Colorado River area also came to the Morongo reservation after being displaced by Mojave-Chemehuevi group warfare.

The Agua Caliente Reservation, due south of Palm Springs, was established in 1896. This reservation was occupied primarily by various Native Americans of Cahuilla origin. The Agua Caliente Band of Cahuilla Indians (the Band) presently own and operate the popular spa and casino situated in downtown Palm Springs. The spa is situated on the hot springs once used by the Cahuilla during Late Prehistoric and ethnohistoric times.

Indeed, the Cahuilla still thrive in the Coachella Valley and have an active role in the Coachella Valley desert community. Recently, the Band reopened Tahquitz Canyon to the public. The picturesque canyon and associated waterfalls were closed to the public after a 1969 concert by the band Canned Heat. After the concert, the crowd proceeded to occupy and literally trash the canyon. After this episode, the tribe declared the canyon, which is situated on reservation lands, off limits to the public.

The canyon derives its named from “Tah-kwish,” a banished shaman who is said to dwell in the canyon, prey on souls, and cause general mayhem (Bean and Bourgeault, 1989:22). The falls and surrounding landscape were used as the setting for Shangri-La in the 1937 adventure film “Lost Horizons,” starring Ronald Coleman (Brazil, 2001). With its abundant fresh water source and commanding view of the Coachella Valley floor, the canyon was a typical geographic setting for the so-called Western Cahuilla (Bean, 1972:73-75). This Cahuilla group, also recognized as the Pass Cahuilla because their territory once extended through the San Gorgonio Pass, was the primary subdivision of Cahuilla in the Project area (James, 1960:37-51).

7.3.1.4 Historical Background

The sections below are synthesized from summaries by Schneider et al. (1992), and general public information of the Palm Springs area. Specific information about the history of Palm Springs was drawn from a webpage <http://palmsprings.com> on May 01, 2007 (Castello Cities Internet Network, Inc., 2007).

The San Gorgonio Pass/Coachella Valley region has been used by Europeans as an east-west transit route since at least the early 1800s. After 1815, the San Gorgonio Pass/Coachella Valley was the route of an annual caravan originating in Los Angeles to gather salt from the Salton Sink (Johnston, 1977:93-94; Patterson, 1987:B2). The first evidence of Spanish incursions into the San Gorgonio Pass area derives

from the so-called Romero expedition of the 1820s (Bean and Mason, 1962). Beginning in the 1820s, the Coco-Maricopa Trail was used as an inland mail route between Tucson and the San Gabriel Mission. The route was scouted in 1821, when Jose Cocomaricopa, leader of the Chiduma and Coco-Maricopa Native American bands on the eastern lower Colorado River, was commissioned by the Tucson military commandant to deliver mail to the San Gabriel Mission (Robinson, 1957:9; Johnston, 1977:91; Gunther, 1984:123). The route began by crossing the Colorado River near present-day Blythe. From there, it crossed over the mountains and the Salton Sink, through the Coachella Valley, through San Geronio Pass, and on to Mission San Gabriel (Robinson, 1957:9). This same route, with surviving segments documented as CA-RIV-53T, was used by the aforementioned Romero expeditions from 1823 to 1825.

In late 1853, Lt. John G. Park of the U.S. Corps of Topographical Engineers entered the Coachella Valley from San Geronio Pass. Park and his party were part of a team of surveyors sent by the United States government to survey and recommend the best railroad routes to the Pacific from the east. The expedition's geologist, William P. Blake, is credited with the discovery, naming, and first description of Ancient Lake Cahuilla, also known as Blake's Lake, The Salton Sink, or the Salton Sea (Gunther, 1984:19; Wilke, 1978; see also Blake, 1907, Laflin, 1995:4). Along the shores of the present day Lake Cahuilla, Blake noticed the high water and expansion marks of the ancient sea. Considering the deposits left behind on the rocks, the thousands of shells of old sea organisms, and the gradient sloping toward the Salton Sea, Blake made the assertion that this was indeed an ancient sea bottom. Using his barometer, Blake discovered that Lake Cahuilla was 271 feet below sea level at its lowest point (Laflin, 1995:4). Blake also provided the most complete early ethnohistoric descriptions of the Coachella Valley's Cahuilla natives (Wilke, 1978).

In January 1862, Powell Weaver, fur trader, prospector, and early San Geronio Pass pioneer, discovered gold on the Colorado River near present-day Ehrenberg, Arizona. Word of the discovery reached Sonora and California within a matter of weeks and the rush was on (Beattie, 1925:249; Johnston, 1977:50). Within the year, William Bradshaw had initiated an overland stage route to the Arizona placers, hauling passengers and mail to the newly established mining town of La Paz, Arizona. The route, known as the Bradshaw Trail, operated until the completion of the Southern Pacific Railroad in the late 1870s. Miners, traders, and settlers also referred to this route as the Road to La Paz. The trail has seen limited use since at least the time of the Park survey in 1853 (Beattie, 1925:257). Among the many stations along the route was Whitewater Point (also called White River Crossing), located at what is now called Windy Point, and situated 3 miles from Whitewater Ranch Station and 6 miles from Agua Caliente (now Palm Springs) (Beattie, 1925:255; Johnston, 1977:193; Gunther, 1984:571, 577).

A stagecoach stop was located at Whitewater Point, at a location which is now an off-road vehicle recreational area. The stage route operated until it was superseded in the late 1870s by the Southern Pacific Railroad (Beattie, 1925:255; Johnston, 1977:193; Gunther, 1984:571, 577). The first Southern Pacific train began a scheduled run from Los Angeles to Indian Wells (now Indio).

Eventually, public lands throughout the Coachella Valley were opened up for prospective settlers via the Desert Irrigation Act of 1882. Land was offered for \$1.25 per acre, under the provision that all applicants irrigate their desert lands with the abundant Coachella Valley well water. Odd numbered sections of land for 10 miles on each side of the tracks became the private property of Southern Pacific. Later, the even-numbered sections of land were given to the Cahuilla Indians, which created the checkerboard pattern of growth that is still evident in the Palm Springs area (Castello Cities Internet Network, Inc., 2007). Patrick H. Gale, the first recorded homesteader in the area, is credited with planting the first date trees. They were given to him by a Southern Pacific official, who had just returned from the Mediterranean (Presley, 1996:9).

The first permanent European settler was the Honorable Judge John Guthrie McCallum of San Francisco, who arrived with his family in 1884. Two years later, he purchased all the surrounding lands in the

vicinity from Southern Pacific and set about improving the water supply by constructing a \$60,000 aqueduct. Completion of the project made possible the rapid growth of fruit trees and alfalfa fields and led to the subsequent rich agricultural development of the Coachella Valley (Castello Cities Internet Network, Inc., 2007).

In 1886, Dr. Welwood Murray purchased a site from McCallum and built the first Palm Springs hotel, a 26-guest establishment. By the turn of the century, Palm Springs was becoming a thriving resort with more than ten buildings, a post office and many seasonal visitors (see www.palmsprings.com). Palm Springs was incorporated in April 1938, with an area of about 20 square miles, and a population of 2,500. This desert area contained a portion of the reservation for the Band. The checkerboard pattern of the Indian reservation was divided in 1959 into 123 different Indian allotments with certain lands retained by the tribe under the control of the Indian Tribal Council. Successive annexations brought the city to its current size of about 82 square miles and a permanent population of approximately 43,000 residents, which doubles in the winter months (Castello Cities Internet Network, Inc., 2007).

7.3.1.5 Built Environment Background

The project site is located east of San Gorgonio Pass at the north end of the Coachella Valley, north of the Salton Sea and between the two communities of Desert Hot Springs and Palm Springs. The area was slow to develop because of constant winds and lack of water. Eventually the dry climate became the reason for settlement. The first settlers came to ease problems with allergies, tuberculosis, and asthma. Later visitors came for the spas, sun, and springs. Today the area is largely a tourist/resort area. The themes of local development and the development of the electrical system in the area are addressed in the following sections.

Desert Hot Springs and Vicinity

The Coachella Valley is the northern end of Imperial Valley above the Salton Sea. It connects to the Santa Ana River Valley and Los Angeles through the San Gorgonio Pass. Settlers traveling to Los Angeles in the early nineteenth century followed a route established by Spanish explorer Juan Batista de Anza to the south of the valley. In 1862, a gold strike in La Paz, Arizona caused the Alexander Company, a subsidiary of Wells Fargo, to open a new route through San Gorgonio Pass. The route became known as the Bradshaw Trail (Brown, 1985). Southern Pacific Railroad used the route in 1875 when competition from the Acheson, Topeka and Santa Fe Railroad spurred them to begin work on a southern route connecting Los Angeles and New Orleans. The railroad required vast amounts of water to keep the steam engines running. The railroad built tanks and sunk wells to keep a supply of water available. A sufficient supply was not available until a well dug at the Walters station produced an artesian supply. The station became the basis for the town of Mecca, located to the southeast at the northern end of the Salton Sea (Nordland, 1978).

Despite the artesian well at Walters, there was not enough water to go around. Near Mecca, in what was then the center of the valley, dates became a profitable crop (Brown, 1985). The extension of the railroad also increased marketability of mid and lower Coachella Valley crops to major cities and larger towns, such as Los Angeles. By the 1890s, with the passage of the 1877 Desert Land Act, more settlers moved to the arid but sheltered lands of the valley. The act encouraged economic development through irrigation and cultivation of arid lands in the West. The increase in artisan wells and agriculture drew down the water level to the north, making settlement more difficult. Several attempts were made to increase the availability of water to the area. The California Development Company built an irrigation canal to bring Colorado River water into the Coachella Valley. In 1905, the California Development Company's works broke and the Colorado River flowed into the valley, creating the Salton Sea. It took two years of work, largely by the railroad, to repair the break and stop the flooding in the valley. The disaster ended any

hope of expanding the irrigation works further north into the Coachella Valley until the public works projects of the Great Depression (Brown, 1985).

Northern Coachella valley had to depend upon another of its natural resources, a network of springs. The earliest of these springs to be developed was Palm Springs, named for a hot spring surrounded by palm trees. It was initially located on an old stage road and was occasionally used as a camping site by Indians and emigrants. The Palm Springs area was later settled by John McCallum in 1884, who sought an arid location to ease his son's tuberculosis. His "Palm Valley" soon became a small agricultural venture to produce fruit to sell to the eastern markets. Grapes, figs, and apricots grew well and the expansion of the railroad led to a speculative land boom during the 1880s. Visitors arrived at Palm Springs from the Seven Palms station, now known as Garnet, located southeast of the project area (Brown, 1985). Many visitors, including famous ones, came for the healthful benefits of the dry air. During this time of speculation, a short line railroad was built from the proposed new town of Palmdale to the Southern Pacific line at Garnet. The town was never built and the rail line was abandoned. A ten-year drought in the 1890s stalled development and slowed visitation until the 1900s. As the area revived after the drought, it turned to its natural source of hot spring waters and appealed to those afflicted with throat or lung maladies (Bird, 1912). Much of the revival is accredited to Nellie Coffman, who established a "boarding house" in Palm Springs. Her inn at first served lung patients, and later wealthy vacationers. In the 1920s, Hollywood discovered Palm Springs and began using it for filming; by 1924, a paved road connected it with Banning (Brown, 1985). Palm Springs flourished as a retreat for Hollywood stars in the 1930s, which helped the town grow and stimulated development in other local communities.

One of the neighboring communities was Desert Hot Springs, located east and northeast of the project area. Cabot Yerxa, who discovered a hot spring while digging a well for his homestead, first settled the oasis of Desert Hot Springs in 1913. He left the area to serve in World War I and did not return until 1932, when he brought in land developer L.W. Coffee, who promoted the health benefits of the hot springs and desert weather (Brown, 1985). Coffee developed the town under the slogan "Where wealth in health greets you," emphasizing the benefit of the hot mineral water resorts. The town of Desert Hot Springs was established in 1940, with its first bath house opening in July 1941 (Coffee, 1949). Similar to Palm Springs, the small town grew based on its appeal as a health spa.

World War II resulted in the development of military bases across California. The Coachella Valley was not an exception. The army used the failing El Mirador resort as a hospital and acquired another 70 acres to create Torney General Hospital. It also developed the Desert Training Center between Indio and Palm Springs. At the training center, begun in 1942, troops practiced for combat in the desert and learned to operate tanks (Carr, 1989).

The end of the war resulted in renewed interest in Palm Springs and the Coachella Valley as a place to regain health. Injured veterans came to the hot springs to alleviate their ailments. Hollywood stars returned to their oases in the desert, expanding beyond Palm Springs into Desert Hot Springs. Viewed as a healthful retreat, many stars built their own ranchettes near established communities. Hollywood once again brought fame to the valley, and word-of-mouth promotion helped spread the benefits of soaking in the hot mineral water, resulting in continued health-based tourism (Hunt, 1997). A founding member of Desert Hot Springs, Aubrey Wardman, donated several acres of land for the Angel View Crippled Children Foundation, which was established in 1955 (Cooper, 1961). In 1950, the burgeoning town of Desert Hot Springs had 1,100 residents, which grew to 3,400 by 1962 (Ringwald, 1962).

The development of important infrastructure opened the valley to tourism. The All-American Canal, completed in 1948, brought Colorado River water to northern Coachella Valley farmers. In addition to expanded water resources, transportation improved. Highway 111 was originally paved between Palm Springs and Palm Desert in the 1920s, and was later extended to Indio in the 1930s. However, it was the paving of the main east-west highway that provided the link to Hollywood and the nation. The

completion of combined Highways 60, 70, and 99, running east from Los Angeles – later renamed Interstate 10 (I-10) – and Highway 111, branching down to Palm Springs, made the trip easier via paved roads (Evans, 1966). I-10 was fully paved in the 1950s. Improved transportation resulted in a boom in Desert Hot Springs development (Hunt, 1997). Also, the increased availability of air conditioning made the desert more inviting. The ability to enjoy the hot springs and then escape from the hot desert air into an air-conditioned room added to the resort quality of the desert communities (Moore, 1981). The resulting development increased interest in areas like that of the study area, outside of the resort communities. Valley View Ranchos, southwest of Devers substation, was subdivided in 1952. The subdivision contained thirty-two 5-acre lots. All but two were leased from the U.S. General Land Office by the September 5, 1952 survey date (Riverside County Assessor, 1952). By 1955, several homes were built in the area.

Development slowed in the 1970s as the energy crisis led to an economic downturn. The strong winds, an attribute of the less hospitable portions of the valley near the San Gorgonio Pass, were recognized in the late 1970s. Southern California Edison had begun monitoring wind speeds in the pass after transmission lines were blown over. The study revealed that the pass was one of the most consistently windy places on earth, with an average wind speed of 19.3 miles per hour. The company submitted a proposal to the Energy Research and Development Administration to establish a wind generation site. The ERDA and NASA conducted a project in Sandusky, Ohio, which was the model for the San Gorgonio Pass project (Taylor, 1976). While several experiments failed, today the area is one of three major sites for wind generation in the state.

The Coachella Valley remains a distinct area of southern California. Tourism is an important feature of the local economy, providing approximately 15 percent of the employment, with another 22 percent involved in retail trade. Between 1991 and 2005 the amusement sector, consisting of casinos and resorts, grew from approximately 4.4 percent to 6.9 percent of the valley's employment. Visitors have often chosen to make the valley their home following vacations, and today the community has a large retired population and growing health care sector (Husing, 2006).

Electrical Development in the Coachella Valley

The development of electrical service in the Coachella Valley involved several different companies, one entering the market from the north, a second from the south, and a third from within the valley.

In the north, the Nevada Power Mining and Milling Co. was founded on December 31, 1904 to provide mines in the region with inexpensive electricity. Engineers sent to find a mine site had located a creek above Bishop, California in the Owens Valley and recognized it as an opportunity to generate hydroelectricity. The first transmission line was completed 8 months later, supplying electricity to camps 125 miles away. The company soon developed four more plants along the creek. When mining began to decline, the company merged into the Southern Sierras Power Company and searched for new markets in southern California. In 1912 it built a transmission line to San Bernardino.

To the south, the development of Imperial Valley following the irrigation project of the California Development Company resulted in the formation of the Holton Power Company in 1905. Owner W.F. Holt needed additional financing, and in 1913 entered a contract with Southern Sierras Power Company to supply power to the Imperial Valley. The small Coachella Valley Ice and Electric Company, also owned by Holt, provided the link between the two systems (Myers, 1983).

Southern Sierras Power Company built a 55-kV transmission line from San Bernardino to Banning. The Coachella Valley Ice and Electric Company built the connection from Banning to El Centro to connect with the Holton system further south. Thus, the Coachella Valley was supplied inexpensive hydroelectric power from the system in 1914. Southern Sierras Power Company bought both Coachella Valley Ice and Electric and Holton Power Companies in 1916.

Over the next decades, Southern Sierras Power Company purchased smaller companies in San Bernardino and Riverside Counties and expanded into Mono, Inyo, and Kern Counties. However, its control of the entire Coachella Valley ended toward the end of the Great Depression. The Imperial Irrigation District decided to use Rural Electrification Administration loans to enter the electrical generation and distribution field in 1936. Despite massive marketing and recruitment campaigns, the two companies reached a stalemate by 1939. Southern Sierras Power Company continued to grow in other areas and became California Electric Company in 1941. The War Production Board halted competition in April 1942, and finally forced the California Electric Company to sell its Imperial Valley system. In exchange, the Imperial Irrigation District was not to challenge the company again (Myers, 1983). The northern end of the Coachella Valley remained in the California Electric Company service area.

California Electric Company was active in rural electrification and the development of Hoover Dam. By the 1950s, the company had tapped all the hydropower sites in its service area (San Bernardino Daily Sun, 1958). As a result, the company began a program of building steam generating power plants. The first plant was Highgrove in 1951, followed by San Bernardino (1956), Norton Air Force Base (1957), Cool Water Steam Plant (1961), Barstow (1959), and a joint project in Yuma, Arizona (Klure, 2005; San Bernardino Daily Sun, 1958). California Electric Power Company was merged with Southern California Edison on January 1, 1964. The complex merger retained many of California Electric's employees, and the President of California Electric, Fred Oldendorf, became the vice-president of the merged company (San Bernardino Daily Sun, 1964).

Increased concern for the environment and oil shortages stalled new plant development in the 1970s. Southern California Edison began experiments with solar and wind technologies as well as developing new hydroelectric sites. Increased demand has also been addressed through increasing interconnections. Power sharing with the Colombia River plants in Oregon has been made possible through the Pacific Intertie direct current line that runs the length of California.

Deregulation in the 1980s has changed how power is generated and distributed. Deregulation often led to separation of the two processes. SCE's strategy was to sell off portions of its generating system. In 1996, it sold off three of its steam plants in the inland empire (Diamond, 1996). Today, it operates as a power distributor covering most of southern California from San Onofre north to Santa Barbara along the Pacific coast, widening to include territory from Blythe in the Mojave Desert to past Bishop on the eastern side of the Sierra Nevada.

General History of Electrical Transmission in California

California's rugged terrain and often scattered settlement made the transmission of power an important factor in development. The problem was that first electrical systems popularized by Edison were direct current (DC) and had a limited transmission distance (Williams, 1997).

The nature of this problem and its solution led to the great electrical battle between Westinghouse, building systems around high voltage alternating current (AC), and Edison, building systems around DC electricity. Westinghouse acquired patents for transformers from other inventors and a very important patent for poly-phase alternating current generators and motors from Tesla. The system his engineers devised used transformers to increase or "step up" the voltage. At this higher voltage, electricity could be transmitted longer distances with less loss. At the receiving end, another transformer would decrease or "step down" the voltage to a level suitable for use.

Former Brush Electric Company engineer Almerian Decker introduced California to AC. Decker came to California in 1891 for his health and became involved in a southern California electrical project. Decker and his partners, Cyrus G. Baldwin and Henry Harbison Sinclair, opened the San Antonio Light and Power Company in 1892, using Westinghouse technology to transmit power over 14 miles to Pomona. Decker then went on to design Mill Creek, the first commercial American three phase power plant. In

1895 the Folsom power plant, designed by James Lighthipe of General Electric, supplied power to Sacramento, 22 miles away. These projects were all completed before the eastern states recognized the value of long distance transmission demonstrated by the Niagara project (Williams, 1997).

California electrical companies, especially Eugene J. de Sabla and John Martin's companies, continued to increase transmission voltages and distances. Bay Counties Power Company, owned by de Sabla and Martin, broke records in 1901 when they transmitted power generated in the Sierra-Nevada to San Francisco. Throughout the early 20th century, California companies developed the hydropower resources of the mountains and transmitted the power across the state.

The shortage of oil and increasing demands for electricity during World War I challenged electrical companies to make more energy available without building more plants. The California State Railroad Commission and the Committee on Petroleum of the State Council on Defense suggested in 1917 that the companies integrate their transmission lines. These integrated lines would allow unused power from one source to be used elsewhere where the generating capacity was not as large. This idea of interconnected generating pools was adapted in the northeast and neighboring states following the California model (Williams, 1997).

The post-World War II era was a time of rapid growth in Southern California. Housing and populations swelled along with the business and industrial concerns. Fueled by wartime defense industries, southern California grew rapidly, spreading out into suburbs and into areas outside the original city limits of the communities around Los Angeles and San Diego. Transmission lines and substations were built to distribute electricity through the new communities.

Devers Substation

Devers substation was built along SCE's transmission line, which once connected its generating abilities in the west with the entire Coachella Valley and Imperial Valley. When the Imperial Irrigation District took over generation and distribution for the Imperial Valley, SCE, California Electric Company retained the northern end of the Coachella Valley. Devers substation was built around 1971. The substation has six local lines of 110 to 161 kV serving the western valley and providing the only link to the Mojave Desert; two larger lines of 220 to 87 kV serving the eastern Coachella Valley and six similar lines connecting to the San Bernardino Valley; and one large 345 to 500 kV line connecting Arizona to the Los Angeles area.

The energy crisis of the 1970s forced the government and energy companies to investigate alternate energies. NASA began the experiments with wind in 1974 with an experimental facility at the Lewis Research Center in Cleveland (Williams, 1997). In 1975, SCE noticed the possibilities of wind generation near Palm Springs. Working with the Department of Energy, SCE monitored wind speeds in the area from 1976 to 1978. In 1978, SCE established a wind energy center near the Devers substation. The largest experimental wind turbine in the nation, invented by Charles Schachle, was attached to the commercial grid at this location in 1980. A second, less successful, Darrieus turbine was installed in 1981. As a result of these experiments, SCE established wind parks in which private developers would own and construct wind turbines with research and technical support from SCE. The developers, or "wind farmers," could then connect and sell the generated power to SCE. Today, several "wind farms" surround Devers substation (Myers, 1983). Devers substation was expanded between 1981 and 1989 to add an additional yard and heliport. The yard was built with additional space to the northwest, which was filled with equipment between 2005 and 2007. No remnants remain of the wind turbine experiments.

7.3.1.6 Resources Inventory

The methods used to inventory the study area for cultural resources consisted of archival research, Native American consultation, and a pedestrian reconnaissance of the study area.

Archival Research

A California Historical Resources Information System (CHRIS) rapid response records search was conducted at the EIC at the Department of Anthropology, University of California, Riverside, by EIC staff on February 16, 2007 (RS #3914). The purpose of this records search was to identify all previously conducted archaeological surveys and studies, as well as all previously recorded archaeological (including both prehistoric and historic) sites within the project study area. The records search encompassed the proposed project site and the project components, with two different search radii; the first search radius was one mile around the project site and the proposed laydown area, the second search radius was a ¼ mile around the linear features right-of-ways. The results of the records search are provided in Appendix K. In addition to the historical resources files, the following publications, manuscripts, or correspondence were consulted:

- The National Register of Historic Places;
- The Office of Historic Preservation (OHP) Archaeological Determinations of Eligibility – Records entered into the OHP computer file, received quarterly (2006); and
- The OHP Directory of Historic Properties – Records entered into the OHP computer file of historic resources, received quarterly (2006).

Based on the information obtained in this records search, there are no known cultural (prehistoric or historic) resources identified within either the archaeological or the architectural APEs (Figure 7.3-1 and Figure 7.3-2). There are three known cultural resources (one historic property and two prehistoric isolates) that have been identified within the search radii. The records search revealed 23 previously conducted surveys within the search radii, six of which fall within one of the project components (Figure 7.3-4). These studies did not identify any cultural resources located within the boundaries of the project components.

Native American Consultation

Prior to the beginning of fieldwork, Ms. Debbie Pilas-Treadway of the NAHC was contacted on February 13, 2007, to request a records search of the Sacred Lands File and a list of appropriate Native American contacts (individuals and/or organizations) that may have knowledge of cultural resources. Mr. Dave Singleton with the NAHC responded the next day. According to the NAHC, the search was negative for the presence of Native American cultural resources in the project APEs.

Copies of the NAHC request letter, NAHC response letter, mailing list, and consultation letter, are provided in Appendix K (URS, 2007).

The NAHC provided a list of 13 individuals/organizations that may have knowledge of cultural resources in the project APE. Letters describing the project and a map depicting the power plant site, the offsite linears, and the temporary construction area were sent to these individuals on February 16, 2007. The letter inquired whether the individuals/organizations had any concerns regarding the project, or wished to provide input regarding cultural resources in the project APEs.

Three responses have been received as of the date this document was published. Mr. Richard M. Begay with the Band, called Ms. Christine K. Michalczuk, URS Archaeologist, on February 27, 2007. Mr. Begay stated that the Band had no specific information regarding cultural resources in the project area, but they did have comments/ mitigation measures they would like URS to consider in its permitting process. These mitigation measures are included in measures presented in Section 7.3.4. A letter was mailed to Ms. Michalczuk outlining the Band's concerns and requests. There are no additional comments or questions at this time.

Follow-up phone calls were made by URS Archaeologist, Mr. Matthew Armstrong, on March 28, 2007, to the thirteen individuals/organizations to inquire whether they had any additional comments, questions or concerns. Phone messages were left with individuals who could not be reached at that time. Mr. Armstrong was able to speak with three individuals. Their responses are discussed below.

Initially, Mr. Armstrong was able to speak with the secretary for the Chairperson of the Twenty-Nine Palms Band of Mission Indians. She mentioned that there might be a written response to the letter, and would call back to confirm whether or not a written response had been prepared. The secretary returned Mr. Armstrong's call on March 28, 2007, to notify URS that a letter would be placed in the mail. This letter would state that the tribal government believes that though cultural resources may be present within the project site, the Twenty-Nine Palms Band of Mission Indians have no specific comments at this time. The secretary also requested that URS keep them apprised of any resources discovered during the course of the project. The letter was received and there were no additional comments or questions at this time.

On March 28, 2007, Mr. Armstrong spoke with John Gomez, the Cultural Resources Manager of the Ramona Band of Mission Indians, regarding the letter mailed out in February. Mr. Gomez needed to review the letter and wished to talk with Mr. Armstrong after he had a chance to look over the letter. Mr. Gomez returned Mr. Armstrong's call later that day, stating that the Ramona Band of Mission Indians would defer to the Band. He also requested a copy of the cultural resources report when it was completed. There are no additional comments or questions at this time.

Mr. Armstrong called Mr. John A. James to discuss the above-mentioned letter and was directed to speak to Ms. Judy Stapp, the Cultural Affairs Director for the Cabazon Band of Mission Indians. She informed Mr. Armstrong that as the project is located near Palm Springs, the Cabazon of Mission Indians of Mission Indians would defer to the Band. There are no additional comments or questions at this time.

Any future responses received after the date of this report will be directly forwarded to the Applicant.

Archaeological Field Reconnaissance

The initial pedestrian survey was conducted by URS Archaeologists Ms. Christine Michalczuk and Mr. Leroy Laurie, from March 5 to 7, 2007. The secondary field survey was conducted on May 15, 2007 by URS Archaeologists Mr. Brian Hatoff and Mr. Dustin Kay. The entire project APE was inspected by walking 15-meter transect intervals over all accessible project components. All areas of exposed soil were inspected for the presence of cultural resources. Surface visibility was generally excellent throughout the project APE (>95 percent), with little to no limitations. During the survey, when a new resource was encountered, a Universal Transverse Mercator reading was taken using a Garmin Global Positioning System (GPS) unit. When the transect was completed, the site noted during that transect was revisited, thoroughly assessed, and recorded. Figure 7.3-5 illustrates the project components and the areas surveyed for archaeological resources.

As required by the revised CEC regulations, an additional 200-foot-wide buffer radius around the project site and the laydown area was surveyed, as well as a 50-foot-wide buffer radius on each side the right of way for each project linear (i.e. the various transmission corridors), where accessible. In general, there were no access issues for the various project components, though portions of the buffer radii for various segments of the project components were not accessible. These inaccessible portions were along Dillon Road, portions of an unnamed dirt road, and an portion east of the project site. Observations were made from the fenceline into the areas not accessible by foot. No cultural resources were noted in these areas.

Two archaeological resources (two historic sites) were identified within the study area examined during the course of the current investigation. The newly identified archaeological resources are detailed below:

- **Site #1** – This resource consists of the remnants of a collapsed/demolished concrete building with an associated concrete stove and pad. The site is located along an unnamed dirt road between Karen and Oasis Roads, approximately 0.8 mile south of Dillon Road. The structure is 15 feet by 11 feet with maximum remaining wall height of 3 feet. The surrounding area is littered with various modern debris and a few scattered cans. No temporally diagnostic artifacts were noted. This resource does not appear to bear any association with any other features or objects.
- **Site #2** – This resource is a low density historic debris scatter located 0.3 mile north of Site #1 along the same unnamed dirt road. The site consists of approximately 50+ cans and glass fragments over a 50-m by 40-m area. A few of the tin cans appear to be “sanitary cans,” which were produced after 1900. The site appears to have no depth, as evidenced through trowel scrapes. Although isolated cans are located throughout the area, the majority of artifacts are limited to two discrete concentrations. It should be noted that modern debris is also scattered in and around this resource. This resource does not appear to bear any association with any other features or objects.

Built Environment Research and Field Reconnaissance

JRP Historical Consulting, LLC (JRP) examined standard sources of information that list and identify known and potential historical resources to determine whether any buildings, structures, objects, districts, or sites had been previously recorded or evaluated in or near the project study area. JRP reviewed the National Register of Historic Places (NRHP) (2007), California Register of Historical Resources (CRHR), California Historical Landmarks (1996), and California Points of Historical Interest (1992). The house at 61701 Smoketree Road named “Warner Homestead” of North Palm Springs, was determined only eligible for local listing during a historical survey. This property is more than a 1/2 mile southwest of the project area and will not be affected. Neither the location of the proposed project nor the properties within a 1/2 mile have been previously identified as potential historic resources, nor do they appear to have been previously evaluated for listing in the NRHP or CRHR.

JRP conducted fieldwork at Desert Hot Springs on February 21 through 23, and March 8, 2007. During this time, JRP recorded and evaluated 12 properties within a 1/2 mile of the proposed project on Department of Parks and Recreation (DPR) 523 forms (JRP, 2007, Appendix K). JRP conducted research at a variety of libraries and repositories, including California State Library, Sacramento; Shields Library, University of California, Davis; Rivera Library and Science Library, University of California, Riverside; Pioneer Historical Society of Riverside; Desert Hot Springs Public Library, Desert Hot Springs; Riverside Assessors Office, Riverside; Desert Hot Springs Historical Society; and Palm Springs Historical Society. JRP then prepared a historic context to address pertinent themes of the settlement of the Coachella Valley and electrical development, and evaluated the properties under CRHR criteria on the DPR 523 form. The detailed descriptions and historical evaluations of the properties are summarized in JRP’s technical report provided in Appendix K (JRP, 2007). A brief description of each resource is detailed below:

- **Devers Substation** – This resource is located in the southwest corner of the subsection on three parcels. The substation takes up approximately 140 acres. The first portion was built on approximately 40 acres on the southwest corner of Section 4. Transmission lines enter and leave the original substation to the south. The substation consists of metal transmission line supports with A-frame sides, similar to a swing set.
- **62575 Powerline Road** – This property includes a 1,416-square-foot residence on a five-acre lot. The residence has an irregular T-plan with an overhanging shed roof of composite shingles. A courtyard with a pool is located on the other side of the building. The property also includes a spa along the east side of the main residence.

- **APN 668-140-002** – This five-acre property has a 576-square-foot one-story residence. The rectangular building has a low overhanging side gable roof and is clad in stucco.
- **62700 16th Avenue** – The residence and associated buildings on this 5-acre lot are surrounded by tall bushes and a wall. The 1,278-square-foot residence appears to be a low side gabled square or rectangle.
- **62750 16th Avenue** – This five-acre lot has a 1,149-square-foot residence. The residence is a one-story square that appears to be constructed in three parts.
- **62800 16th Avenue** – This five-acre lot contains a 1,385-square-foot residence. The irregularly shaped house has a protrusion near one end.
- **15275 Karen Road** – This 20-acre lot contains a 1,569-square-foot residence and numerous windmills. The one story house has an irregular plan.
- **APN 668-220-012** – Real estate records state that this 2.5-acre property contains a 192-square-foot residence. A larger structure now exists. Described as a rectangular house with a side gable roof faces south, it also has a full porch supported by posts.
- **16365 Diablo Street** – This five-acre lot includes a 904-square-foot residence. The house has a low front gable roof with a solar panel.
- **16535 Diablo Street** – This 1.97-acre lot has a 566-square-foot house. The house is rectangular with a side gable roof.
- **61948 Smoke Tree Road** – This property contains a 725-square-foot residence on a 4.12-acre lot. The stucco sided building has a low gravel roof.
- **APN 668-140-008** – This 1.5-acre lot contains a 480-square-foot residence. The one story house has a rectangular plan.

7.3.2 Environmental Consequences

7.3.2.1 Federal Regulations

Four evaluation criteria to determine a resource's eligibility to the NRHP, in accordance with the regulations outlined in 36 CFR 800, are identified at 36 CFR 60.4. To determine site significance through application of National Register criteria, several levels of potential significance that reflect different (although not necessarily mutually exclusive) values must be considered. As provided in 36 CFR 60.4:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- (a) That are associated with events that have made a significant contribution to the broad patterns of our history,
- (b) That are associated with the lives of persons significant in our past,
- (c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic

values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or

- (d) That have yielded, or may be likely to yield, information important in prehistory or history.

These evaluation criteria are used to help determine what properties should be considered for protection from destruction or impairment resulting from project-related activities (36 CFR 60.2). Please see section 7.3.5 for additional information on these regulations.

7.3.2.2 State Regulations

In considering impact significance under the California Environmental Quality Act (CEQA), the significance of the resource itself must first be determined. At the state level, consideration of significance as an “important archaeological resource” is measured by cultural resource provisions considered under CEQA Sections 15064.5 and 15126.4, and the draft criteria regarding resource eligibility to the CRHR.

Generally under CEQA, a historical resource (these include built-environment historic and prehistoric archaeological resources) is considered significant if it meets the criteria for listing on the CRHR. These criteria are set forth in CEQA Section 15064.5 and defined as any resource that:

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

Section 15064.5 of CEQA also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under Public Resources Code (PRC) Section 5097.98. Please see section 7.3.5 for additional information on these regulations.

7.3.2.3 Archaeological Resources Evaluation

Though two archaeological resources (two historic sites) were identified within the proposed project’s archaeological APE, the two archaeological sites do not appear to be “significant” resources, i.e., they do not qualify as historic properties or historic resources, as defined by the NRHP or CEQA. The archaeological resources are located in an environment that has been heavily disturbed by construction activities associated with the wind farms, off-road vehicular traffic, and especially illegal dumping. No further information can be obtained from these resources. Therefore, there would be no effect to significant archaeological resources with project implementation.

It is possible that with proposed project implementation, previously undiscovered archaeological resources may be exposed during construction activities. Unless properly evaluated and managed, this could result in a significant impact to cultural resources. It should also be noted, however, that most of the site has been subjected to extensive grading and development, thereby reducing the likelihood that

intact cultural deposits exist within the study area. Mitigation measures presented in Section 7.3.4 further reduces the potential impacts to archaeological resources to less-than-significant levels.

7.3.2.4 Built Environment Resources Evaluation

None of the buildings or structures in the architectural APE of the proposed project appear to meet the criteria for listing in the NRHP or the CRHR. All buildings or structures in the APE around the project location more than 50 years old received evaluation. None of the more recently constructed buildings appear to meet the exacting standards of exceptional significance. Therefore, none of the buildings in the architectural APE appear to be significant historic properties subject to Section 106, nor do they appear to be historical resources for the purposes of CEQA.

All the houses more than 50 years old in the survey area, except one, were built in the 1950s. They do not appear significant to the development of the Coachella Valley (Criteria A or 1). They are typical of homes built during the housing boom of the 1950s and are not a part of a cohesive or planned development. The one home built in 1932 also does not appear significant under Criteria A or 1. While an early building on the floor of the valley, it did not encourage others to settle in the area.

Under Criteria B or 2, the buildings do not appear to be associated with any historically significant people. Research on the area between Desert Hot Springs and San Geronio Pass did not reveal any individuals associated with the area. Significant individuals have been associated with the development of the resort communities along the edges of the valley, and agriculture to the south. However, the nature of the valley floor prevented significant individuals from involving themselves with it or living on it.

Under Criteria C or 3, the residences do not possess any distinctive characteristics or high artistic value that would render them eligible under these criteria. Rather they are examples of minimal traditional, contemporary, and ranch, common but relatively insignificant styles of architecture used in the mid-twentieth century. None of the buildings are works of a master.

The integrity of these homes has been impacted by the construction of wind farms in the area beginning in the 1980s. In the case of 15275 Karen Avenue, the wind farm was built on the same parcel with rows of windmills flanking the house. This development has affected the integrity of the setting, feeling, and association of these desert floor houses. Individual homes have seen alterations affecting design, materials, and workmanship. Notable is 62750 16th Avenue, which appears to have several additions.

As noted above, the wind farms have developed in the last 25 years and are a dominant feature of the landscape. While the Devers substation was the site of wind generation experiments and the largest Schachle turbine in the nation, only company literature discusses the site. In addition, the main research for developing the turbine occurred in Sandusky, Ohio. Therefore, the substation and the experimental turbines do not qualify under Consideration G. They have not achieved significance within this time.

This property has been evaluated in accordance with Section 106 of the National Historic Preservation Act (NHPA), using criteria described in 36 CFR 30; and in accordance with Section 15064.5(a) (2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code. It does not appear to be a historical resource for the purposes of CEQA.

A full evaluation of these properties is located in Appendix K (JRP, 2007).

7.3.3 Cumulative Impacts

The following cumulative projects have been identified as being within the immediate vicinity of the proposed project:

- Indian Avenue/I-10 Interchange Project: This proposed project involves reconstruction of the I-10 Freeway/Indian Avenue interchange and is located south of the proposed project. This reconstruction is expected to occur in 2008.
- Dillon Wind Farm: Installation of 45 wind turbines located in three separate areas, including (1) an area west of Devers substation, (2) an area 2,000 feet east of the project site, and (3) an area 4,500 feet to the southeast of the project site. The Environmental Impact Report for this project was recently certified by Riverside County.
- Wind Energy Conservation System (WECS) 20 Permit Project: This project would consist of 8 new GE 1.5 MW wind turbine generators in the existing WECS 20 Wind Park. This site is located approximately 0.5 mile west of State Route 62 and 2 miles north of I-10; about 2 miles northwest of the proposed project site.
- Green Path Project: The main feature of the Green Path project is a new 100-mile, 500kV line planned to extend from the Devers-Palo Verde transmission corridor north to a new Upland substation in the northeastern sector of Los Angeles Department of Water and Power (LADWP) service territory. Planned construction is 2007 to 2009; planned in-service date is 2010.
- Oasis Annexation: Mixed-use development (including residential) on 155 acres located approximately 3.2 miles northeast of the project site.
- Alpine Group Development: Mixed-use development (including schools and high-density residential) on 160 acres located 1 mile northwest of the project site. The City Desert of Hot Springs is expecting to annex and approve this project.
- Palmwood Specific Plan and Outparcels Development: Mixed-use development (including 1,853 residential units) on 1,926-acres located 6.5 miles north of the site.

Given that project implementation would not result in effects to known important cultural resources, it is unlikely that the proposed project could have significant cumulative effects to cultural resources. As noted above, however, it is possible that previously undiscovered archaeological resources may be exposed during construction activities. Unless properly evaluated and managed, this could result in a significant cumulative effect to such inadvertently exposed resources. However, the project's contribution to cumulative impacts would be less than significant with implementation of mitigation measures identified below in Section 7.3.4.

7.3.4 Mitigation Measures

Measures to ensure avoidance of cultural resources within the APE, and measures to avoid indirect impacts to nearby cultural resources, are described below. The mitigation measures and procedures described below would apply to any new recorded cultural resources in the study area (i.e., during construction) that could be recommended as or would have the potential to be significant, and such recommendations are concurred with by the CEC and State Historic Preservation Officer (SHPO), regardless of facility component. With implementation of the measures listed below, no significant unavoidable impacts to known cultural resources are expected to occur.

CUL-1. Avoidance. Proposed project facilities will be located at the greatest possible distance from any newly identified cultural resources found to be eligible for inclusion on the CRHR and/or the NRHP. As needed, an archaeologist will accompany the project engineer to the field to demarcate cultural resource boundaries on the ground and to ensure that proposed project component placement will not impinge

upon the potentially significant cultural resource. Routes of any access roads of other temporary use areas that must be built or graded that are located outside of areas previously surveyed for cultural resources will be subjected to archaeological survey prior to construction. If a potentially significant cultural resource is discovered, the route/ temporary use area will be modified to avoid that resource. If there are not feasible means to avoid the resource, the cultural resource will be tested; if found significant, the measures for mitigation described below will be implemented. These will be done in consultation with the CEC.

CUL-2. Physical Demarcation and Protection. In instances where a project facility must be placed within 100 feet of a newly identified cultural resource found to be eligible for inclusion on the CRHR and/or the NRHP, the cultural resource will be temporarily fenced or otherwise demarcated on the ground, and the area will be designated environmentally sensitive. Construction equipment will be directed away from the cultural resource and construction personnel will be directed to avoid entering the area. Where cultural resource boundaries are unknown, the protected area will include a buffer zone with a 100-foot radius. In some cases, additional archaeological work may be required to demarcate the boundaries of the cultural resource in order to ascertain whether the cultural resource can be avoided.

CUL-3. Crew Education. Prior to beginning of construction near any newly identified sensitive cultural resource (i.e. potentially significant), the construction crew will be informed of the value of the resource involved and of the regulatory protections afforded to that resource. The crew will also be informed of procedures relating to designated culturally sensitive areas, and cautioned not to drive into these areas or to park or operate construction equipment in these areas. The crew will be cautioned not to collect artifacts, and asked to inform a construction supervisor in the event that cultural remains are uncovered.

CUL-4. Archaeological Monitoring. All initial grading or excavation within 100 feet of any newly identified potentially significant resource that may have a subsurface component will be monitored by an archaeologist. If subsurface materials are uncovered, construction work in the immediate vicinity will be halted and the emergency discovery procedures described below will be implemented.

CUL-5. Native American Monitoring. In order to ensure participation by interested members of the Native American community, it is recommended that a Native American monitor be present during archaeological cultural resource testing for a newly recorded resource and/or data recovery operations at archaeological cultural resources that appear to have a prehistoric or ethnographic component. The monitor will be retained either directly by the project Applicant, or through the subconsultant conducting the actual fieldwork.

CUL-6. Formal Compliance with CEQA Section 15064.5 and 15126.4 and Section 106 of the NHPA. In the event that a newly identified potentially significant resource cannot be avoided during the placement of any project component, further archaeological work will be undertaken as appropriate to assess the importance/significance of the resource prior to the project implementation.

CUL-7. Mitigation for Resource. If unanticipated resources are discovered during construction, they will be addressed under the procedures set forth at CEQA Section 15064.5. If possible, the resource will be avoided first through design modification, or second, through protective measures as described above. If the resource cannot be avoided, the project archaeologist will consult with the CEC and SHPO with regard to resource significance. If it is determined that the resource is significant, then measures to mitigate impacts will be devised in consultation with the CEC and SHPO and will be carried out by the Applicant.

7.3.5 Laws, Ordinances, Regulations, and Standards

The proposed project will be constructed and operated in accordance with all LORS applicable to cultural resources. Federal, state, and local LORS applicable to cultural resources are discussed below and summarized in Table 7.3-1.

7.3.5.1 Federal

Federal laws, procedures, and policies affecting the treatment of cultural resources include the Antiquities Act of 1906, Public Law 59-209, Executive Order 11593, Section 106 of the NHPA of 1966 (Public Law 89-665), as amended, Public Law 93-291, the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190), and the Federal Land Policy Management Act (Public Law 94-94-579), regulations 36 CFR 60 and 36 CFR 800.

For management purposes, a cultural resource must be recommended as either eligible or not eligible to the NRHP to determine effect and the need for mitigation of effect. If the property (cultural resource) is determined eligible, then a determination of effect, as per 36 CFR 800, must be provided. If the property is identified as not eligible, then no determination of effect or mitigation measures is necessary. Recommendations are reviewed and approved by the SHPO and the Advisory Council on Historic Preservation (ACHP).

The NHPA requires all federal agencies to assess the effects of any agency-sponsored undertaking on cultural resources. The federal agency is responsible for project compliance with Section 106 of the NHPA and its implementing regulations, set forth by the ACHP at 36 CFR 800.

Four evaluation criteria to determine a resource's eligibility to the NRHP, in accordance with the regulations outlined in 36 CFR 800, are identified at 36 CFR 60.4. To determine site significance through application of National Register criteria, several levels of potential significance that reflect different (although not necessarily mutually exclusive) values must be considered. As provided in 36 CFR 60.4:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- (a) That are associated with events that have made a significant contribution to the broad patterns of our history,
- (b) That are associated with the lives of persons significant in our past,
- (c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
- (d) That have yielded, or may be likely to yield, information important in prehistory or history.

These evaluation criteria are used to help determine what properties should be considered for protection from destruction or impairment resulting from project-related activities (36 CFR 60.2).

The criteria for eligibility to the CRHR are very similar to those that qualify a property for the NRHP, which is the significance assessment tool used under the NHPA. Essentially, a property that is eligible for the NRHP is also eligible to the CRHR. All resources encountered within the APE during a federally

supported or sponsored project must be evaluated for significance vis-à-vis Section 106 of the NHPA, set forth at 36 CFR 800. If a resource is found significant, then it should be subject to avoidance through alterations in project design. In the event that avoidance of significant historic properties is not possible, appropriate mitigation in accordance with Section 106 of the NHPA, and in conjunction with the lead agency, will be conducted.

7.3.5.2 State

The basic goal of the CEQA is to develop and maintain a high-quality environment now and in the future. The CEQA Guidelines provide a framework for the analysis of impacts to Archaeological Resources.

In considering impact significance under CEQA, the significance of the resource itself must first be determined. At the state level, consideration of significance as an “important archaeological resource” is measured by cultural resource provisions considered under CEQA Sections 15064.5 and 15126.4, and the draft criteria regarding resource eligibility to the CRHR.

Under CEQA, a historical resource (these include built-environment historic and prehistoric archaeological resources) is generally considered significant if it meets the criteria for listing on the CRHR. These criteria are set forth in CEQA Section 15064.5 and defined as any resource that:

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

Section 15064.5 of CEQA also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under PRC Section 5097.98.

Impacts to “unique archaeological resources” are also considered under CEQA, as described under PRC 21083.2. A unique archaeological resource implies an archaeological artifact, object, or site about which it can be clearly demonstrated that – without merely adding to the current body of knowledge – there is a high probability that it meets one of the following criteria:

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

A nonunique archaeological resource indicates an archaeological artifact, object, or site that does not meet the above criteria. Impacts to nonunique archaeological resources and resources which do not qualify for listing on the CRHR receive no further consideration under CEQA.

Under CEQA Appendix G, a project would potentially have significant impacts if it would cause substantial adverse change in the significance of one of the following:

1. A historical resource (i.e., a cultural resource eligible for the CRHR),
2. An archaeological resource (defined as a unique archaeological resource which does not meet CRHR criteria),
3. A unique paleontological resource or unique geologic feature (i.e., where the project would directly or indirectly destroy a site), or
4. Human remains (i.e., where the project would disturb or destroy burials).

A nonunique archaeological or paleontological resource is given no further consideration other than the simple recording of its existence by the CEQA lead agency.

Potential impacts to identified cultural resources need only be considered if the resource is an “important” or “unique archaeological resource” under the provisions of CEQA Sections 15064.5 and 15126.4 and the eligibility criteria. If a resource cannot be avoided, then the resource must be examined vis-à-vis the provisions of CEQA Sections 15064.5 and 15126.4 and of the eligibility criteria as an “important” or “unique archaeological resource.” In many cases, determination of a resource’s eligibility can only be made through extensive research and archaeological testing. No mitigation measures are required unless previously undiscovered cultural resources are detected. Mitigation under CEQA must address impacts to the values for which a cultural resource is considered important. To mitigate adequately, it must therefore be determined what elements make a site eligible for the CRHR. The first line of mitigation is complete avoidance, when feasible, of all cultural resources.

7.3.5.3 Local

On the local level, compliance with the Riverside County General Plan (RCGP) (2003) is also necessary. According to the RCGP, cultural resources “are important for scientific, historic, and/or religious reasons to cultures, communities, groups or individuals.” There are seven specific policies that are intended to ensure the preservation of cultural, historical, archaeological, paleontological, geological, and educational resources in Riverside County. In general, compliance with CEQA and/or Section 106, along with additional involvement with the Native American community, satisfies the County’s concerns for cultural resources.

Additionally, the County of Riverside is currently considering a requirement that all consultants who will serve as principal investigators, and will certify cultural resources reports for project within Riverside County, participate in a Cultural Sensitivity Training Program, directed by the Riverside County Board.

According to the City’s General Plan (2007), their policies promote “the historic qualities of the City in order to complement tourism and specialty shopping which contribute to the local economy.” These policies are centered on the preservation of the history of Palm Springs and enhance the quality of life for those living in Palm Springs. Investigation and analysis as required under CEQA, along with additional involvement with the Native American community, satisfies the City’s requirements for compliance.

7.3.6 Involved Agencies and Agency Contacts

Both the City of Palm Springs and Riverside County were contacted regarding information about the General Plans for each agency. Unless consultation with SHPO becomes necessary, the NAHC is the only agency involved with the management of cultural resources for the proposed project. Appendix K (URS, 2007) contains the correspondence with the NAHC concerning this particular project.

Specific contacts for the NAHC, the City of Palm Springs, and Riverside County are listed below, should the need for additional consultation arise.

Involved Agencies and Agency Contacts: Cultural Resources			
Issue	Agency/Address	Contact/Title	Telephone
Native American traditional cultural properties	NAHC 915 Capitol Mall, Room 364 Sacramento, CA 95814	Ms. Debbie Pilas-Treadway Associate Government Program Analyst	(916) 653-4038
Preservation of cultural resources	City of Palm Springs 3200 E Tahquitz Canyon Way Palm Springs, CA 92262	Craig A. Ewing, AICP Director of Planning Services Craig.Ewing@palmsprings-ca.gov	(760) 323-8269
Preservation of cultural resources	Riverside County Administrative Center (Indio) 82675 Highway 111 Indio, CA 92201	Jay Olivas Planner jolivas@rctlma.org	(760) 863-7579

7.3.7 Permits Required and Permit Schedule

Other than certification from the CEC, no state, federal, or local permits are required by the proposed project for the management of cultural resources.

As described previously, consultation with SHPO and ACHP would be required under Section 106 if federal involvement is to occur and significant cultural resources were to be affected by the proposed project.

7.3.8 References

Bailey, H.P.

- 1966 *Climate of Southern California* (California Natural History Guide). Berkeley: University of California Press.

Bean, L.J.

- 1972 *Mukat's People: The Cahuilla Indians of Southern California*. Berkeley: University of California Press.
- 1978 Cahuilla. In *Handbook of North American Indians, Volume 8 California*. R.F. Heizer (ed.): 575-587. Washington DC: Smithsonian Institute Press.

Bean, L.J., and L.J. Bourgeault.

- 1989 *The Cahuilla*. New York: Chelsea House Publishers.

Bean, L.J., and W.M. Mason

- 1962 *Temalpakh (from the Earth): Cahuilla Indian Knowledge and Usage of Plants*. Banning: Malki Museum Press.

Bean, L.J., and K.S. Saubel

- 1962 Diaries and Accounts of the Romero Expeditions in Arizona and California, 1823-1826. Los Angeles: W. Ritchie Press.

Beattie, G.W.

- 1925 *Development of Travel Between Southern Arizona and Los Angeles as it was Related to the San Bernardino Valley*. Annual publication of the Historical Society of Southern California.

Bedwell, Stephen F.

- 1970 Prehistory and Environment of the Pluvial Fort Rock Lake Area of South Central Oregon. Unpublished Ph.D. dissertation. University of Oregon, Eugene.
- 1973 *Fort Rock Basin: Prehistory and Environment*. Eugene: University of Oregon Press.

Bennyhoff, James A. and Richard E. Hughes

- 1987 Shell Bead and Exchange Networks Between California and the Western Basin. *Anthropological Papers of the American Museum of Natural History*. New York: American Museum of Natural History.

Berger, R.

- 1975 Advances and Results in Radiocarbon Dating: Early Man in North America. *World Archaeology* 7: 174-184.

Bird, Jessica

- 1912 "The San Gorgonio Pass," In *History of Riverside County*. Los Angeles: Historic Record Company: 215-217.

Blake, W.P.

- 1907 *Lake Cahuilla, the Ancient Lake of the Colorado Desert*. National Geographic Magazine.

Borrows, D.P.

- 1900 *The Ethno-botany of the Coahuilla Indians of Southern California*. Chicago: University of Chicago Press.

Bouscaren, Stephen and Daniel McCarthy

- 1984 An Archaeological Assessment of the Proposed Devers-Valley 500 kV Transmission Line and Corridor and the Proposed Valley-Auld-Skylark 115 kV T/L Corridor, Riverside County, California. Document No. 1082217. Submitted to private. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Brazil, E.

- 2001 Mistreated Shangri-La Finds New Horizons. *San Francisco Chronicle*, Sunday, March 11: T4-T5.

Brown, James T.

- 1985 *Harvest of the Sun: An Illustrated History of Riverside County*. Northridge, California: Windsor Publications, Inc.

California Energy Commission (CEC)

- 1992 Instructions to the California Energy Commission Staff for the Review of and Information Requirements for an Application for Certification. California Energy Commission, Energy Facilities Siting and Environmental Protection Division, Sacramento.
- 1997 Rules of Practice and Procedure and Proposed Plant Certification. California Energy Commission, Sacramento.
- 2006 Rules of Practice and Procedure and Power Plant Site Certification Regulations Revisions, 04-SIT-2, December 14, 2006.

Campbell, Elizabeth W.C.

- 1931 An Archaeological Survey of the Twenty-nine Palms Region. *Southwest Museum Papers* 7. Los Angeles.

Campbell, Elizabeth W.C. and William H. Campbell

- 1935 The Pinto Basin Site. *Southwest Museum Papers* 9. Los Angeles.

Campbell, Elizabeth W. Crozer, William H. Campbell, Ernst Antevs, Charles A. Amsden, Joseph A Barbieri, and Francis D. Bode

- 1937 The Archaeology of Pleistocene Lake Mohave: A Symposium. *Southwest Museum Papers* 11. Los Angeles.

Carr, Jim

- 1989 *Palm Springs and the Coachella Valley*. Helena, MT: American Geographic Publishing.

Castello Cities Internet Network, Inc.

- 2007 *Palm Springs Hotels: Golf: Attractions: Real Estate: Palm Springs.com*, <http://palmsprings.com/>, accessed May 1, 2007.

Chartkoff, J. and K.K. Chartkoff

- 1984 *The Archaeology of California*. Stanford: Stanford University Press.

Coffee, L.W.

- 1949 "Desert Hot Springs." Los Angeles: L.W. Coffee.

Cooper, Charles W.

- 1961 *The A. Wardman Story*. Whittier, California: Whittier College.

Cowan, Richard and Kurt Wallof

- 1977 Interim Report – Fieldwork and Data Analysis: Cultural Resource Survey of the Proposed Southern California Edison Palo Verde-Devers 500 kV Power Transmission Line. Document No. 1080278. Submitted to private. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Diamond, Michael

- 1996 “Edison to Sell Three Inland Empire Power Plants,” *San Bernardino Daily Sun*. November 23, 1996.

Dillon, B.

- 1990 *Archaeological Record Search and Impact Evaluation for the Los Angeles Wastewater Program Management (NOS-NCOS) Project, Los Angeles, California*. Prepared for Dr. Janet Fahey, James M. Montgomery, Consulting Engineers, 250 N. Madison Avenue, P.O. Box 7009, Pasadena, CA 91109-7009.

Dixon, E.J.

- 1999 *Bones, Boats and Bison: Archeology and the First Colonization of Western America*. Albuquerque: University of New Mexico Press.

Dodge, William A.

- 1978a An Informal Report on a Abandoned Structure Located in the NW Corner of Section 4, T3S, R4E, on SCE-Owned Land North of the Devers Substation. Document No. 1080424. Submitted to Southern California Edison. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.
- 1978b An Archaeological Survey for the Proposed SCE Wind Turbine Project. Document No. 1080427. Submitted to Southern California Edison. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Dozier, D.

- 1998 *The Heart is Fire*. Berkeley: Heyday Books.

Duffield, Anne, and Gale Broeker

- 1990 I-10/Hwy. 62 and Devers Hill Land Exchange Parcels Sections 4 and 18, T3S, R4E, SBBM. Document No. 1083326. Submitted to private. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Eberhart, H.

- 1961 The cogged stones of Southern California. *American Antiquity* 26(3): 361-370.

Evans, Carolyn (ed.)

- 1966 *Remembrances of the High Desert and the communities of Morongo Valley Palm Wells, Yucca Valley, Pioneertown, Landers, Joshua Tree and Twentynine Palms, Volume 2*. Yucca Valley, CA: Artcraft Print Shop.

Foster, John M., R.S. Greenwood

- 1985 Class I Cultural Resources Investigation for the Pacific Texas Pipeline Project – State of California. Document No. 1082504. Submitted to private. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Greenwood, Roberta S.

- 1975 Paleontological, Archaeological, Historical, and Cultural Resources, West Coast-Midwest pipeline Project, Long Beach to Colorado River. Document No. 1080200. Submitted to private. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Gunther, J.D.

- 1984 *Riverside County, California, Place Names: Their Origins and Their Stories*. Riverside, CA: Rubidoux Printing Inc.

Heizer, R.F. and S.F. Cook

- 1952 Fluorine and other chemical tests of some North American human and fossil bones. *American Journal of Physical Anthropology* 10 (3): 289-393.

Hogan, Michael

- 1992a Cultural Resources Assessment, 26+ Mile Segment of the AT&T Fiber-Optics Line Replacement Project, Whitewater to Coachella, Riverside County, California. Document No. 1084226. Submitted to private. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.
- 1992b Cultural Resources Overview, Mid-Valley Parkway Project, Palm Springs, Riverside County, California. Document No. 1084270. Submitted to private. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Hooper, L.

- 1920 The Cahuilla Indians. *University of California Publications in American Archaeology and Ethnology* 16(6): 315-380.

Hunt, John J.

- 1997 *The Waters of Comfort: The Story of Desert Hot Springs, California*. Desert Hot Springs, California: Little Morongo Press.

Husing, John E.

- 2006 Coachella Valley Economic Report. Coachella Valley Economic Partnership.

James, H.C.

- 1960 The Cahuilla Indians. Westernlore Press (1995 reprint by Malki Museum Press, Banning, CA).

Johnston, F.J.

1977 *The Bradshaw Trail*. Riverside, CA: Historical Commission Press.

JRP Historical Consulting, LLC (JRP)

2007 Historical Resources Inventory and Evaluation Report Sentinel Energy Project. Prepared for URS Corporation. On file at URS Corporation, Oakland, California.

Kaye, Sandra

2003 *Pinto Culture*. <http://www.nps.gov/jotr/culture/pinto/pinto.html>, accessed May 1, 2007.

King, Thomas F., Mary A. Brown, Gerrit Fenenga, and Claudia Nissley

1974 Archaeological Impact Evaluation: Southern California Edison Company's Dever-Vista 220 kV Transmission Line Riverside County, California. Document No. 1080150. Submitted to private. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Klure Laura L.

2005 *California Electric Power Company*. Riverside, CA: A to Z Printing.

Kroeber, Alfred

1908 Ethnography of the Cahuilla Indians. *University of California Publications in American Archaeology and Ethnology* 8(2): 29-68.

Laflin, Pat

1995 *The Periscope: Salson Sea, California's Overlooked Treasure*. Coachella Valley Historical Society.

Leakey, L.S.B., R.D. Simpson, and T. Clements

1968 Archaeological excavations in the Calico Mountains, California: Preliminary report. *Science* 160: 1022-1023.

1969 Man in America: The Calico Mountains Excavations. Chicago: *The Encyclopedia Britannica Yearbook of Science and the Future* 1970: 64-75, 77-79.

Leakey, L.S.B., R.D. Simpson, T. Clements, R. Berger, J. Witthift, and participants of the Calico Conference

1972 *Pleistocene man at Calico: A report on the international Conference on the Calico Mountains Excavations, San Bernardino County, California*. Redlands: San Bernardino County Museum.

Leonard, N.N. III.

1971 Natural and social environments of the Santa Monica Mountains. *University of California, Los Angeles, Archaeological Survey Annual Report 1970-1971*: 97-135.

Love, Bruce

- 1993 Cultural Resources Reconnaissance, Eagle Mountain Pumped Storage Transmission Corridor, Riverside County, California.

McCarthy, Daniel F.

- 1983 An Archaeological Assessment of 345 Acres of Land Near Desert Hot Springs, Riverside County, California (Change of Zone 3955). Document No. 1082010. Submitted to private. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Meighan, C.W.

- 1954 A late complex in Southern California prehistory. *Southwestern Journal of Anthropology* 10(2): 215-227.
- 1959 California cultures and the concept of an archaic stage. *American Antiquity* 24(3): 289-305.

Moratto, Michael J.

- 1984 *California Archaeology*. New York: Academic Press.

Moore, Steve

- 1981 "Growth but no Urban Sprawl Seen for Coachella Valley," *Press Enterprise*, September 6, 1981, sec.B:1.

Munz, P.A.

- 1974 *A Flora of Southern California*. Berkeley: University of California Press.

Myers, William A.

- 1983 *Iron Men and Copper Wires: A Centennial History of the Southern California Edison Company*. Glendale, California: Tans-Anglo Books.

Nordland, Ole J.

- 1978 *Coachella Valley's Golden Years Revised Edition*. Indio, California: Desert Printing Co., Inc.

Patterson, T.

- 1987 *Coachella Valley Yields Many Clues to Pre-History*. Riverside Press-Enterprise.

Presley, Sally

- 1996 *Facts and Legends: The Village of Palm Springs*. Second Printing.

Rector, Carol and P.J. Wilke

- 1980 Devers to Valley and Valley to Serrano 500 kV Transmission Route and Serrano to Villa Park 220 kV Transmission Route, San Geronio Pass Addendum, Riverside County, California. Document No. 1081056. Submitted to Southern California Edison. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Riddell, F.A., and W.H. Olsen

- 1969 An Early Man site in the San Joaquin Valley. *American Antiquity* 34(2): 121-130.

Ringwald, George

- 1962 "A Transformed Desert Valley," *Desert Magazine*. 25:3 (March 1962).

Riverside County Assessor

- 1952 *Record of Survey of the NE ¼ of Section 8, T3S, R4E, SBBM*.

Robinson, W.W.

- 1957 *The Story of Riverside County*. Los Angeles, Title Insurance and Trust Company.

San Bernardino Daily Sun

- 1958 "To Water Add Steam: Output Grows," April 23, 1958.
1964 "Official Midnight Merger Made by Edison-Calelectric," January 1, 1964.

Seiler, Hansjakob

- 1977 *Cahuilla Grammar*. Banning, CA: Malki Museum Press.

Schuling, W.C.

- 1972 Pleistocene man at Calico. *San Bernardino County Museum Association*.
1979 Pleistocene man at Calico. *Quarterly of San Bernardino County Museum Association* 26(4).

Schneider, Joan, Linda Thierrian, Gwyn Alcock, Dawn Reid, Andrea Maestrojuan, and Tom Tang

- 1992 Cultural Resources, Palm Springs, General Plan EIR. Document No. 1082870. Submitted to Southern California Edison. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Swenson, James

- 1984a A Cultural Resources Survey of Portions of Section 17, Township 3 South, Range 4 West, Near West Garnet, Riverside County, California. Document No. 1082113. Submitted to private. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

- 1984b A Cultural Resource Survey of a Portion of Section 10, T.3S, R.4E, North of Palm springs, Riverside County, California. Document No. 1082142. Submitted to Private. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Sutton, Mark Q.

- 1987 An Introduction to the Archaeology of the Western Mojave Desert, California. *Archives of California Prehistory*. Number 14. Salinas, California: Coyote Press.
- 1980 A Pitted Boulder Site in the Western Mojave Desert, California. *La Pintura*. 2 (2):214-225.

Swanton, John R.

- 1952 The Indian Tribes of North America. *Bureau of American Ethnology Bulletin* 145. Washington.

Taylor, Rivian

- 1976 "Pass site is still in Running for Giant Windmill," *Press Enterprise*. August 15, 1976, B-1.

Taylor, Thomas T.

- 1983 Report of an Intensive Archaeological Survey of Various Private and Public Land Parcels for the San Gorgonio Pass Wind Program, Riverside County, California. Document No. 1081987. Submitted to Southern California Edison. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

URS Corporation

- 2007 Cultural Resources Technical Report for the Sentinel Energy Project. Prepared by URS Corporation. On file at URS Corporation, Oakland, California.

Wagstaff and Brady and Robert Odland Associates

- 1982 San Gorgonio Wind Resource Study: Environmental Impact Report/Environmental Impact Statement (Cultural Resource Portion Only). Document No. 1081736. Submitted to County of Riverside and Bureau of Land Management. On file at University of California, Riverside, Eastern Information Center, Riverside, CA.

Wallace, William J.

- 1962 Prehistoric Cultural Developments in the Southern Deserts. *American Antiquity*. 23(2):172-180.

Wallace, W.R.

- 1955 A suggested chronology for Southern California coastal archaeology. *Southwestern Journal of Anthropology* 11 (3): 214-230.

Warren, Claude N.

- 1967 The San Dieguito Complex: A review and hypothesis. *American Antiquity* 32(2): 168-185.

- 1968 Cultural tradition and ecological adaptation the southern California coast. In (C. Irwin-Williams, ed.) Archaic prehistory in the western United States. Portales: *Eastern New Mexico University Contributions in Anthropology* 1(3): 1-14.
- 1984 The Desert Region, California. In *California Archaeology* by Michael J. Moratto, pp. 339-430. Orlando: Academic Press.

Wilke, Philip J.

- 1978 *Late Prehistoric Human Ecology at Lake Cahuilla, Coachella Valley, California*. University of California Archaeological Research Facility Contributions No. 38.

Willey, G.R.

- 1966 *Introduction to North American Archaeology, Volume 1: North and Middle America*. New Jersey: Prentice-Hall, Inc.

Williams, James C.

- 1997 *Energy and the Making of Modern California*. Arkon, Ohio: University of Akron Press.

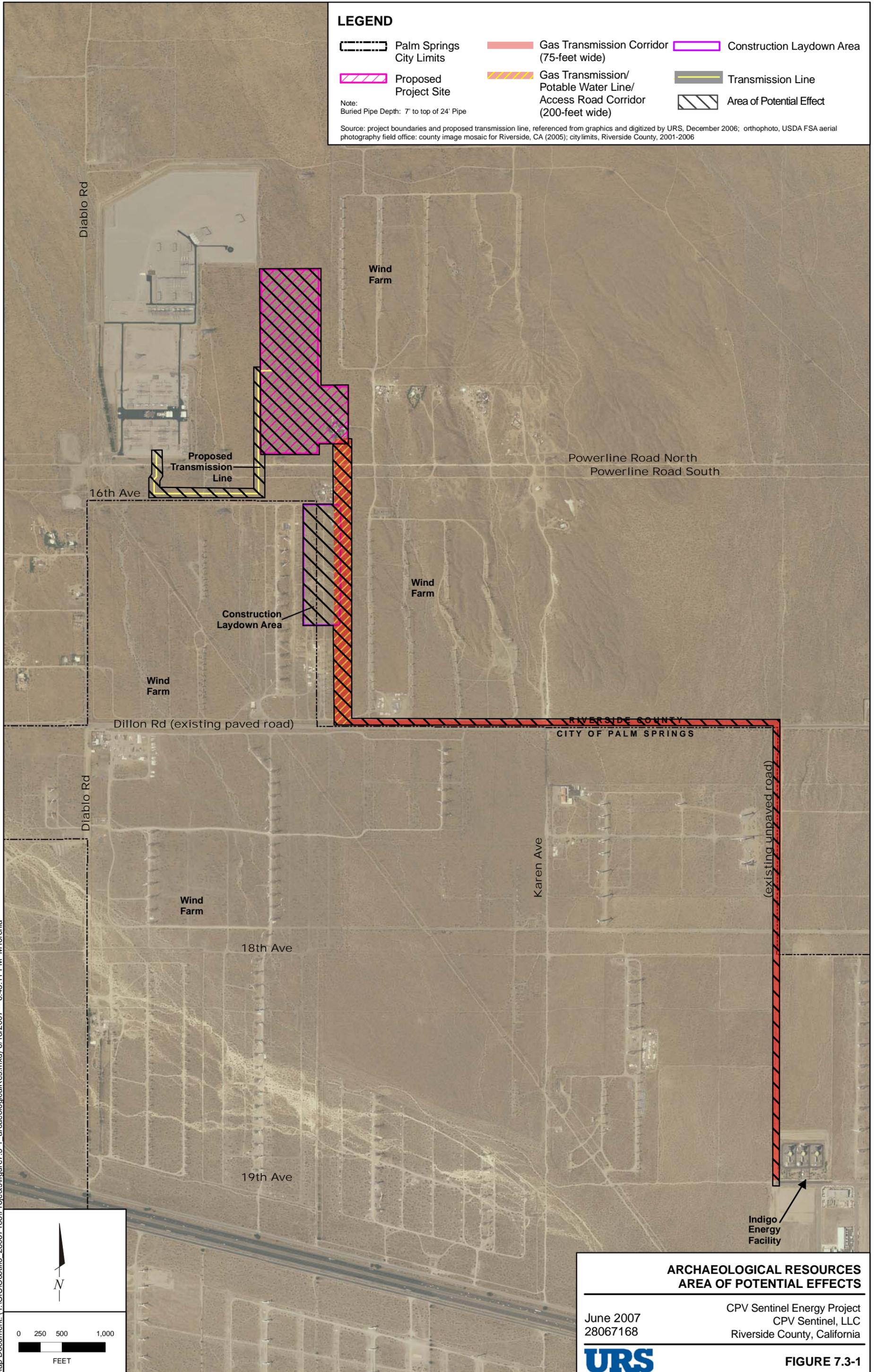
Table 7.3-1 Laws, Ordinances, Regulations, and Standards			
LORS	Applicability	Administering Agency	AFC Section
Federal			
Section 106 of the National Historic Preservation Act	Federal regulation affecting the treatment of cultural resources. Controls erosion of soil and disruption or displacement of surface soil.	SHPO	7.3.5.1
State			
California Environmental Quality Act	Requires evaluation of impacts of project on cultural resources.	CEC	7.3.5.2
Local			
City of Palm Springs, Planning Department	General plan provides necessary measures to provide for the preservation of any significant resources	City of Palm Springs	7.3.5.3
Riverside County, Planning Department	General plan provides necessary measures to identify and preserve important archaeological and historic resources within the county	Riverside County	7.3.5.3

LEGEND

-  Palm Springs City Limits
-  Proposed Project Site
-  Gas Transmission Corridor (75-foot wide)
-  Gas Transmission/Potable Water Line/Access Road Corridor (200-foot wide)
-  Construction Laydown Area
-  Transmission Line
-  Area of Potential Effect

Note:
Buried Pipe Depth: 7' to top of 24' Pipe

Source: project boundaries and proposed transmission line, referenced from graphics and digitized by URS, December 2006; orthophoto, USDA FSA aerial photography field office: county image mosaic for Riverside, CA (2005); city limits, Riverside County, 2001-2006



Map Document: T:\GIS\Ocotillo_28067168\Projects\figure7.3-1_archaeological(Res.mxd) 6/18/2007 -- 6:45:11 PM M.Torchia

**ARCHAEOLOGICAL RESOURCES
AREA OF POTENTIAL EFFECTS**

June 2007
28067168

CPV Sentinel Energy Project
CPV Sentinel, LLC
Riverside County, California



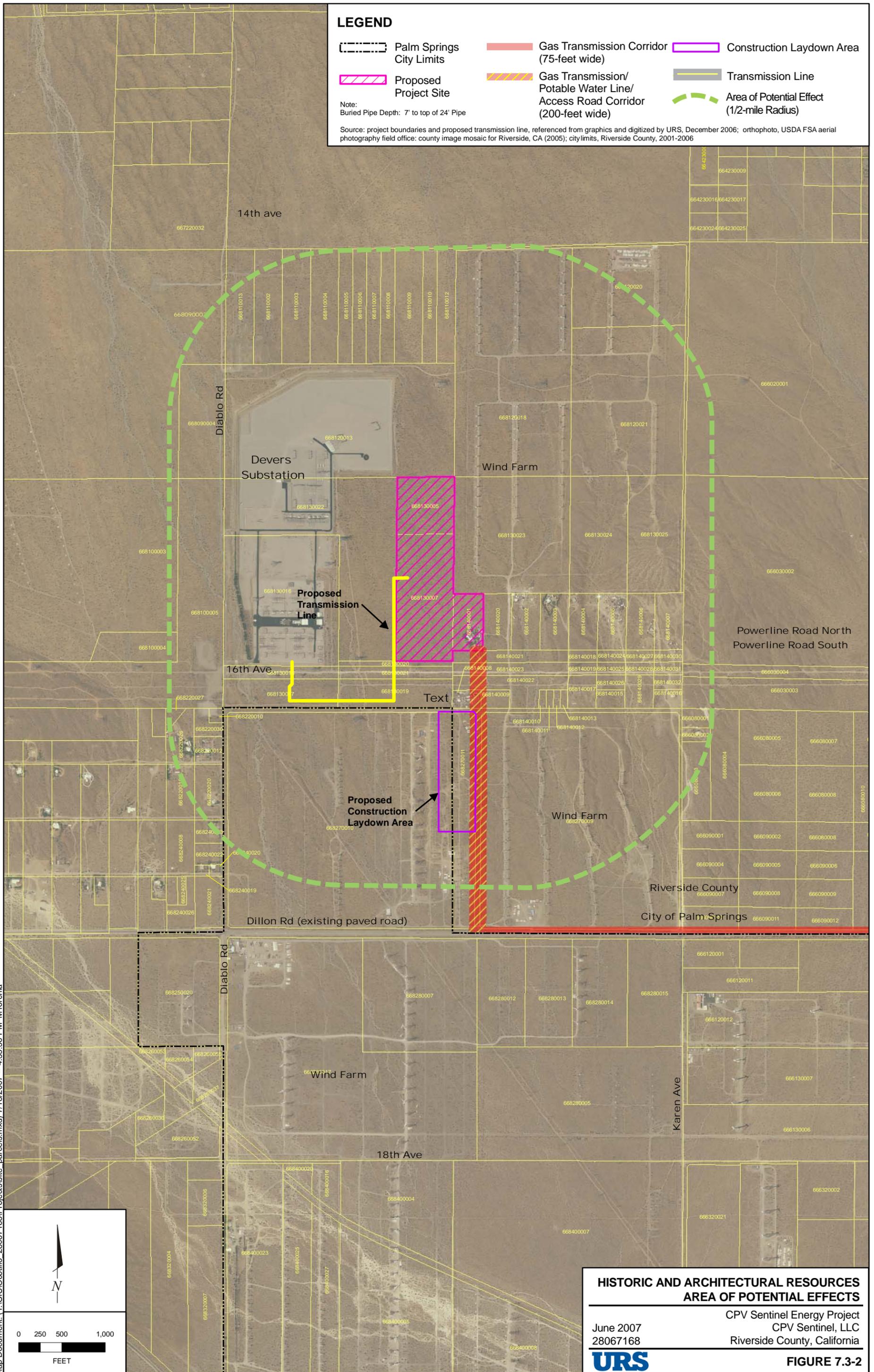
FIGURE 7.3-1

LEGEND

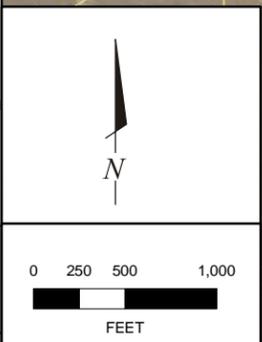
-  Palm Springs City Limits
-  Proposed Project Site
-  Gas Transmission Corridor (75-foot wide)
-  Gas Transmission/Potable Water Line/Access Road Corridor (200-foot wide)
-  Construction Laydown Area
-  Area of Potential Effect (1/2-mile Radius)
-  Transmission Line

Note:
Buried Pipe Depth: 7' to top of 24' Pipe

Source: project boundaries and proposed transmission line, referenced from graphics and digitized by URS, December 2006; orthophoto, USDA FSA aerial photography field office: county image mosaic for Riverside, CA (2005); city limits, Riverside County, 2001-2006



Map Document: T:\GIS\Ocotillo_28067168\Project\site_parcels.mxd 7/18/2007 -- 4:35:56 PM M.Torchia



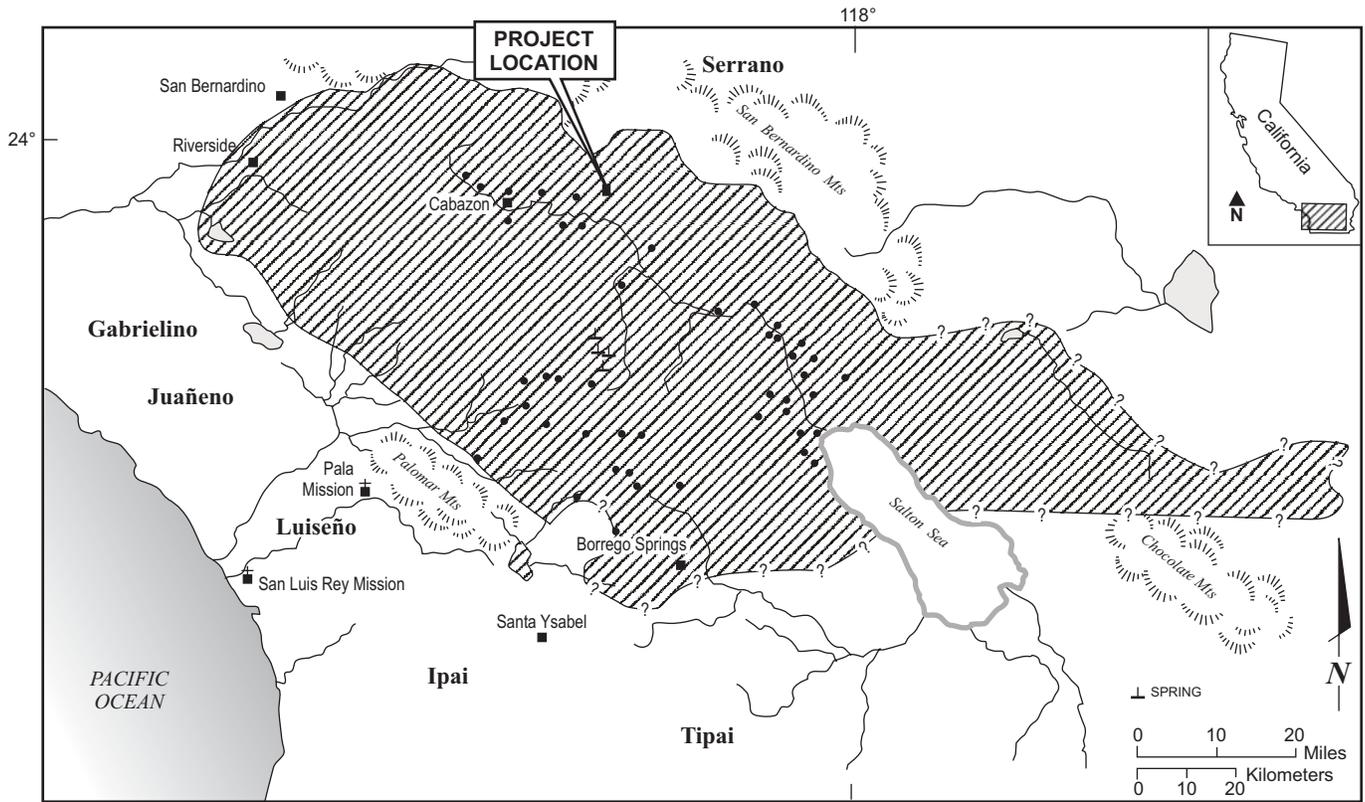
**HISTORIC AND ARCHITECTURAL RESOURCES
AREA OF POTENTIAL EFFECTS**

June 2007
28067168

CPV Sentinel Energy Project
CPV Sentinel, LLC
Riverside County, California

URS

FIGURE 7.3-2



Source:
 Gabrielino Handbook of North American Indians,
 Volume 8, California, pg. 538 (Bean and Smith, 1978).

**ETHNOGRAPHIC TRIBAL TERRITORY
 OF THE CAHULLA**

June 2007
 28067168

CPV Sentinel Energy Project
 CPV Sentinel, LLC
 Riverside County, California



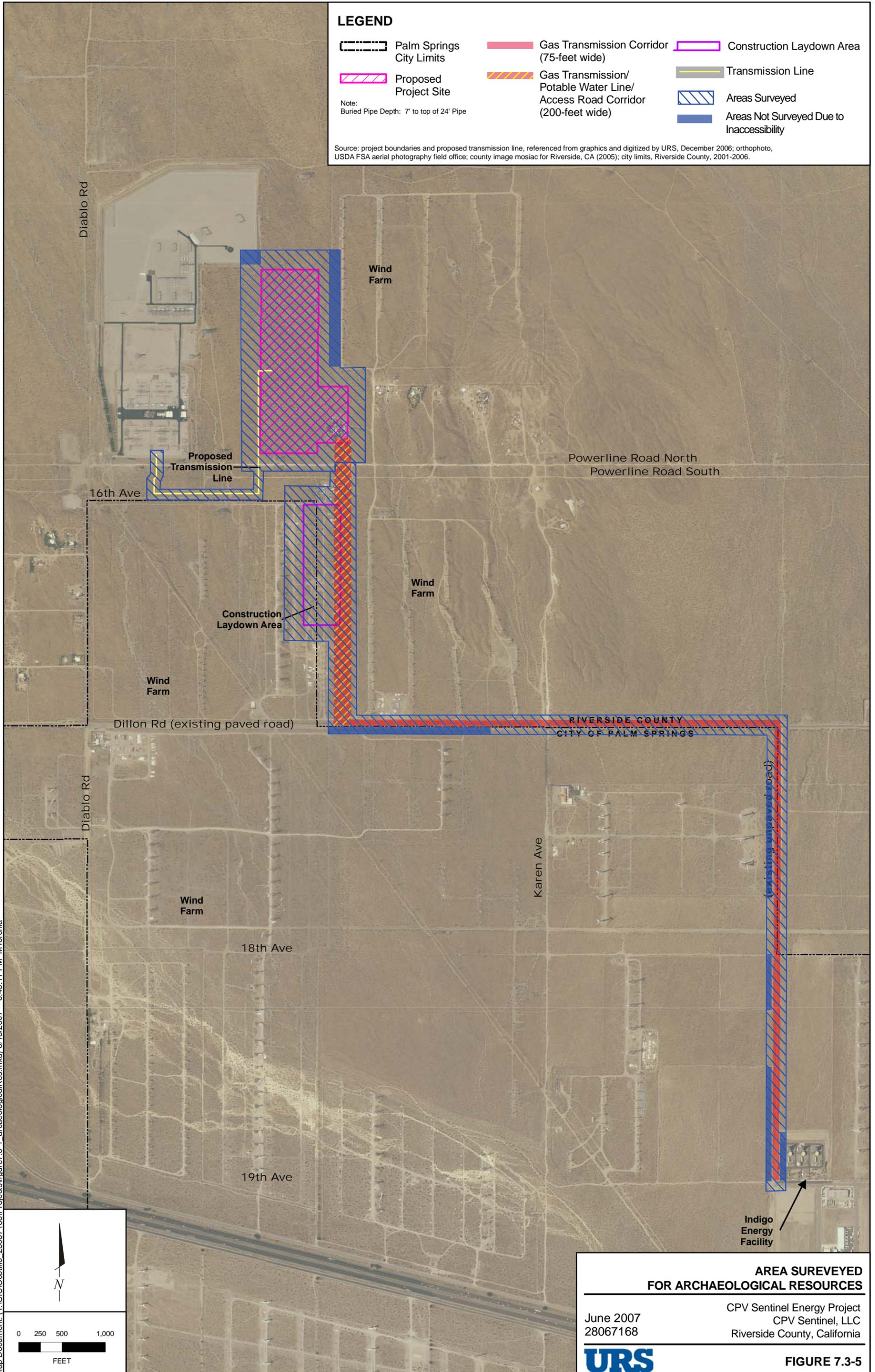
FIGURE 7.3-3

LEGEND

-  Palm Springs City Limits
-  Gas Transmission Corridor (75-foot wide)
-  Construction Laydown Area
-  Proposed Project Site
-  Gas Transmission/Potable Water Line/Access Road Corridor (200-foot wide)
-  Transmission Line
-  Areas Surveyed
-  Areas Not Surveyed Due to Inaccessibility

Note:
Buried Pipe Depth: 7' to top of 24' Pipe

Source: project boundaries and proposed transmission line, referenced from graphics and digitized by URS, December 2006; orthophoto, USDA FSA aerial photography field office; county image mosaic for Riverside, CA (2005); city limits, Riverside County, 2001-2006.



Map Document: (T:\GIS\Ocotillo_28067168\Projects\figure7.3-1_arcaeological(Res.mxd) 6/18/2007 -- 6:45:11 PM M.Torchia

**AREA SUREVEYED
FOR ARCHAEOLOGICAL RESOURCES**

June 2007
28067168

CPV Sentinel Energy Project
CPV Sentinel, LLC
Riverside County, California

URS **FIGURE 7.3-5**