3.4 Cultural Resources

This section identifies and evaluates the potential for the Proposed Project to affect historical and archaeological resources in the project area. Reference is made to archaeological and historical architecture reports and findings of effect produced between 2000 and 2009 (principally Far Western Anthropological Research Group 2009, and JRP Historical Consulting Services 2001, 2002, 2008a, 2008b), as well as to both state and federal regulations applied during prior and current studies.

3.4.1 Existing Conditions

This section provides a discussion of the regulatory setting, as well as relevant pre-historical and historical conditions, related to cultural resources on the project site and the immediately surrounding project area.

3.4.1.1 Regulatory Setting

State

California Environmental Quality Act and Guidelines

CEQA states that if implementation of a project would result in significant effects on historical resources, then alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (14 CCR] Sections 15064.5, 15126.4). Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined.

The State CEQA Guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review.

1. The resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR).
2. The resource is included in a local register of historical resources, as defined in Section 5020.1[k] of the Public Resources Code (PRC) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1[g], unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. The lead agency determines the resource to be significant, as supported by substantial evidence in light of the whole record (CCR, Title 14, Division 6, Chapter 3, Section 15064.5[a]).

Properties that are listed in or eligible for listing in the National Register of Historic Place (NRHP) are considered eligible for listing in the CRHR and thus are significant historical resources for the purpose of CEQA (PRC Section 5024.1[d][1]).

California Public Resources Code

California PRC Section 5024.1, which established the CRHR, protects historical resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet NRHP listing criteria.

California PRC Section 5097.5 prohibits removing, destroying, injuring, or defacing any vertebrate paleontological site, including fossilized footprints, or any other paleontological feature as well as items of archeological and historic interest that are situated on public lands, except with permission of the public agency with jurisdiction.

California Health and Safety Code—Treatment of Human Remains

Under Section 8100 of the California Health and Safety Code, six or more human burials at one location constitute a cemetery. Disturbance of Native American cemeteries is a felony (Health and Safety Code Section 7052).

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must then contact the Native American Heritage Commission (NAHC), which has jurisdiction pursuant to PRC Section 5097.

Local

The Proposed Project would extend outside of the Caltrain right-of-way (ROW) to accommodate two traction power substations (TPSs), one in South San Francisco and one in San Jose. The Proposed Project would also minimally extend outside of the Caltrain ROW in some locations for construction access, staging and storage, and to accommodate the overhead contact system (OCS) and vegetation maintenance where the OCS pole alignment is near the edge of the Caltrain ROW. This section identifies the general plan elements and ordinances of the City of South San Francisco and the City of San Jose as they pertain to historic resources.

City of South San Francisco

The city's general plan, adopted October 13, 1999, references historic resources in an Open Space and Conservation Element.

> **Policy 7.5-G-1:** Conserve historic, cultural, and archaeological resources for the aesthetic, educational, economic, and scientific contribution they make to South San Francisco's identity and quality of life.
>
> **Policy 7.5-I-3:** Explore mechanisms to incorporate South San Francisco's industrial heritage in historic and cultural preservation.

In addition, South San Francisco Municipal Code Title 2: Administration, Chapter 2.56.080-190 encourages the preservation of the community's historic resources and outlines the criteria for their preservation, including guidelines for the development and maintenance of surrounding settings and environments, in order to enhance property values and stabilize neighborhoods.

City of San Jose

The Land Use and Transportation chapter of *Envision San Jose 2040 General Plan*, as adopted November 1, 2011, contains three goals and five policies relevant to the Proposed Project.:

Goal LU-13: Landmarks and Districts. Preserve and enhance historic landmarks and districts in order to promote a greater sense of historic awareness and community identity and contribute toward a sense of place.

Policy LU-13.1. Preserve the integrity and fabric of candidate or designated Historic Districts.

Policy LU-13.2. Preserve candidate or designated landmark buildings, structures and historic objects, with first priority given to preserving and rehabilitating them for their historic use, second to preserving and rehabilitating them for a new use, or third to rehabilitation and relocation on-site. If the City concurs that no other option is feasible, candidate or designated landmark structures should be rehabilitated and relocated to a new site in an appropriate setting.

Policy LU-13.3. For landmark structures located within new development areas, incorporate the landmark structures within the new development as a means to create a sense of place, contribute to a vibrant economy, provide a connection to the past, and make more attractive employment, shopping, and residential areas.

Goal LU-14: Historic Structures of Lesser Significance. Preserve and enhance historic structures of lesser significance (i.e., Structures of Merit, Identified Structures, and particularly Historic Conservation Areas) as appropriate, so that they remain as a representation of San José's past and contribute to a positive identity for the City's future.

Policy LU-14.1. Preserve the integrity and enhance the fabric of areas or neighborhoods with a cohesive historic character as a means to maintain a connection between the various structures in the area.

Policy LU-14.3. Discourage demolition of any building or structure listed on or eligible for the Historic Resources Inventory as a Structure of Merit by pursuing the alternatives of rehabilitation, re-use on the subject site, and/or relocation of the resource.

Goal LU-16: Sustainable Practices. Preserve, conserve, and/or rehabilitate historic structures as a means to achieve the City of San José's environmental, economic, and fiscal sustainability goals.

Three of San Jose's city ordinances make reference to historic resources. Title 2, Chapter 2.08, Part 26 establishes the Historic Landmarks Commission. Title 13, Chapter 13.48 discusses the goals of historic preservation; outlines the procedures for historic designation; prohibits alteration, demolition or maintenance without a permit; and requires a public hearing should a historic resource be proposed for demolition. Title 17 references the application of the State Historical Building Code.

3.4.1.2 Environmental Setting

Prehistoric, Ethnographic, and Historic Conditions

The following prehistoric and ethnographic conditions are summarized from the *Data Recovery and Late Discovery Treatment Plan for the Caltrain Electrification Program Alternative: San Francisco, San Mateo, and Santa Clara Counties, California* (Far Western Anthropological Research Group 2009). The historic-era conditions are summarized from the *Addendum Inventory and Evaluation of Historic Resources for the Caltrain Electrification Program, San Francisco to San Jose (MP 0.0 to 52.0)* (JRP Historical Consulting Services 2008a). For more in-depth discussion on the environmental setting, please refer to these documents.

Prehistoric Context

The San Francisco Bay and Santa Clara Valley landscape has changed significantly during the 12,000 years since humans first occupied the region. Large drainages once flowed from Santa Clara Valley out through the Golden Gate during the late Pleistocene, but were inundated by rising ocean waters when continental glaciers began to melt with the onset of the Holocene. Sea level rise was quite rapid between 12,000 and 6000 calibrated years before the present (cal BP), which resulted in the development of the San Francisco Bay estuary. After 6000 cal BP, the rate of glacier melting slowed down, and Holocene terrestrial sedimentation outpaced the rate of sea level rise, resulting in the extensive tidal marshes and mudflats we see today at the south end of the bay (Rosenthal and Meyer 2004). As a result, prehistoric archaeological materials predating 4500 cal BP are relatively rare in the area. Numerous archaeological sites from after 4500 cal BP are available for study, revealing one of the most complex hunter-gatherer archaeological records in North America (Far Western Anthropological Research Group 2009).

Early Holocene (Lower Archaic), cal 8000–3500 B.C.

The Early Holocene is characterized by a mobile forager pattern throughout the Bay Area. The milling slab and handstone, as well as a variety of large, wide-stemmed and leaf-shaped projectile points, all emerged during this period (Milliken et al. 2007:114). Local Franciscan chert dominated the Early Holocene Santa Clara Valley components (Hylkema 2002:235). The Metcalf Creek Site (SCL-178), a deeply stratified deposit in the southern Santa Clara Valley, yielded cultural materials as deep as 9 meters below the surface (Hildebrandt 1983). Radiocarbon determinations from a feature and an *Olivella biplicata* spire-lopped bead indicate the presence of cultural materials dating as early as cal 7500 B.C. (Fitzgerald and Porcasi 2003; Fitzgerald et al. 2005). The Metcalf Creek Aspect (or Phase), the millingstone pattern cultural expression in the Santa Clara Valley and adjacent coast, was named for this site (Milliken et al. 2007:114). SCL-65, the Saratoga site, produced two flexed burials beneath cairns of millingstones, which date between cal 5400 and 4900 B.C. (Fitzgerald 1993).

Early Period (Middle Archaic), cal 3500–500 B.C.

Several technological and social developments characterize the Early Period. New groundstone technology and the first cut shell beads in mortuaries signal sedentism, regional symbolic integration, and increased regional trade in the Bay Area, beginning at cal 3500 B.C. The earliest cut bead horizon, the *Olivella* grooved rectangle (Vellanoweth 2001), bracketed cal 3400 to 2500 B.C., is represented by a single bead from the San Bruno Mound (Clark 1998:127, 156). Double-perforated *Haliotis* rectangle beads are first documented at the 5,590-year-old Sunnyvale Red Burial (SCL-832), which also contained red ocher and exhibited preinterment burning (Cartier 2002).

Lower Middle Period (Initial Upper Archaic), cal 500 B.C.–cal A.D. 430

Although it is unclear when the "major disruption in symbolic integration systems" originated, it is clear in the record around 500 B.C. and may have begun several hundred years earlier (Milliken et al. 2007:115). Bead Horizon M1 of the Middle Period (Upper Archaic, cal 200 B.C. to A.D. cal 430) brought more tiny *Olivella* saucer beads into the Bay Area, as well as new circular *Haliotis* ornaments. New bone tools, including barbless fish spears, elk femur spatula, tubes, and whistles, appeared for the first time during this period. Basketry awls (split cannon bones) with shouldered tips, indicating coiled basketry manufacture, appeared in the Central and North Bay (Bennyhoff

1986:70, Bieling 1998:218). In the South Bay, the pure millingslab/handstone-oriented forager economy continued along the Pacific Coast of San Mateo County (Hylkema 2002:261).

Upper Middle Period (Late Upper Archaic), A.D. cal 430–1050

Around 430 A.D., the *Olivella* saucer bead trade network of the Lower Middle Period collapsed. Over half of known M1 sites were abandoned, while in the remaining sites, the number of sea otter bones greatly increased (Bennyhoff 1994a, 1994c). These changes co-occurred with the inception of a series of *Olivella* saddle bead horizons (M2a and 2b; M3, and M4) that marked central California bead trade until A.D. cal 1000 (Groza 2002; Milliken et al. 2007:116). The Meganos mortuary complex spread during this horizon from inland areas almost to the San Francisco Bay at the current Fremont BART site (ALA-343) and into the Santa Clara Valley at Wade Ranch (SCL-302). Single-barbed bone fish spears, ear spools, and large mortars all appeared for the first time during this horizon (Milliken et al. 2007:116). The Santa Teresa Locality Mazzoni site (SCL-131), one of the few mortuary sites that can be dated to this time period, contained no grave accompaniments (Milliken et al. 2007:116).

Initial Late Period (Lower Emergent), A.D. CAL 1050–1550

Fredrickson (1973) coined the term Emergent to describe this period, in recognition of the appearance of a new level of sedentism, status ascription, and ceremonial integration in lowland central California. The Middle/Late Transition bead horizon, previously thought to have occurred around A.D. 300, is now largely believed to have occurred around A.D. cal 1000 (Milliken et al. 2007:116). During the Middle/Late Transition, burial objects became much more elaborate, and initial markers of the Augustine Pattern appeared in the form of multiperforated and bar-scored *Haliotis* ornaments, fully shaped show mortars, and new *Olivella* bead types in sites such as SCL-690 (Hylkema 2006). In the San José and Point Año Nuevo localities, local Franciscan chert remained the primary production material for debitage and casual tools, and Napa Valley obsidian remained the primary production material for projectile points (Bellifemine 1997:124-136, Clark and Reynolds 2003:8, Hylkema 2002:250).

Evidence for increased social stratification throughout the Bay Area after 1250 A.D. can be found in mortuary evidence. Although the quantity of shell beads contained in burials decreased, the quality of burial items increased in high-status burials and cremations (Fredrickson 1994:62). This development may have reflected a new regional ceremonial system that was the precursor of the ethnographic Kuksu cult, a ceremonial system that unified the many language groups around the Bay Area during Bead Horizon L1 (Fredrickson 1974:66; Bennyhoff 1994b:70, 72 in Milliken et al. 2007:117).

Terminal Late Period: Protohistoric Ambiguities

Changes in artifact types and mortuary objects characterized A.D. cal 1500–1650. The signature *Olivella* sequin and cup beads of the central California L1 Bead Horizon abruptly disappeared, and clamshell disk beads, markers of the L2 Bead Horizon, spread across the North Bay (Milliken et al. 2007:117). Desert side-notched points spread into the South Bay from the Central Coast (Hylkema 2002; Jackson 1986, 1989; Jurmain 1983).

Another upward cycle of regional integration was commencing when it was interrupted by Spanish settlement in the Bay Area beginning in 1776. Such regional integration was a continuing characteristic of the Augustine Pattern, most likely brought to the Bay Area by Patwin speakers from

Oregon, who introduced new tools (such as the bow) and traits (such as preinternment grave pit burning) into central California. Perhaps the Augustine Pattern, with its inferred shared regional religious and ceremonial organization, was developed as a means of overcoming insularity, not in the core area of one language group but in an area where many neighboring language groups were in contact (Milliken et al. 2007:118).

Ethnographic Context

The area covered by the Proposed Project passes through the aboriginal territory of the Costanoans (from the Spanish Costaños for "coastal people"), who are known today as the Ohlone (or Ohlone/Costanoan). Most of what we know about the Ohlone comes from the early work by Kroeber (1925), with a summary treatment by Levy (1978). Recent interpretations of Ohlone lifeways, sometimes contradictory with earlier studies, come from research with mission records conducted by Milliken (1995).

Costanoan is a linguistic subfamily of the Penutian language stock. According to early linguists, there are eight branches of the Costanoan language, each associated with a geographic location and the tribelet(s) that inhabited the locality; the project corridor passes through two linguistic territories (Ramaytush and Tamyen). The basic unit of political organization was a territory-holding group of one or more associated villages and smaller temporary encampments. Milliken (1995) defined these units as "tribes": independent, multifamily, landholding, religious congregations. Mission records indicated that there were six tribal regions within the project corridor (Yelamu, Urebure, Ssalson, Lamchin, Uichon and Tamien), each approximately 8 to 12 miles apart. Each tribe was an autonomous polity numbering 200 to 400 people and fell under the jurisdiction of a headman and council of elders who served as advisors to the villagers. Permanent villages were established near the coast and river drainages, while temporary camps were located in prime resource collecting areas.

Subsistence activities centered around the seasonal availability of gathered resources such as acorns and seeds; hunting deer, tule elk, sea mammals, and waterfowl; fishing; and collecting shellfish. The proliferation of shell middens throughout the Bay Area attests to a heavy reliance on marine food resources. The Ohlone practiced annual burning to ensure an abundance of seed-bearing annuals, forage for large game, and to facilitate the gathering of acorns.

Seven Spanish missions were founded in Ohlone territory between 1777 and 1797. While living within the mission system, the Ohlone commingled with other groups, including Esselen, Yokuts, Miwok, and Patwin. Mission lifeways were devastating to the Ohlone population. It has been estimated that the Native American population in the region numbered around 10,000 in 1770, when the first mission was established in Ohlone territory, and that population rapidly declined to fewer than 2,000 by 1832 because of introduced disease, harsh living conditions, and reduced birth rates. After the secularization of the missions, circa 1830, Native Americans gradually left the missions. Many went to work as wage laborers on the ranchos and mines, and others found domestic positions. There was a partial return to aboriginal religious practices and subsistence strategies, but for the most part the Ohlone culture was greatly diminished. Today, descendants of the Ohlone still live in the area, and many are active in maintaining their traditions and advocating Native American issues.

Historical Context

Spanish Period

The historic period for the Bay Area began in 1769, with the entry of the Spanish Portola expedition. Spanish colonial policy throughout the late 1700s and early 1800s was directed toward establishing missions, presidios, and secular towns known as pueblos, with all land being held by Spain. Three missions were established near the Archaeological Study Area (see Section 3.4.2.1, *Methods for Analysis*, for a description of the Archaeological Study Area). Mission San Francisco de Asis was established October 9, 1776, Mission Santa Clara de Asis on January 12, 1777, and Mission San Jose de Guadalupe on June 11, 1797. The location of Mission Santa Clara de Asis was moved five times due to flooding and earthquakes. The third site for Mission Santa Clara, destroyed by an earthquake, is located within the project corridor near the Santa Clara Caltrain Station.

Mexican Period (1821–1848)

The Spanish Period in this area lasted until 1821, when the Mexican government gained control over Alta California. During the 1820s, the mission system declined as Native Americans abandoned the missions, and land formerly held by Spain was divided into vast tracts owned by individuals. Secularization grew with the creation of land grants, the rise of a ranching class, and the growth of pueblo populations. These "ranchos," granted by the government, were used primarily for farming and raising cattle. The native people who had been laboring at the mission gardens and orchards moved to the ranchos, still working as manual laborers, and mixing with other tribes.

The American Period: Residential, Industrial, and Railroad Development

The region came under American control after the defeat of the Californio (Mexican) forces in 1847. Agriculture continued to be the major economic pursuit with the onset of the American Period, in particular to feed the gold miners from 1848 into the 1850s. American farmers then became commonplace in the region, and a series of court cases in the 1850s resulted in the loss of land for many Mexican land-grantees.

In the 1850s, land grants were subdivided for towns and eventually, in the 1860s, for the railroad ROW. The city of San Jose was incorporated in 1850, the town of Santa Clara in 1852, and San Francisco in 1856. Urban development in these cities moved at a swift pace during the 1860s. Tracts adjacent to the city limits were subdivided, including the lands originally part of the ranchos. Public works services were introduced in the 1860s, with gas mains, water companies, and formal sewers organized and constructed. During the 1850s, regional stage lines were established and these were replaced by the arrival of the streetcar lines in the 1860s, establishing the first urban transit lines.

Construction on the San Francisco and San Jose Railroad (SF&SJ RR) began in 1861, with passenger and freight service commencing in 1863, and reaching San Jose in 1865. This was the first Bay Area railroad, and it reduced travel time between San Francisco and San Jose from a 9-hour stage or 5-hour boat ride to a 3.5- hour rail journey. Other than the general alignment, this first single-track railroad had little in common with the modern system. At that time what stations existed were described as nothing more than sheds.

The railroad operated as the SF&SJ RR until 1870 when it was obtained by the Collis P. Huntington's Southern Pacific Railroad, which operated the SF&SJ RR as a passenger and freight line until 1980 when it was obtained by Caltrans and rebranded as Caltrain. Twenty-four of the twenty-five historic

built resources identified in the project area are part of, or directly related to, the Southern Pacific Railroad, now Caltrain.

During the period from 1870 through 1900, the Peninsula route was the only freight and long distance passenger line that served San Francisco. The railroad contributed to the expansion of agriculture in Santa Clara Valley, and led to more innovative ways to ship and preserve food supplies, such as the transportation of fruit and meat in refrigerator cars developed in 1880. At the same time, undeveloped lands within San Jose city limits were being subdivided and filled with homes during the 1880s, and new suburban tracts were being subdivided.

The connection between San Francisco and the southern Bay Area encouraged suburban development and people started to commute to work, even during the nineteenth century. Many of the stations outside of San Francisco were merely stops in the rural landscape of San Mateo and Santa Clara Counties, and many of the more substantial stations served towns that were no more than villages. The city of South San Francisco, the town of Palo Alto, with Stanford University, and the city of San Jose were the exceptions. In the last quarter of the nineteenth century, much of the land in eastern San Mateo and Santa Clara Counties was still held in large tracts by wealthy individuals.

The Southern Pacific system was in relatively good condition and Huntington was in the process of modernizing and improving both rolling stock and infrastructure when he died in 1900. But when Edward Henry Harriman gained control of the line in 1901, he ushered in a new phase of development for the company. The subsequent system-wide improvements that Harriman introduced between 1901 and 1909, as well as the scale of the projects he directed, proved to be unprecedented.

Harriman ordered the installation of a second track between San Jose and San Bruno in preparation for the Bayshore Cutoff. The 39 miles of new line was ready by late 1903. Several new bridges and trestles along the Peninsula route were part of this improvement program; examples of these structures are the four small grade separations located in the city of San Mateo. Work on the Bayshore Cutoff began in 1904 and continued for 3 years, opening for traffic in December 1907. Company forces built the cuts, filling, bridges, tunnels, and trestles, with the exception of contractors hired to perform the grading and to build Tunnels No. 2 and No. 5. These brick and steel tunnels brought the tracks through the steep hills and bluffs that make up the rough coastline of the northeastern Peninsula while remaining at an even, low gradient that never reached an elevation of more than 20.3 feet above sea level. The double track alignment included 10,000 feet of tunnels, six iron bridges, six timber trestles, and a new hump yard created on the newly filled Visitacion Bay site.

The new Bayshore route had far fewer at-grade crossings than the old line and included new passenger stations at 23rd Street, Amy Street, Paul Avenue, Bayshore, Visitacion, and South San Francisco before joining the old alignment at San Bruno. This new route immediately improved passenger train times into San Francisco and helped establish the Peninsula commuter tradition that continues today. The Bayshore Cutoff also had an immediate and important effect on the industrialization of South San Francisco by bringing rail service to the area for the first time.

Southern Pacific Railroad undertook a massive improvement program in and around San Jose beginning in the late 1920s. The improvements included continued double tracking the main line, construction of a roughly six-mile bypass of congested downtown San Jose, and completion of a large new passenger station. The impressive Italian Renaissance-revival style Cahill Street Station (now known as the Diridon Station) was designed by John H. Christie and constructed by the C. N.

Swenson Company. It is a multilevel combination passenger and freight depot, and is on the NRHP. The bypass, completed in 1935, represented a significant alteration of the original railroad and a major railroading change for the region, relocating the Southern Pacific's depot from Market Street where it had been located since the 1860s for the SF&SJ RR.

While motor traffic grew exponentially on the roads and highways of the Peninsula, so did accidents, particularly at railroad at-grade crossings. Both railroads and motor vehicle supporters saw grade separations as the ideal method for eliminating the hazards of at-grade railroad crossings. The Peninsula Grade Crossing Association was formed and, in February 1931, its engineering subcommittee released a proposed $9 million two-phase plan to eliminate at-grade crossings on the 47 miles of track. Among the approximately 80 grade separations along the Caltrain line today, 27 were built before 1950, with more than half of those structures built or improved in the period between 1927 and 1941.

During World War II, other than track improvements to meet the constant demand for more capacity, very few construction projects were undertaken. By 1946 the railroad returned to its regular passenger service and even improved travel time. Modernization in the 1950s included replacing the timber trestle near Islais Creek and eliminating Tunnel No. 5, both part of the 1907-constructed Bayshore Cutoff. Tunnel No. 5 was closed to accommodate U.S. Highway 101's realignment and expansion to six lanes of automobile traffic. Massive freeway construction of the post-war period was in response to the ever-increasing dominance of the automobile over rail transit; grade separations were constructed as overpasses.

In 1974 the Southern Pacific applied to the California Public Utilities Commission to abandon the Peninsula commuter trains, which by then served fewer than 8,000 people a day. The State of California eventually stepped in and took over the commuter operations at a cost of $20 million paid by San Francisco, San Mateo, and Santa Clara Counties. The new commuter service operated by Caltrans was dubbed "Caltrain." In 1987 the three Peninsula counties formed the Peninsula Corridor Joint Powers Board (JPB) with the intent to have this newly created entity take over at the expiration of Caltrans' 10-year contract. JPB purchased the ROW from San Francisco to San Jose in late 1991 and has provided commuter operations ever since.

3.4.2 Impact Analysis

3.4.2.1 Methods for Analysis

Cultural resources assessment efforts have included records searches and literature reviews; consultation with the Native American Heritage Commission and local Native American groups, individuals, and historical interest groups; field surveys of the Area of Potential Effect (APE)[1] as it has progressed through a series of refinements; a geoarchaeological sensitivity study to assess the potential for buried archaeological resources; and the development of avoidance measures for built resources and archaeological sites within or potentially within the Archaeological Study Area and Historic Study Area (defined below under *Architectural History*).

[1] "APE" or "area of potential effects" is a term specific to Section 106 of the National Historic Preservation Act of 1966 (36 CFR Part 800.16(d)). When discussing past reports that were Section 106 documents, the term APE is used. For the purposes of this CEQA document, the geographic area included in the 2013 updated survey will be referred to as "Archaeological Study Area."

The following presents a chronological breakdown of previous efforts pertaining to the identification and evaluation of cultural resources in the project area:

- **1999:** An inventory of the original APE (encompassing San Francisco to Gilroy) was conducted (Carrico et al. 2000).
- **2001/2002**: Field surveys of the previously defined traction power facility sites and electrical connector routes were conducted (JRP Historical Consulting Services 2002; Far Western Anthropological Research Group 2002).
- **2002:** The State Historic Preservation Officer (SHPO) concurred with the Federal Transit Administration's (FTA's) determination that the Proposed Project, as described at the time, would have no adverse effect on historic properties.
- **2003:** SHPO concurred in the Finding of Effect Amended (FOEA).
- **2008**: Project changes reduced the length of the corridor from terminating in Gilroy to terminating in San Jose, and expanded the APE to include three new traction power substations at six potential locations. Field surveys of these expanded APE areas were conducted, and a supplemental records search was also undertaken (Far Western Anthropological Research Group 2008; JRP Historical Consulting Services 2008a).
- **2008:** A geoarchaeological assessment of the entire route (San Francisco to San Jose) was conducted.
- **2009**: A Programmatic Agreement (PA) regarding implementation of the project as it pertains to the potential discovery of archaeological sites was negotiated between the JPB, SHPO, and the FTA. The stipulations set forth in the PA are listed in this chapter's mitigation measures. The PA can also be found in Appendix E.
- **2009**: A data recovery and late discovery treatment plan (Far Western Anthropological Research Group 2009), a stipulation of the PA, was completed.
- **2013:** Surveys were conducted on June 3, 4, and 6 by a professionally qualified architectural historian. In addition to field verifying the condition of the 25 previously determined eligible and listed properties to ensure they have not been altered since the 2008 survey, 15 properties within the APE known to have been constructed in or prior to 1968 and not previously surveyed because they had not reached 45 years of age in 2008 were surveyed and subsequently evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines (ICF International 2013). None were found to be eligible for the CRHR. No new records search was conducted at this time because the 2013 Proposed Project updates did not include any new parcels beyond those covered in the 2008 supplemental records search conducted by Far Western Anthropological Research Group.
- **2013:** In 2013 it was determined that trees planted on private property adjacent to the Caltrain ROW may need to be pruned or removed for electrical safety for the OCS. 71 properties with buildings over 50 years old were identified as having potential to be impacted by this vegetation clearance. These properties were surveyed and evaluated for eligibility for the CRHR. All surveys took place from the public ROW. For those properties that could not adequately be seen from the public ROW, additional research was conducted to determine whether the properties had been significantly altered since their construction. Additionally, city registers of historic resources were reviewed to assess whether any of the 71 properties in question were locally listed (ICF International 2014).

Native American Consultation

Section 106 of the National Historic Preservation Act of 1966 provides federally recognized Native American tribes the opportunity to identify their concerns about cultural and heritage resources, advise on the identification and evaluation of such resources, articulate their views on the undertaking's effects on archaeological sites and traditional cultural properties, and participate in the resolution of adverse effects (36 CFR Section 800.2 (c)(3)(i)). JPB contacted NAHC on December 4, 2001, to advise them of the Proposed Project. The NAHC responded on December 12, 2001, stating that their record search revealed no indication of the presence of Native American cultural resources in the immediate project area; however, they also recommended that JPB contact other Native American individuals/organizations to verify the findings of the NAHC. JPB sent notification letters to these Native American tribes on December 18, 2001. The 30-day review period expired, and no additional comments were received from the Native American tribes or individuals.

JPB sent a second letter to NAHC in December of 2007, informing NAHC of the revisions to the project APE (with maps) and asking for any information on known resources or sensitive areas. In the January 16, 2008 reply, NAHC stated that the Sacred Lands File did not indicate any cultural resources within the project area, but cautioned that the absence of specific site information does not necessarily indicate the absence of cultural resources. Subsequently, JPB sent letters to all the Native American individuals and groups on the list provided by NAHC; in addition, phone calls or emails were sent to each contact.

Given the passage of time since the last project-related Native American correspondence, ICF contacted NAHC on October 24, 2013, in order to re-fresh the Sacred Lands File search and to obtain an updated Native American contact list for the project area. The NAHC responded on November 5, 2013, stating that its record search revealed no indication of the presence of Native American cultural resources in the immediate project area; however, NAHC also recommended that ICF contact other Native American individuals and organizations to verify the findings of the NAHC.

ICF sent notification letters to the Native American contacts on November 11, 2013. The 30-day review period expired, and no additional comments were received from the Native American tribes or individuals.

Archaeological Study Area

The Archaeological Study Area for this analysis contains the areas defined herein:

- The existing Caltrain ROW including all existing stations.
- Locations of potential locations for two traction power substations in South San Francisco (TPS1) and San Jose (TPS2) and the area of connecting underground duct banks. TPS1 Options 1 and 2 are off of Gateway Boulevard and Option 3 is off of Harbor Way; all three options are in South San Francisco. TPS2 Option 1 is off of Newhall Street; Option 2 is off of Stockton Avenue, and Option 3 is at the Central Equipment Maintenance Operations Facility (CEMOF); all three options are in San Jose.
- Certain areas outside the Caltrain ROW where OCS poles and wires would be placed partially outside the existing ROW. Based on current designs, Caltrain has identified approximately 20 locations with a total length of approximately 1.8 miles where the OCS alignment may be outside the existing Caltrain ROW. Most of these areas are within the existing rights-of-way for adjacent

roads and railroads, but some of these areas are on residential or commercial parcels. In general, these areas only extend a few feet off the existing Caltrain ROW.

- Certain areas outside the Caltrain ROW where vegetation maintenance would be required within 10 feet of the OCS pole alignment for electrical safety. Vegetation maintenance is the only proposed activity in these areas. Based on current designs, Caltrain has identified approximately 108 potential locations where the 10-foot vegetation maintenance zone would be outside the current ROW. The area of the maintenance zone outside of the current ROW would vary in width up to approximately 10 feet outside the ROW (where the OCS pole alignment would be within the Caltrain ROW) to a few feet more than 10 feet (where the OCS pole alignment would be outside the Caltrain ROW). Not all of these areas contain trees. The preliminary estimate of the area outside the Caltrain ROW within the 10-foot vegetation maintenance zone is 18 acres located on existing rights-of-way for adjacent roads and railroad, on residential and commercial parcels, and in several public parks.
- Caltrain has identified potential construction access, staging, and storage areas within its current ROW. Contractor construction staging and storage areas may be proposed in heretofore unidentified nearby locations that are outside the current ROW.

The archaeological records search included a 20-foot buffer beyond the Caltrain ROW and the architectural history assessment included the parcels adjacent to the Caltrain ROW, thereby including areas where the OCS must be placed outside of the ROW or where vegetation maintenance may be performed. The results of previous historic built resources and archaeological studies were taken into account when initiating the current analysis for the existence of and potential effects on historic resources within the project area.

Archaeology

The background records search and literature review conducted for the Proposed Project identified 21 prehistoric and historic-era archaeological sites in or potentially in the project Archaeological Study Area (see Table 3.4-1). Additional documentary research identified three additional archaeologically sensitive zones (Hamilton shell mound, the vicinity of the Third Mission Santa Clara [CA-SCL-30/H], and the Native American burial ground at Tamien Station [CA-SCL-690]). Previous investigations indicate that one site, CA-SCL-30/H, has been determined eligible for the NRHP, and CA-SCL-690 has been recommended eligible; neither has been listed.

Consequently, a PA regarding implementation of the Proposed Project as it pertains to the potential discovery of archaeological sites was negotiated between the JPB, SHPO, and the FTA (PCJPB, FTA, and SHPO 2009). The PA, executed December 17, 2009, in accordance with 36 CFR Section 800.6 (b)(1)(iv), has a termination date of 2019. The stipulations set forth in the PA are included as mitigation commitments in this EIR for archaeological resources (see Section 3.4.2.3).

A data recovery and late discovery treatment plan (Far Western Anthropological Research Group 2009), a stipulation of the PA, was completed in April 2009 (see Appendix E for the PA).

Table 3.4-1. Prehistoric and Historic-Era Archaeological Sites In or Potentially In the Archaeological Study Area

Site Trinomial or Number	Site Description	Relation to Archaeological Study Area[a]
CA-SFR-15	Shell mound	Potentially in
CA-SMA-371	Shell midden capped by historic-era debris	Potentially in (buried)
P-41-498 Hamilton Shell Mound	Shell midden	Potentially in (buried)
CA-SMA-358/H	Prehistoric/protohistoric and historic-era artifact scatter	In
CA-SMA-343H	Historic trash dump	In
CA-SMA-102	Shell mound	In
CA-SMA-316	Shell midden	In
CA-SMA-317	Shell mound	In
CA-SMA-4	Large shell midden	In
CA-SMA-232	Shell midden	In
CA-SMA-318	Shell mound	Potentially in
CA-SMA-309 (C-767)	Shell mound	Potentially in
CA-SMA-233	Shell midden	Potentially in
CA-SCL-624	Shell midden	Potentially in
CA-SCL-707	Shell midden	Potentially in
CA-SCL-22	Dirt midden	In
CA-SCL-8	Large occupation site	Potentially in
CA-SCL-30/H	Habitation site w/burial	In
CA-SCL-690 Tamien Station	Large prehistoric cemetery	In
C-1	Reported burial	Potentially in
CA-SCL-448	Shell scatter	In

[a] Sites listed as potentially in the Archaeological Study Area are those whose full extent has not been determined.

In 2013, JPB identified potential construction access, staging, and storage areas within the Caltrain ROW. Additionally, JPB identified areas where OCS poles and wires would be placed partially outside the existing Caltrain ROW, and where vegetation maintenance would be required within 10 feet of the OCS pole alignment for electrical safety (as discussed in greater detail in Section 3.4.2.1, *Archaeological Study Area*, above).

All of these locations were compared with the areas of known archaeological sensitivity throughout the project area in order to determine if any are situated within sensitive areas. By comparing the maps, it was determined that the following archaeologically sensitive areas would be subject to vegetation clearance, the placement of OCS poles, or proposed staging areas:

- A proposed staging area around Railroad Avenue and 16th Avenue in San Mateo (MPs 17.1 to 18.3) overlaps with the Hamilton Shell Mound Sensitivity Zone (P-41-000498), of which the southern border is 9th Avenue. Additionally, there would be some vegetation removal in this area that is outside of the Caltrain ROW.
- Poles would be installed outside of the Caltrain ROW between MPs 44.4 and 45 in Santa Clara, which is within the Third Mission Sensitivity Zone (SCL-30/H); however the area of pole

installation is within the developed and disturbed UP ROW and thus installation is unlikely to disturb undisturbed resources, if present at this location.

- Poles would be installed outside of the Caltrain ROW, and there is a proposed staging area, at the Tamien Station, which is located within the recorded boundaries of CA-SCL-690.

Architectural History

A Historical Study Area for historical architectural resources was defined as the Caltrain ROW, the area directly affected by the Proposed Project, and the first row of parcels surrounding each of the proposed traction power facility sites. Within this Historical Study Area are all of the Caltrain railroad features, such as stations (modern and historic), signal bridges, tunnels, grade separations, culverts, bridges, viaducts, and overpasses.

Because of the passage of time, the 25 previously determined eligible and listed properties were field checked to ensure they have retained their historic integrity; none appears to have been altered since the 2008 survey. Also due to the passage of time, an additional 15 properties—14 bridges and culverts, and one commercial building—within the Caltrain ROW or adjacent to proposed traction power facilities were evaluated for historic significance; none appears to qualify as an historical resource for inclusion in the CRHR or for the purpose of CEQA (PRC Sections 5020.1[k], 5024.1, 5024.1[g]). Thus, none of the 15 is listed in Table 3.4-2.

For this analysis, five additional historic properties were added after the 2008 survey: the Jules Francard historic tree grove in Burlingame; El Palo Alto, an ancient redwood tree in Palo Alto; the Greenmeadow neighborhood in Palo Alto, 100 Block of Castro in Mountain View, and the Mountain View Adobe in Mountain View. These five properties plus the previously identified resources are listed in Table 3.4-2.

This analysis also examined the potential to affect historic architectural resources where OCS poles and wires would be placed partially outside the existing Caltrain ROW and where vegetation maintenance would be required within 10 feet of the OCS pole alignment outside the ROW for electrical safety. The locations were mapped by layering GIS information onto aerial photographs. The locations were carefully reviewed and it has been determined that 71 properties built in or prior to 1968 have vegetation within the vegetation clearance zone; no OCS poles are proposed to be located on properties with buildings constructed in or prior to 1968. These 71 properties consist of two commercial properties, two parks, and 67 residential properties and were evaluated to identify if any contain historic resources (as defined under CEQA) and if so, to determine if vegetation removal would or would not have an indirect effect on the historic significance of historic resources.

Of these 71 properties, one (1110 Old County Road, Belmont) is on the City of Belmont's Historical Resources Inventory, listed as a Historical Resource and is therefore considered a historical resource for the purposes of CEQA; it does not appear to be eligible for the CRHR. This 1907-built modest Craftsman residence is included in Table 3.4-2. One other property, the Holbrook-Palmer Park in Atherton, contains two built resources that appear to be individually eligible under Criteria 2 and 3, for their association with Charles Holbrook, one of the first San Francisco residents to establish a farming estate in Atherton, and for their noteworthy architecture. However, the park as a whole does not have adequate integrity to be considered a historic landscape.

Of the remaining 69 properties, research has indicated that none appears to have the potential to be significant under Criteria 1, 2, or 4. Six of these properties could not be adequately seen from the ROW to determine if they have the potential to be architecturally significant (Criterion 3). Research

was conducted at the San Mateo County Assessor's Office and Atherton's Building Permit Center to ascertain if the properties had been altered since their construction dates. Between the results of this research and property photographs, it was determined that four had been significantly altered. The research results for two properties, 45 and 51 Mount Vernon Lane in Atherton, were inconclusive. Therefore, for the purposes of this Project, these two properties are assumed to be eligible under CRHR Criterion 3 for their architectural significance.

Of the remaining 67 properties, none appear to be significant under Criteria 1, 2, 3 or 4, and, therefore are not considered historic resources for the purposes of CEQA.

Table 3.4-2. Properties within the Historical Study Area Listed, or Determined Eligible for Listing, in the NRHP and CRHP, or are Historic Properties for the Purposes of CEQA

Milepost	Resource Name (and Office of Historic Preservation status code)[a]	Property Type	City	County	Year Built
01.33	Tunnel No. 1[b] (3D)	Tunnel	San Francisco	San Francisco	1907
01.72	22nd Street Overpass (3D)	Overpass	San Francisco	San Francisco	1906
01.90	23rd Street Overpass (3D)	Overpass	San Francisco	San Francisco	1906
01.93	Tunnel No. 2[b] (3D)	Tunnel	San Francisco	San Francisco	1907/1936
03.19	Tunnel No. 3 (2)	Tunnel	San Francisco	San Francisco	1904–1907, 1999
04.27	Tunnel No. 4 (2)	Tunnel	San Francisco	San Francisco	1904–1907
04.95-A	Schlage Lock Factory (2)	Building	San Francisco	San Francisco	1926
09.59	Airport Boulevard Underpass (3S)	Underpass	South San Francisco	San Mateo	1927/1935
13.70	Millbrae Station/Building (1)	Station	Millbrae	San Mateo	1907
15.30 – 16.90	Jules Francard Grove (5S1)	Tree Grove	Burlingame	San Mateo	1876–1886
16.30	Burlingame Station (1)	Station	Burlingame	San Mateo	1894
17.20	East Poplar Avenue Underpass (2)[e]	Underpass	San Mateo	San Mateo	1903
17.34	East Santa Inez Avenue Underpass (2)[e]	Underpass	San Mateo	San Mateo	1903
17.45	Monte Diablo Avenue Underpass (2)[e]	Underpass	San Mateo	San Mateo	1903
17.53	Tilton Avenue Underpass (2)[e]	Underpass	San Mateo	San Mateo	1903
22.05	Craftsman residence not within Caltrain ROW(5S1)	Building	Belmont	San Mateo	1907
23.20	San Carlos Station (1)	Station	San Carlos	San Mateo	1888
27.63	51 Mount Vernon Lane (3CS)	Residence	Atherton	San Mateo	1964
27.67	45 Mount Vernon Lane (3CS)	Residence	Atherton	San Mateo	1903
27.80	Atherton Station[c](3D)	Station	Atherton	San Mateo	1913
28.10	Holbrook-Palmer Park water tower and carriage house. (Not within Caltrain ROW). (3CS)	Buildings	Atherton	San Mateo	1875 (water tower), 1896 (carriage house)
28.90	Menlo Park Station (1)	Station	Menlo Park	San Mateo	1867, 1890s, 1917
29.69	San Francisquito Bridge (2)	Bridge	Palo Alto	Santa Clara	1902
29.69	El Palo Alto (7L)	Tree	Palo Alto	Santa Clara	<1000 (est. 949)
30.10	Palo Alto Station (1)	Station	Palo Alto	Santa Clara	1940
30.13	University Avenue Underpass (2)	Underpass	Palo Alto	Santa Clara	1941
30.70	Embarcadero Underpass (2)	Underpass	Palo Alto	Santa Clara	1936

Milepost	Resource Name (and Office of Historic Preservation status code)[a]	Property Type	City	County	Year Built
N/A	Greenmeadow Neighborhood (near MP 33.6; not within Caltrain ROW) (1)	Building	Palo Alto	Santa Clara	1954–1955
N/A	100 Block of Castro Street (near Mountain View Station at MP 36.0; not within Caltrain ROW) (5S1)	Buildings	Mountain View	Santa Clara	1874–1906
N/A	The Mountain View Adobe (near MP 36.0; not within Caltrain ROW) (1)	Building	Mountain View	Santa Clara	1934–1950
44.60	Santa Clara Tower at Benton and Railroad Street[d]	Station	Santa Clara	Santa Clara	1927
44.70	Santa Clara Station (1)	Station	Santa Clara	Santa Clara	1863–64, 1877, 1885
47.35	Santa Clara Street/Alameda Underpass (part of San Jose/Cahill Station) (1)	Underpass	San Jose	Santa Clara	1933
47.50	San Jose/Cahill Station (1)	Station	San Jose	Santa Clara	1935

[a] Office of Historic Preservation status codes:
(1) Listed in the NRHP and/or CRHR.
(2) Properties previously evaluated, found eligible, and received SHPO concurrence.
(3D) SHPO concurrence of eligibility assumed as a contributor to a district.
(3S) SHPO concurrence of eligibility assumed as individually eligible.
(3CS) Property appears potentially eligible for CRHR as an individual property through survey evaluation. 45 and 51 Mount Vernon Lane, Atherton, are pending further evaluation to determine if they are potentially eligible for the CRHR.
(5S1) Individual properties recognized as historically significant by local government.
(7L) A California historical landmark designated prior to 1998 and, therefore, not evaluated for the NRHP or the CRHR.

[b] JRP Historical Consulting Services determined that Tunnels 1 and 2 (MP 01.33 and 01.93) appeared to have significance, but did not retain enough integrity to convey that significance under the criteria for listing in the NRHP and CRHR. SHPO concurred with this conclusion in a letter dated December 9, 2002. In 2002, the San Francisco Planning Department conducted an inventory and evaluation of resources located in the Central Waterfront area, including Tunnels 1 and 2. The Planning Department presented its evaluation of the tunnels to the San Francisco Landmarks Preservation Advisory Board on May 15, 2002, and the board agreed with planning staff that these two tunnels appeared to be eligible for the NRHP, and, therefore, appeared to be eligible for the CRHR. The Central Waterfront Historic District inventory is identified in the Historic Property Data File with Office of Historic Preservation status code 3 (appears eligible for listing in NRHP). Because they have been found eligible as contributors to the district, Tunnels 1 and 2 appear eligible for the NRHP and are considered to be historical resources for the purposes of CEQA. "Directory of Properties in the Historic Property Data File" for San Francisco County, as of December 2007; San Francisco Landmarks Preservation Advisory Board, 2002 Minutes, Minutes of Regular Meeting, May 15, 2002, http://www.sfgov.org/site/planning_page.asp?id=15882. See also Section 15064.5(a)(2)-(3) of the CEQA Guidelines and the criteria outlined in Section 5024.1 of the California PRC.

[c] The Atherton Station was previously found "potentially eligible for the National Register of Historic Places for its local significance as a contributor to a historic district if a historic district is established encompassing the neighborhood surrounding the depot."

[d] The tower is outside of the boundary of the NRHP-listed Santa Clara Station; it is locally recognized as a historic resource and therefore considered a historic property for the purposes of CEQA.

[e] In a separate project, the San Mateo Bridge Replacement Project, Caltrain, in cooperation with the city of San Mateo, is planning to replace these four bridges because they do not meet current seismic safety standards. The project is planned for completion by 2016.

Two railroad bridges in San Jose, the Delmas Avenue and the Prevost Avenue Bridges, which are within the Historical Study Area, were evaluated for the Caltrain Electrification Program in 2002. They were determined ineligible for the CRHR and NRHP. SHPO concurred with this finding in a letter dated December 9, 2002 (California SHPO 2002).

3.4.2.2 Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Proposed Project would be considered to have a significant effect if it would result in any of the conditions listed below.

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.

3.4.2.3 Impacts and Mitigation Measures

Impact CUL-1	Cause a substantial adverse change in the significance of historic built resources pursuant to Section 15064.5
Level of Impact	Significant
Mitigation Measures	CUL-1a: Evaluate and minimize impacts on structural integrity of historic tunnels CUL-1b: Minimize impacts on historic decorative tunnel material CUL 1-c: Install project facilities in a way that minimizes impacts on historic tunnel interiors CUL-1d: Implement design commitments at historic railroad stations CUL-1e: Implement specific tree mitigation considerations at two potentially historic properties and landscape recordation, as necessary CUL-1f: Implement historic bridge and underpass design requirements BIO-5: Implement Tree Avoidance, Minimization, and Replacement Plan
Level of Impact after Mitigation	Less than significant for all resources except possibly significant and unavoidable at Tunnel 4 and possibly for two potential historic resources affected by tree removal

Construction and Operation

There is the potential that the Proposed Project could result in a change to the significance of archaeological and historic built resources (considered "historical resources" as defined under CEQA).

There are known historic built resources in the Historical Study Area, which includes the Caltrain ROW, one parcel on either side of the traction power facility sites and areas along the ROW needed for OCS poles and/or vegetation clearance for electrical safety. Table 3.4-2 presents the identified architectural or built resources—the majority of which are related to the railroad. Significant impact on a built historical resource occurs when the project results in substantial adverse change to the physical characteristics that convey its historical significance and that justifies its inclusion in, or eligibility for, inclusion in the CRHR, or in a local register of historic resources. Potentially significant impacts are identified to some of the historic properties prior to mitigation. As discussed below, with mitigation, all significant impacts could be mitigated to a less-than-significant level with the possible exception of impacts on Railroad Tunnel 4 in San Francisco.

The discussion below provides a profile of impacts and mitigation for the historic built resources potentially affected by the Proposed Project.

Railroad Tunnels 1, 2, 3, and 4, San Francisco

There are three different Proposed Project potential impacts on the tunnels: notching of the inside of tunnel to provide clearance for the OCS infrastructure above freight and passenger trains; removal of a portion of the decorative stone portals outside the tunnels when notching; and installation of OCS infrastructure in the tunnel lining.

Tunnel Notching

The Proposed Project requires that the tunnels' lining be notched by crown mining to achieve the clearances needed to accommodate electrified train operations and existing freight trains[2]. These tunnels are listed on the CRHR as meeting Criteria 1 because the tunnels were key elements of the Bayshore Cutoff, which was an important development in Southern Pacific's system-wide modernization at the turn of the 20th century. They also meet Criteria 3 for their distinctive architectural and engineering qualities. The tunnels are important for their unusual drift-and-core bracing method of construction, as well as their use of decorative brick and masonry accents at each portal or tunnel entrance.

The removal of historic brick fabric along the length of the tunnels' interior crown could result in a change to the tunnels' historic integrity if removal results in the loss of structural integrity such that new, modern materials must be introduced to achieve structural stability. Mitigation Measure CUL-1a would require the minimization of any impacts on the tunnels' structural integrity.

Removal of Decorative Stone Portals

The Proposed Project requires that the tunnels' decorative stone portals also be notched by crown mining to achieve the clearances needed to accommodate electrified trains, existing diesel trains, and existing freight trains. Additionally, the removal of the historic fabric may affect the round-arch shape of the portal or remove enough stone material such that the massing of the feature is diminished to the point that it no longer retains its visual character. At the crown of the portals for Tunnels 1 and 3, between 0.10 and 0.25 feet (1 to 3 inches) would be removed. At the crown of Tunnel 4 portals, an estimated 0.50 to 1.75 feet (6 to 21 inches) would be removed. Mitigation Measure CUL-1b would require gradually "feathering" the removal of the historic fabric out from the notch to minimize the visual impact of the alteration for these portals. The greater the amount of historic material that is removed and the more the original design is altered, the greater the likelihood that the impact cannot be reduced to a less-than-significant level. At this time, impacts on Tunnel 1 and 3 would be less than significant with mitigation, but, due to the extent of historic material removal required at Tunnel 4, it is possible that mitigation would not reduce the impact to a less-than-significant level at the Tunnel 4 portals.

OCS Infrastructure Attachment to Tunnels

Power system supports, for the OCS, required for the Proposed Project would be installed within Tunnels 1, 2, 3, and 4. The installation of the power system has the potential to remove historic fabric from the interior of the tunnels, alter the surface of the interior of the tunnels with the installation of support brackets, and cause visual impacts if the systems are visible from the exterior of the tunnels. The addition of these non-historic systems in conjunction with the crowning of Tunnels 1, 3, and 4 would result in a significant impact (Tunnel 2 would not require crowning). The

[2] As discussed in Chapter 2, *Project Description*, the Proposed Project is being designed to accommodate the existing passenger and freight heights and future EMU heights.

implementation of specific design requirements contained in Mitigation Measure CUL-1c would reduce impacts to a less-than-significant level by avoiding impacts visible from the exterior of the tunnels.

The following mitigation is proposed.

Mitigation Measure CUL-1a: Evaluate and minimize impacts on structural integrity of historic tunnels

A structural investigation shall be conducted prior to the removal of any historic fabric to evaluate probable effects on each tunnel's structural integrity, followed by the development of a design approach and construction methods to avoid affecting structural integrity. While the notching would remove historic fabric, retained structural integrity will ensure that this historic method of construction will retain integrity.

Mitigation Measure CUL-1b: Minimize impacts on historic decorative tunnel material

Prior to any removal of decorative tunnel portal material during crown mining of historic Tunnels 1, 3, and 4, a structural investigation shall be conducted to evaluate the probable effects on the structural integrity of the tunnel portals. Also prior to the removal of the historic material, depending upon the extent of the material to be removed, the portal may be recorded to the Historic American Engineering Record (HAER) standards level III (refer to http//www.nps.gov/history/hdp/). Additionally, also depending upon the extent of the material to be removed, the Secretary of the Interior's standards (SOIS) for the rehabilitation of historic properties may be followed in the design and implementation of the adaptation of the tunnels to accommodate the larger rolling stock (refer to http//www.nps.gov/tps/standards.htm).

A structural investigation shall be conducted to identify construction disturbance to the decorative portals If it is determined that more than 4 inches of material must be removed from the portals of any of the tunnels, a visual simulation depicting the removal shall be prepared to assess the visual impacts and to determine if the portal(s) will need to be recorded according to HAER standards and if the SOIS need to be applied. If the maximum amount of material to be removed is 4 inches or less, removal of the decorative tunnel material shall be "feathered" from the maximum removal at the keystone to the sides of the tunnels, maintaining the round arch.

Mitigation Measure CUL-1c: Install project facilities in a way that minimizes impacts on historic tunnel interiors

Power system supports for the Proposed Project inside Tunnels 1, 2, 3 and 4 shall be placed sufficiently far back to not be readily visible, and attached to the tunnels' interiors using methods that are either removable or may be cut off at the tunnels' lining surface.

At Tunnels No. 1, 2, and 3, the OCS shall be attached to the interior roof surface of the tunnel by brackets inserted into the brick lining. Installation of the main support soffit plates would require the permanent installation of eight epoxy grouted stainless bolts at each support. These bolts shall be cut off at the tunnel lining, resulting in little evidence of any modification. The remainder of the tunnel-support arrangements and the parallel feeder cables shall be completely removable. In addition, pole sets shall be installed at the portals of each tunnel. For Tunnel Nos. 1–3, side poles shall be used with power systems over the individual tracks that the poles power. The brackets within the tunnel interiors shall be set inside the tunnel mouth

sufficiently far back that they would not be readily visible to passers-by or to those standing on the passenger platforms.

At Tunnel No. 4, the system shall also be attached to the interior roof surface of the tunnel by brackets inserted into the brick lining. Installation of the main support soffit plates would require the permanent installation of eight epoxy grouted stainless bolts at each support. These bolts could be cut off at the tunnel lining, resulting in little evidence of any modification. The remainder of the tunnel support arrangements and the parallel feeder cables shall be completely removable. In addition, pole sets shall be installed at the portals of each tunnel. For Tunnel No. 4, the pole sets shall support a headspan to support the power system over multiple tracks. The brackets within the tunnel interiors shall be set inside the tunnel mouth sufficiently far back that they will not be readily visible to passers-by or to those standing on the passenger platforms (particularly at Tunnel No. 4's southern portal, the Bayshore Station).

Railroad Stations

The Proposed Project would install OCS poles and wires adjacent to seven of eight historically significant railroad stations. Due to the location of poles and OCS in relation to seven of eight stations, impacts would be less than significant. At the eighth station, Diridon Station, the OCS would be placed on the passenger platforms and extend through the existing umbrella sheds used as passenger shelters. Because these shelters are a contributing feature of this NRHP-listed station, impacts at this location would be significant, but can be mitigated through mitigation identified below. Impacts by station are discussed below.

Millbrae Station, MP 13.70 (Built 1907)

The original Millbrae Station was located south of Millbrae Avenue whereas the current Millbrae Station is located north of Millbrae Avenue. The historic Millbrae Station was listed on the NRHP in 1978 at the local level of significance. The station is described as "typical of those built in the early 1900s" and is significant to the growth and prosperity of the community. Significant features are limited to the exterior of the building itself; no adjacent buildings, structures, or objects are included in its statement of significance. To avoid potentially significant impacts, Mitigation Measure CUL-1d includes specific design commitments. With mitigation, the installation of poles in this location would have no adverse impact on the attributes that made the Millbrae Station eligible for listing in the CRHR and the NRHP, or on those attributes listed in the preservation covenant. The station structure itself would not be altered at all. Because the operating Caltrain station itself was previously moved from its original location closer to Millbrae Avenue, and its setting has already been substantially altered by modern development and construction in its immediate vicinity.

Burlingame Station, MP 16.30 (Built 1894)

The Burlingame Station was listed on the NRHP and CRHR in 1978 at the state level of significance. The station, formed by three sections (baggage room, waiting room, and station master living quarters), was built in 1893 in the Mission Revival style and is located west of the current tracks. No other resources were listed as part of the station other than the station building itself. To avoid a potentially significant impact, Mitigation Measure CUL-1d includes specific design commitments. With mitigation, the installation of poles in this location would have no adverse impact on the attributes that made the Burlingame Station eligible for listing in the NRHP and the CRHR. The station would not be directly affected by construction, and its setting has already been substantially

altered by modern development and construction in its immediate vicinity. None of the features listed in the preservation covenant would be affected by the Proposed Project.

San Carlos Station, MP 23.20 (Built 1888)

The San Carlos Station was listed on the NRHP and CRHR in 1984 at a state level of significance. It was described as a Richardsonian Romanesque building with a high level of integrity. The station was listed as eligible under NRHP/CRHR Criterion 1/A for its association with the development of the town of San Carlos and under Criterion 3/C "for the quality of its architecture and the rarity of the Richardsonian Romanesque style for California railroad buildings." No contributors were listed with the building. A 1999 grade separation raised the active line approximately 15 feet. The proposed design would be to install OCS poles on the modern elevated structure well above the historic structure such that the OCS pole and wires will be part of the modern grade separation structure and not associated with the historic station. The station would not be directly affected by construction and, as noted above, its setting has already been substantially altered by construction of the grade separation project embankment in 1999. None of the significant features listed in the preservation covenant would be affected by the Proposed Project. Thus, impacts at this location would be less than significant.

Atherton Station, MP 27.80 (Built 1913)

The Atherton Station was evaluated in 1983 as likely eligible as a contributor to a historic district, should one be identified. The station reflects the high architectural quality of the spacious contemporary homes on large lots surrounding it. Consequently, it is considered eligible under Criterion 3/C for its architectural quality, despite the 1954 additions that are reversible and do not detract from its original design. The historic station structure is located east of the tracks. The proposed design includes OCS poles and wires installed near the current location of the historic station. To avoid a potentially significant impact, Mitigation Measure CUL-1d includes specific design commitments. With mitigation, the installation of poles in this location would have no adverse impact on the attributes that make the Atherton Station appear to meet the criteria for listing in the NRHP and CRHR, and the station itself would not be directly affected by the Proposed Project construction.

Menlo Park Station, MP 28.90 (Built 1867, 1890s, 1917)

The Menlo Park Station was listed in the NRHP and CRHR in 1974 at a local level of significance. Built in 1867, it was modified in the 1880s and 1890s to its current condition, significant under Criterion 3/C for the "picturesque cottage style" of the original building and added decorative elements of the Shingle style in the subsequent modifications. Only the building was listed; no other associated resources were identified as contributors. The station is located east of the tracks. To avoid a potentially significant impact, Mitigation Measure CUL-1d includes specific design commitments. With mitigation, the installation of poles in this location would have no adverse impact on the attributes that make the Menlo Park Station eligible for listing in the NRHP and CRHR; the station would not be directly affected by construction, and modern previous improvements to the station area and in its immediate vicinity have already altered the original station setting. None of the significant features specified in the covenant agreement would be affected by the Proposed Project.

Palo Alto Station, MP 30.10 (Built 1940)

The 1996 NRHP and CRHR listing of the Palo Alto Station name two buildings and two objects as the historic property. The property is an example of the Streamline Modern style of architecture, listed under Criterion 3/C. The historic structures are both east and west of the tracks (confirm). Poles and OCS would be installed near the current location of the historic station. To avoid a potentially significant impact, Mitigation Measure CUL-1d includes specific design commitments. With mitigation, the installation of poles in these locations would have no adverse impact on the attributes that make the Palo Alto Station eligible for listing in the NRHP and the CRHR, and none of the resources listed in the nomination would be directly affected by the installation of the poles. Only the setting of the tracks would be slightly affected, in that the poles would be installed between the sets of tracks, and would extend over them, at this location. This, however, is a less-than-significant impact.

Santa Clara Station and the Station Tower, MP 44.70 (Built 1863-4, 1877, 1885)

Placed on the NRHP and CRHR in 1985, this station was identified as the oldest continually operating passenger depot in California, dating back to 1863. It was moved in 1877 and a freight warehouse was added. It was rehabilitated in 1990 following the Secretary of the Interior's guidelines. The nomination was expanded to include the depot and three related resources, including the control tower, the speeder shed, and utility shed, located approximately 400 feet north of the station. The property as a whole is listed as eligible under Criterion 1/A for its association with the original development of rail transportation in California; the tower is considered eligible under Criterion 3/C. The historic covenant includes the station and freight-house building. The station and contributing resources would not be directly affected by construction, and modern previous improvements to the station area and in its immediate vicinity have already, to a substantial degree, affected the original station setting. The original station was located adjacent to an active freight and passenger track in a relatively sparsely settled agricultural area east of the old Santa Clara mission; its current setting is a combination of industrial and commercial buildings, modern streets, and a large and active railroad freight yard.

Poles and OCS would be installed near the current location of the historic station and the contributing structures such as the control tower. To avoid a potentially significant impact, Mitigation Measure CUL-1d includes specific design commitments. With mitigation, the installation of poles in these locations would have no adverse impact on the attributes that made the Santa Clara Station, its tower or sheds eligible for listing in the NRHP and CRHR, nor would OCS installation affect features described in the preservation covenant.

San Jose Diridon Station (Built 1935)

The Proposed Project includes the installation of poles for headspans and OCS that would extend through the butterfly passenger shelters or "umbrella" sheds on the Caltrain platforms of the Diridon Station (formerly the Cahill Station). Figure 3.4-1 shows the butterfly passenger shelters. These shelters are contributing elements to the Cahill Station National Register Historic District and are a historic resource under CEQA. The district is composed of six related resources: the main terminal building, the passenger butterfly shelters, the tunnels connecting the terminal to the platforms, car-cleaner shed, water tank, and the Alameda Underpass (grade separation). The butterfly passenger shelters are the only historic district resource that would be directly impacted at the Diridon Station. The installation of poles and OCS at the Diridon Station could result in a change to the historic district. Mitigation Measure CUL-1e would reduce impacts to a less-than-significant

Source: ICF 2013.

Graphics . . . 00606.12 (8-15-13)

Figure 3.4-1
Butterfly Passenger Shelters at Diridon Station
Peninsula Corridor Electrification Project

level by requiring the OCS to be installed without significantly impacting the historic integrity of this district contributor.

The following mitigation measures were developed with the specific stations' historic character-defining features and contributors considered, as defined in their eligibility statements or NRHP nominations, which vary. When proposing Historic American Building Surveys (HABS), the current setting for each station was considered, which varies with regard to how substantially the current setting has already been altered by modern development. Consequently the proposed mitigation for each station varies as appropriate and is not uniform.

Mitigation Measure CUL-1d: Implement design commitments at historic railroad stations

Millbrae Station

Side poles shall not be placed in front of or within 40 feet of the historic station on the west side of the Caltrain ROW. In addition, to minimize the visual intrusion of the poles, one of the following arrangements will be used for areas along the alignment within 100 feet on either side of the historic station:

- center pole/two-track cantilevers between MT1 and MT2 with side poles for the Millbrae siding, or
- a two-track cantilevers east of MT2 covering MT2 and MT1 with side poles for Millbrae siding.

Additionally, prior to the installation of the OCS, the station will be recorded to HABS level III standards from the track side of the building, from the opposite platform.

Burlingame Station

Side poles shall not be placed in front of or within 40 feet of historic station on the west side of the Caltrain ROW. In addition, to minimize the visual intrusion of the poles, one of the following arrangements will be used for areas along the alignment within 100 feet on either side of the historic station:

- center pole/two–track cantilevers; or
- two-track cantilevers from the east side platform.

Additionally, prior to the installation of the OCS, the significant portions of the property (i.e., the baggage room, waiting room, and the station master living quarters which together make up the current station) will be recorded to HABS level III standards from the track side of the building, from the opposite platform.

Atherton Station

Side poles shall not be placed in front of or within 40 feet of historic station on the west side of the Caltrain ROW. In addition, to minimize the visual intrusion of the poles, within 100 feet on either side of the historic station, one of the following shall be used:

- center pole/two–track cantilevers; or
- single cantilevers in the median between the two tracks.

Additionally, prior to the installation of the OCS, the station will be recorded to HABS level III standards from the track side of the building, from the opposite platform.

Menlo Park Station

Side poles shall not be placed in front of or within 40 feet of historic station on the west side of the Caltrain ROW. In addition, to minimize the visual intrusion of the poles, one of the following arrangements will be used for areas along the alignment within 100 feet on either side of the historic station:

- center pole/two–track cantilevers; or
- two-track cantilevers from the east side platform.

Additionally, prior to the installation of the OCS, the station will be recorded to HABS level III standards from the track side of the building, from the opposite platform.

Palo Alto Station

Side poles shall not be placed in front of or within 40 feet of historic station on the west side of the Caltrain ROW. Given the separation between MT1 and MT2, single center poles are not feasible. Thus, to minimize visual impacts on the property, single pole/cantilevers will be placed in the median between MT1 and MT2.

Additionally, prior to the installation of the OCS, the station will be recorded to HABS level III standards from the track side of the building, from the opposite platform.

Santa Clara Station and the Station Tower

Side poles shall not be placed in front of or within 40 feet of historic station or the other historic structures (control tower, etc.) on the west side of the Caltrain ROW. Poles in front of the historic station should be center pole single cantilevers for MT2 and MT3 where parallel to the historic station. Side poles can be used for MT1 and placed on the modern center platform.

Side poles on the western side of the ROW shall be located near non-historic features, to the extent feasible as follows:

- A pole at the northern end of the station can be located near the modern steel and glass passenger waiting shelter.
- A pole at the southern end of the station can be sited east of the old set of tracks nearest the historic station (retained as an example of the relationship of the station to the original line and no longer operative) set in the modern poured concrete passenger platform and located among the modern electroliers on this platform.
- Poles shall not be located near the speeder shed or the utility shed.
- Poles can be located to each side of the control tower, one between the tower and the stub of Benton Street, the other more than 50 feet to the north.

Additionally, prior to the installation of the OCS, the station will be recorded to HABS level III standards from the track side of the building, from the opposite platform.

San Jose Diridon Station

At the San Jose Diridon Station the OCS design shall utilize a headspan. No poles shall be installed within the butterfly shelters between Tracks 2 and 3 and between Tracks 4 and 5.

Historic Properties along the Caltrain ROW Potentially Affected by Vegetation Clearance

To create safety clearance for the OCS, trees would be pruned or removed from potentially historic residential properties at 45 and 51 Mount Vernon Lane in Atherton. Because these two properties are 50 years old or more and were not visually accessible, for the purpose of this Project they are assumed to be historic resources eligible for their architectural significance. Research did not find that either is eligible for their association with historic events or persons of historic significance when applying Criteria 1 and 2 of the CRHR. Given that the potential historic resource nature of these two properties is unknown at this time, it was presumed that the mature trees near the Caltrain ROW might be part of the historic resource of these residential properties, if they are indeed historic resources. The Proposed Project would require removal of some of the trees within approximately 10 feet of the Caltrain ROW on these two properties. This is considered a potentially significant impact pending resolution of the historic resource nature of these two properties. Mitigation Measure BIO-5, in Section 3.3, *Biological Resources*, requires the JPB to implement a Tree Avoidance, Minimization, and Compensation Plan. Depending on the site-specific implementation of Mitigation Measure BIO-5, tree removal on these two properties may be avoided, minimized or compensated through replanting such that no significant effect would occur to these potentially historic properties. However, the feasibility of avoiding, minimizing, or replanting on these properties will not be known until detailed design of the OCS itself is completed. Mitigation Measure CUL-1e would also be required. At this time, it is unknown whether the properties are historic resources, whether the Proposed Project would have a significant impact on their historic character due to tree removal, and whether tree mitigation would avoid significant impacts; therefore, it is presumed that this impact is potentially significant and unavoidable.

Mitigation Measure CUL-1e: Implement specific tree mitigation considerations at two potentially historic properties and landscape recordation, as necessary

Access to properties at 45 and 51 Mount Vernon Lane in Atherton needs to be gained and historic resources evaluation completed prior to the removal of vegetation. If either of the residences proves to be CRHR-eligible, and the trees requiring removed for the project are character-defining features from the historic period of significance, or if the removal of the vegetation has the potential to visually impact the historic property, the preparation of specific tree avoidance, minimization, and/or compensation plans pursuant to Mitigation Measure BIO-5 shall take into account the historic character of the properties. If avoidance or minimization is not feasible, then replanting shall be conducted on the properties, if feasible. Regardless of the tree mitigation implemented, if the properties are determined to be CRHR-eligible, then the JPB shall have a qualified architectural historian record the landscape using Historic American Landscape Survey Standards level 3 prior to any project vegetation removal.

Other Built Resources

The Proposed Project's potential impacts on other historic built resources are discussed below.

22nd Street and 23rd Street Overpasses, San Francisco

The installation of OCS power supports and/or barrier enhancements would not require extensive physical changes to the historic properties, their use, nor their character defining features. These project activities would introduce some new materials to the overpasses and their setting, but the existing barriers on the bridges are modern additions and the setting has already been substantially altered since their original construction. Furthermore, the addition of these facilities would not cause a significant visual impact by the placement of additional infrastructural elements to a corridor already substantially altered, and would not diminish the integrity of the properties' significant historic features such that they would no longer contribute to the previously determined eligible Central Waterfront historic district. Thus the impacts on the these resources would be less than significant and no mitigation is identified

Schlage Lock Factory Main Building, San Francisco

Poles and OCS would be installed in the Caltrain ROW running east of the building, the only extant plant building and the only plant building on the property to be determined to be a historical resource. The Main Building was one of a group of buildings interconnected with a modern warehouse; the other buildings have been previously demolished. The poles would be located along the railroad line at a substantial distance from the Main Building. The installation of poles in this location would have no adverse impacts on the attributes that make the Main Building appear to meet the criteria for listing in the CRHR, and the building would not be directly impacted by construction. Thus, the impacts on this resource would be less than significant and no mitigation is identified.

Airport Boulevard Underpass, South San Francisco

The California Division of Highways and the Southern Pacific Railroad completed the Airport Boulevard Underpass (also known as the South San Francisco Subway) in 1927 and later widened the structure in 1935. The construction and widening are elements in the history of Peninsula highway development and the early 20th-century grade-separation movement, and is representative of the architectural/engineering development of underpass design. The South San Francisco Subway is therefore historically significant and has been determined eligible for listing in the CRHR and NRHP under Criteria 1/A and 3/C.

The installation of the OCS power system supports on this historically significant bridge could result in significant adverse impacts. To avoid a potentially significant impact, Mitigation Measure CUL-1f includes specific design commitments. Because the cables would be suspended above and parallel to the existing line, there would be no impact on the characteristics of the bridge that make it appear to meet the criteria for listing in the CRHR and NRHP. Additionally, its immediate vicinity has already been altered, so the addition of the power system would not impact the bridge's setting. Thus, the impacts on this resource would be less than significant and no mitigation is identified.

Jules Francard Grove of Eucalyptus Trees, Burlingame

The Jules Francard Grove of blue gum (*Eucalpytus globulus*) eucalyptus trees is on the east side of California Drive, from Burlingame Avenue to Palm Drive in the city of Burlingame. The city of Burlingame Park Department designated the tree row as a heritage grove in 1976. The heritage designation form states that the trees were probably planted between 1876 and 1886, about the same time that the Howard-Ralston Eucalyptus Tree Rows along El Camino Real in Burlingame,

recently listed on the NRHP, was planted. The designation form describes the Jules Francard Grove as a "densely planted double row along the railroad tracks" and says that it "provides a tall dramatic silhouette in [the] center of town." It further states that this tree row is the most densely planted of any in Burlingame (City of Burlingame 1976). A letter from the Burlingame City Clerk to Mr. B. B. Vodicka, Agent of the Southern Pacific Company, dated June 22nd, 1916, states that the grove was designated a public park and dedicated to the people of Burlingame in 1910, to be "forever held, maintained, kept and preserved" (Burlingame City Clerk 1916).

At present, pruning and vegetation maintenance is conducted to ensure no branches fall on the tracks. The OCS alignment would be placed between the trees and the tracks. Based on current design, one tree would need to be removed to accommodate the Proposed Project and approximately 30 trees would require some pruning, but not removal, within the electrical safety zone (see details in Appendix F, *Tree Inventory and Canopy Assessment*). The views of this grove along the adjacent streets in the City of Burlingame would be unchanged as the pruning would occur on the Caltrain ROW sides of the grove. A visual simulation in Section 3.1, *Aesthetics,* shows the effect of vegetation removal on part of the grove. The overall appearance of the grove would not be substantially changed and the vast majority of the trees would be retained. The pruning would be conducted by a qualified arborist or under the supervision of a qualified arborist to ensure that the pruning would not jeopardize the health of the trees.

Due to the limited amount of project disturbance to the grove, the insubstantial changes in appearance overall, no change in appearance from city streets, and no substantial observable change in views from the train to the adjacent grove, the grove would continue to contain its character-defining features as a historic grove. Thus, Proposed Project impacts are considered less than significant. No mitigation is necessary.

East Poplar Avenue Underpass, East Santa Inez Avenue Underpass, Monte Diablo Avenue Underpass, Tilton Avenue Underpass, San Mateo

These four essentially pre-automobile underpasses are significant at the local level, under CRHR and NRHP Criterion 3/C based upon their distinctive characteristics of type, period, and method of construction. The underpasses are rare examples of their type and period, and they illustrate an important phase in development of underpass design. They are the earliest grade separations along the former Southern Pacific Coast Line (now Caltrain) between San Francisco and San Jose, and they are among a small group of such structures within the state. These four bridges have been found to not meet current seismic safety requirements. In a separate project, Caltrain, in cooperation with the city of San Mateo, is planning to demolish and replace these bridges by 2016. Thus, this Proposed Project will have no effect on these historic bridges as the OCS will be installed on the new bridges.

1110 Old County Road, Burlingame

This modest Craftsman residence was built in 1907 and is listed on the City of Belmont's Historical Resources Inventory as a Historical Resource. The highest level of historical significance in Belmont is "landmark" so this building is considered moderately significant. Because it is locally listed as a historic resource, it is a historic resource for the purposes of CEQA.

This track-side residence, while outside of the ROW, is within the vegetation removal zone to accommodate OCS. Field review of the building has shown that it has been altered since it was constructed and that there are newer structures on the parcel that have also altered its setting.

Because the setting appears to retain no historical integrity, the removal of trees along the parcel boundary and the Caltrain ROW, are considered less than significant. No mitigation is necessary.

Holbrook-Palmer Park, Atherton

The 22-acre Holbrook-Palmer Park, located on the east side of Watkins Avenue, in the city of Atherton was originally a farming estate established in 1875. Only two buildings, the 1875-built water tower, and the second carriage house, built in 1896, are extant from the historic period. Both appear to be individually eligible for the CRHR for their architecture (Criterion 3). Although the original parcel boundaries have not changed, due to the significant alterations that have taken place since 1963, when it was first established as a public park, the property as a whole does not contain adequate integrity to be considered a historic landscape.

This track-side property, while outside of the ROW, is within the vegetation removal zone to accommodate OCS. Because the property lacks integrity to be considered a historic landscape, further altering the setting of the two individual historic resources by the removal of trees along the parcel boundary and the Caltrain ROW, is considered less than significant. No mitigation is necessary.

San Francisquito Bridge, Palo Alto

The installation of the power system supports on this historically significant bridge could result in significant adverse impacts. San Francisquito Bridge, a steel through-truss bridge, is eligible under Criterion 1 for its association with the image and development of Palo Alto in the 20th century, and under Criterion 3 for being the only significant steel bridge in Palo Alto and a distinctive example of an important standard type of truss bridge. Substantial alteration of the bridge structure could be a significant impact. With implementation of Mitigation Measure CUL-1d, the historic resource would not be altered other than the small clearance holes, and the cables would be suspended above and parallel to the existing railroad line. Thus, with mitigation there would be no significant impact on the characteristics of the bridge that make it appear to meet the criteria for listing in the CRHR.

El Palo Alto, Palo Alto

A large ancient redwood tree, known as "El Palo Alto," is located adjacent to the Caltrain ROW in Palo Alto. The tree has been recognized through at least three historic preservation programs, both locally and statewide, and is identified as California State Historic Landmark #2, a State Point of Historic Interest, and City of Palo Alto Heritage Tree #1. The state landmark status (Landmark #2) was conferred in 1954. Because SHPO did not develop specific uniform standards for landmark designation until well after many resources had been identified, landmarks with a number lower than 770 and recognized as state historic landmarks prior to 1998 are not considered to have been evaluated for the CRHR. Nevertheless, the tree is described as follows in SHPO's published list of state landmarks: "Portola Journey's End. In 1769 the Portola expedition of 63 men and 200 horses and mules camped near El Palo Alto, the tall tree. They had traveled from San Diego in search of Monterey but discovered instead the Bay of San Francisco. In 1974, the tree was designated as State Point of Historic Interest #SCL-026, in recognition of its local significance (Office of Historic Preservation 2014). A City of Palo Alto press release states that the tree is estimated to be more than 1,000 years old and more than 110 feet high (San Jose Mercury News 2004).

The tree would not be impacted by the Proposed Project because all power system supports would be attached to the adjacent San Francisquito Bridge. Thus, the impacts on this resource would be less than significant and no mitigation is identified.

University Avenue Underpass, Embarcadero Underpass, Palo Alto

The University Avenue Underpass, built between 1939 and 1941, is significant under CRHR and NRHP Criterion 1/A for its association with the transformation of Palo Alto's transportation core, and is central to the redesign of University Avenue as it intersected two of the most historically important transportation corridors between San Francisco and San Jose: Southern Pacific's Coast Line and El Camino Real/U.S. Highway 101. The Embarcadero Underpass, constructed in 1939 as part of the government's grade separation program, is eligible under CRHR and NRHP Criterion 1/A. The installation of the power system supports on these historically significant bridges could result in significant adverse impacts. To avoid a potentially significant impact, Mitigation Measure CUL-1d includes specific design commitments. Under this mitigation measure, the cables would be suspended above and parallel to the existing line and there would be no impact on historic fabric of these bridges, nor would the placement of the poles alter the use of or character-defining features of these underpasses that make them appear to meet the criteria for listing in the CRHR and NRHP. Additionally, the immediate vicinities of the underpasses have already been altered, so the addition of the power systems would not impact the bridges' settings. Thus, the impacts to these resources would be less than significant and no mitigation is identified.

Greenmeadow Neighborhood, Palo Alto

The Greenmeadow Neighborhood in Palo Alto is a residential district listed on the NRHP on July 28, 2005. Greenmeadow consists of 243 single-family homes and one community center complex of two buildings and one swimming pool. The subdivision was developed by Eichler Homes, Inc. between 1954 and 1955. The single-story homes, designed by architects A. Quincy Jones and Frederick Emmons, have three or four bedrooms, two bathrooms, and attached garages. The homes are designed in a mid-century modern style and were built with a slab-on-grade post-and-beam construction. The designs emphasize privacy on the relatively blank street facades and openness to the rear with floor-to-ceiling, wall-to-wall plate glass windows. The district was listed at the state level of significance under Criterion C in the area of architecture as an excellent example of Joseph Eichler's mid-century modern subdivision housing in California. Eichler made a significant contribution in the area of modern home design and innovative construction methods. Working closely (and alternately) with architects Anshen and Allen, and Jones and Emmons, Eichler wished to offer middle-class families high-quality, contemporary design in an affordable production house. Greenmeadow is an excellent example of Joseph Eichler's contribution to mid-century residential modernism and the California suburban environment. When Eichler developed Greenmeadow in 1953, he had already built hundreds of lower priced, architect-designed homes in more than a dozen subdivisions on the Peninsula. With Greenmeadow, Eichler decided to move up the price range and tap into the growing market for larger houses with more amenities (California Office of Historic Preservation).The district is bounded by Nelson Drive, El Capitan Place, Adobe Place, and Creekside Drive.

Paralleling Station 5 (PS-5), Option 1 is proposed between the railroad and Alma Avenue, outside of the district boundaries; it therefore it has no potential to directly impact the historic district.[3] The proposed PS5, Option 1 would be opposite the entrance to Greemeadow Way, which leads into the district; the residences on Alma Avenue, opposite the proposed PS5, Option 1, are not included in the NRHP district. This paralleling station would not diminish the historic character-defining features of the historic district by introducing a visual change to the district. PS5, Option 1 would be visible only by individuals leaving the historic district by way of Greenmeadow Way. The closest homes in the district to the proposed paralleling station are oriented facing Creekside Drive, opposite from Alma Avenue; the homes on the second block of Creekside Drive face each other and not toward the proposed PS5, Option 1. Continuing northeast on Creekside Drive is the community center, a significant distance from the proposed PS-5, Option 1. This is not the main entrance to the center, but a footpath. The mature landscaping of this area of the community center further blocks any potential visual impact. Therefore the Proposed Project would have no impact on this historic resource.

100 Block of Castro Street, Mountain View

Several buildings on the 100 block of Castro Street, southwest of the Mountain View Station, are on the Mountain View Register of Historic Resources Property List (City of Mountain View2004). These include the Weilheimer Store, 124 Castro (built in 1874); the First National Bank, 142-156 Castro (built in 1913); the Ames Building, 169-171-175 Castro (built in 1903); and the Mockbee Building, 191 Castro (built c1906). The proposed addition of OCS power lines on the opposite side of the station, along the rail line, would not result in a visual impact to any of these buildings. All of the buildings on the 100 block of Castro Street face each other and are not oriented toward the Proposed Project. Additionally, because the area's setting already contains overhead power lines and has been altered by the addition of modern infrastructure and buildings, the Proposed Project would not diminish the integrity of the buildings' significant historic features or setting. Thus, the impacts on this resource would be less than significant and no mitigation is identified.

The Mountain View Adobe, 157 Moffett Boulevard, Mountain View

The Mountain View Adobe was listed on the CRHR and the NRHP in 2002; it is significant under Criteria 1/A and 3/C, and its period of significance is 1934–1950. Under Criterion 1/A, the Mountain View Adobe is significant for its continued role as a public building central to the development of the Mountain View community and as a building constructed under the Civil Works Administration. The building is also significant under Criterion C: Design/Construction, because it embodies the distinctive characteristics of a 1930s community building type, of adobe and concrete construction. The nomination is limited to the building itself. The nomination states that the "outlying peripheral areas of the property no longer retain integrity and do not contain any significant features." Because the setting is not a character-defining feature of this property, the introduction of additional power poles and lines in its vicinity would not diminish the integrity of the building's significant historic features. Furthermore, the Proposed Project's impacts would be on the opposite side of Central Expressway from the Mountain View Adobe and thus would be in previously altered areas not considered part of the historic resources. The impacts on this resource would be less than significant and no mitigation is identified.

[3] PS5 Option 2 is located on the west side of the Caltrain ROW adjacent to commercial area and is not near the Greenmeadow neighborhood.

Alameda Underpass, San Jose

The Alameda Underpass is a contributing element of the NRHP and CRHR listed Cahill/Diridon Station. The underpass is located about 500 feet to the north of the depot. Built between 1932 and 1935, the depot and its contributors, including the station, several vernacular sheds, a water tower, butterfly passenger shelters and the Alameda Underpass are listed under CRHR and NRHP Criterion 3/C, for their architectural values. The installation of the OCS supports on this historically significant bridge could result in significant adverse impacts. To avoid a potentially significant impact, Mitigation Measure CUL-1d includes specific design commitments. Because the cables would be suspended above and parallel to the existing line, there would be no impact on the characteristics of the bridge that make it appear to meet the criteria for listing in the CRHR. Additionally, its immediate vicinity has already been altered, so the addition of the power system would not impact the bridge's setting. Thus, the impacts on this resource would be less than significant and no mitigation is identified.

Mitigation Measure CUL-1f: Implement historic bridge/underpass design requirements

This mitigation measure addresses the approach to installing Proposed Project facilities at nine historic bridges/underpasses to ensure that the power system supports are not attached to the historic fabric of these bridges/underpasses and avoid adverse impacts on their historic integrity and visual appearance.

Airport Boulevard Underpass or South San Francisco Subway

Rather than installing the power system directly onto the bridge, power cables shall be suspended parallel to and above it to ensure that the bridge will not be impacted. The pole sets shall support a headspan that crosses the track at the same angle as the roadway beneath.

San Francisquito Bridge, Palo Alto

The OCS cables shall be suspended from the upper portions of the San Francisquito Creek Bridge truss. The power cables shall use fasteners and brackets to support the power lines. The brackets shall be attached to the existing structure, but no part of the existing structure shall be removed as a part of the Proposed Project. Installation of the main support brackets shall require no permanent modification to the bridge structure and shall be completely removable. Installation of the static wire grounding brackets will require site drilling of eight 5/8-inch-diameter clearance holes, with the brackets completely removable. No poles shall be set on the bridge itself.

University Avenue Underpass, Embarcadero Underpass, Palo Alto

Power cables shall be suspended parallel to and above the University Avenue Underpass. The poles in this configuration shall be set at the side of the track they power. No poles shall be set on the bridges themselves.

Alameda Underpass, San Jose

Power cables shall be suspended parallel to and above the Alameda Underpass. Pole sets shall support a headspan that crosses the track at the same angle as the roadway beneath. No poles shall be set on the bridge itself.

Impact CUL-2	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5
Level of Impact	Significant
Mitigation Measures	CUL-2a: Conduct an archaeological resource survey and/or monitoring of the removal of pavement or other obstructions to determine if historical resources under CEQA or unique archaeological resources under PRC 21083.2 are present CUL-2b: Conduct exploratory trenching or coring of areas where subsurface project disturbance is planned in those areas with "high" or "very high" potential for buried site CUL-2c: Conduct limited subsurface testing before performing ground-disturbing work within 50 meters of a known archaeological site CUL-2d: Conduct exploratory trenching or coring of areas within the three zones of special sensitivity where subsurface project disturbance is planned CUL-2e: Stop work if cultural resources are encountered during ground-disturbing activities CUL-2f: Conduct archaeological monitoring of ground-disturbing activities in areas as determined by JPB and SHPO
Level of Impact after Mitigation	Less than significant

Construction and Operation

There is the potential that the Proposed Project could result in a change in the significance of historic or prehistoric archaeological resources (both considered "historical resources" as defined under CEQA) or unique archaeological resources. There are known archaeological resources in the Archaeological Study Area. Table 3.4-1 presented the 21 identified archaeological resources— 19 prehistoric, one multi-component, and one historic-era archaeological— in or potentially in the Archaeological Study Area.

Additionally, documentary research identified three archaeologically sensitive zones (the area between Easton Creek and the east bank of San Mateo Creek identified as the "Hamilton shell mound sensitive zone", see Far Western Anthropological Research Group 2009: 4); the vicinity of the Third Mission Santa Clara [CA-SCL-30/H]; and the Native American burial ground at Tamien Station [CA-SCL-690]). Previous investigations indicate that CA-SCL-30/H has been determined eligible to the NRHP, and CA-SCL-690 has been recommended eligible; however, neither has been listed.

Because all areas of potential ground disturbance have not been surveyed for cultural resources, some portions of the Archaeological Study Area, as well as some areas outside of the Archaeological Study Area where OCS poles and wires would be placed partially outside the existing Caltrain ROW, and where vegetation maintenance would be required within 10 feet of the OCS pole alignment for electrical safety, are sensitive for archaeological resources. Therefore, there is a potential to encounter heretofore unidentified buried cultural resources and potential ground disturbance from construction, which could result in a significant impact. If prehistoric, ethnographic, and/or historic archaeological resources are identified within the proposed disturbance areas as noted above, then the evaluation and treatment of such resources will be conducted according to the measures set forth in Mitigation Measures CUL-2a through CUL-2f. Implementing these measures would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-2a: Conduct an archaeological resource survey and/or monitoring of the removal of pavement or other obstructions to determine if historical resources under CEQA or unique archaeological resources under PRC 21083.2 are present

Prior to the start of construction or future construction activities, the JPB shall retain qualified archaeologists to conduct a pedestrian archaeological survey to determine the prehistoric, ethnographic, and historic archaeological resources within areas proposed for disturbance within the Archaeological Study Area and within those areas outside of the Archaeological Study Area established for OCS pole placement and vegetation maintenance. In those areas covered with pavement or other obstructions, a qualified archaeologist shall monitor removal of the obstruction (and any underlying base, foundations, etc.) and inspect the ground for cultural materials.

Mitigation Measure CUL-2b: Conduct exploratory trenching or coring of areas where subsurface project disturbance is planned in those areas with "high" or "very high" potential for buried sites

In those areas with "high" or "very high" potential for buried sites, a qualified archaeologist shall conduct exploratory trenching or coring of areas where subsurface project disturbance is planned, prior to that disturbance. Any cultural resources discovered during exploratory trenching or coring shall be protected or evaluated. Evaluation shall follow the research design and recommendation presented in the *Data Recovery and Late Discoveries Treatment Plan for the Caltrain Electrification Program Alternative: San Francisco, San Mateo, and Santa Clara Counties, California* (Far Western Anthropological Research Group 2009).

Mitigation Measure CUL-2c: Conduct limited subsurface testing before performing ground-disturbing work within 50 meters of a known archaeological site

When avoidance of impacts is not feasible, a qualified professional archaeologist shall conduct limited subsurface testing before any ground-disturbing project work is done within 50 meters of a known archaeological site. The objectives of the testing shall be to delineate the extent and depth of the site within the Archaeological Study Area and within those areas outside of the Archaeological Study Area established for OCS pole placement and vegetation maintenance; determine whether human remains are present within the Archaeological Study Area; and assess the nature and potential significance of the archaeological deposit within the Archaeological Study Area. The work shall be guided by the *Data Recovery and Late Discoveries Treatment Plan for the Caltrain Electrification Program Alternative: San Francisco, San Mateo, and Santa Clara Counties, California* (Far Western Anthropological Research Group 2009). All testing within a prehistoric or ethnographic site (including Mission-era sites) shall include consultation with the local Native American community.

Mitigation Measure CUL-2d: Conduct exploratory trenching or coring of areas within the three zones of special sensitivity where subsurface project disturbance is planned

If any ground-disturbing project work is planned within the three zones of special sensitivity (the Hamilton shell mound zone, the vicinity of the Third Mission Santa Clara, and Tamien Station), a qualified archaeologist shall conduct exploratory trenching or coring of areas where subsurface project disturbance is planned, prior to that disturbance. Any cultural resources discovered during exploratory trenching or coring shall be protected or evaluated.

Archaeological investigations in the vicinity of the archaeological preserve at the Third Mission (CA-SCL-30/H) should be guided by the recommendations presented by Allen et al. (2003) or by anticipated updates to that document. Archaeological investigations in the other two zones of special sensitivity shall be guided by the *Data Recovery and Late Discoveries Treatment Plan for the Caltrain Electrification Program Alternative: San Francisco, San Mateo, and Santa Clara Counties, California* (Far Western Anthropological Research Group 2009).

Mitigation Measure CUL-2e: Stop work if cultural resources are encountered during ground-disturbing activities

The JPB shall ensure the construction specifications include a stop work order if prehistoric or historic-period cultural materials are unearthed during ground-disturbing activities. All work within 50 feet of the find shall be stopped until a qualified archaeologist and Native American representative can assess the significance of the find. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool making debris; culturally darkened soil ("midden") containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative, shall develop a treatment plan that could include site avoidance, capping, or data recovery.

Mitigation Measure CUL-2f: Conduct archaeological monitoring of ground-disturbing activities in areas as determined by JPB and SHPO

Even though data recovery would, in theory, collect all potentially significant materials and information from the impact zone, in practice it is not feasible to do archaeological excavation of the entire area. This is particularly true in highly urbanized areas such as this project corridor. Therefore, at the discretion of JPB and the SHPO, it may be necessary to monitor project operations within recorded site boundaries. Activities to be monitored would include, but are not necessarily limited to, brush clearing, grading for stations, pavement removal, placement of electrification poles and utilities, and any activity involving subsurface excavation. The monitor(s), in consultation with the construction supervisor, would have authority to halt construction activities temporarily in the immediate vicinity of an unanticipated find to assess the significance of the find. Whether or not a monitor is present, the construction supervisor and work crews should be alert to the possibility of additional cultural or human remains being unearthed. If this occurs, all work should stop temporarily within 50 feet of the find until a qualified professional archaeologist can be called in to assess the find and determine the proper course of action.

Impact CUL-3	Disturb any human remains, including those interred outside of formal cemeteries
Level of Impact	Significant
Mitigation Measure	CUL-3: Comply with state and county procedures for the treatment of human remains discoveries
Level of Impact after Mitigation	Less than significant

Construction and Operation

There is the potential that the Proposed Project could disturb human remains, including those interred outside of formal cemeteries.

There are two known archaeological resources that are known to contain human remains: the vicinity of the Third Mission Santa Clara [CA-SCL-30/H], and the Native American burial ground at Tamien Station [CA-SCL-690]). Previous investigations indicate that CA-SCL-30/H has been determined eligible to the NRHP, and CA-SCL-690 has been recommended eligible; neither has been listed.

Because all areas of potential ground disturbance have not been surveyed for cultural resources, some portions of the Archaeological Study Area, and within those areas outside of the Archaeological Study Area established for OCS pole placement and vegetation maintenance, are sensitive for archaeological resources, including human remains; and since there is a potential to encounter heretofore unidentified buried cultural resources, including human remains, potential ground disturbance from construction could result in a significant impact on such resources. Implementing Mitigation Measure CUL-2 would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-3: Comply with state and county procedures for the treatment of human remains discoveries

Any human remains and related items discovered during the implementation of the terms of the PA prepared for this project shall be treated in accordance with the requirements of Section 7050.5(b) of the California Health and Safety Code. If, pursuant to Section 7050.5(c) of the California Health and Safety Code, the county coroner/medical examiner determines that the human remains are or may be of Native American origin, then the discovery shall be treated in accordance with the provisions of Section 5097.98(a)-(d) of the California Public Resources Code. The JPB shall ensure that the remains are not damaged or disturbed further until all stipulations in Section 7050.5 and Section 5097.98 have been met.