SUBSECTION 8.3

Cultural Resources

8.3 Cultural Resources

8.3.1 Introduction

This subsection discusses the environmental setting, consequences, regional and local impacts, and mitigation measures associated with the cultural resource aspects of the San Francisco Electric Reliability Project (SFERP). Subsection 8.3.2 presents the laws, ordinances, regulations, and standards (LORS) applicable to cultural resources. Subsection 8.8.3 describes the environment that may be affected by SFERP construction and operation. Subsection 8.3.4 identifies environmental consequences from development of the power plant and its associated laydown site and water supply pipeline, and Subsection 8.3.5 discusses cumulative impacts. Mitigation measures are discussed in Subsection 8.3.6. Subsection 8.3.7 presents the agencies involved and provides agency contacts. Subsection 8.3.8 presents the required permits and permitting schedule. Subsection 8.3.9 provides references used to prepare this subsection. Resumes of the preparers are provided in Appendix 8.3A.

The SFERP project is located between Cesar Chavez Street and 25th Street in the Potrero District of the City of San Francisco (City). Land use in the vicinity of the proposed SFERP project site is predominantly industrial to the north, south, and west. The laydown site is located immediately east of the project site on a vacant parcel flanked by Maryland, Cesar Chavez and 26th streets. The San Francisco Bay is east of the laydown site. The water supply pipeline is located on Cesar Chavez, Mississippi, and Marin streets (see Figure 1-2). The electrical transmission line runs west from the project site on 25th Street, then north on Michigan, west on 24th, north on Illinois, then east on 22nd to the PG&E Substation and will be constructed in an underground trench. The natural gas pipeline runs west on 25th Street to Illinois Street.

Cultural resources include prehistoric and historic archaeological sites,[1] districts and objects; standing historic structures, buildings, districts and objects; and, locations of important historic events, or sites of traditional/cultural importance to various groups.[2] Primary data sources used to prepare this section include the CEC testimony by Reinoehl and Mason (2002)

---

1 Site – "The location of a significant event, a prehistoric or historic occupation or activity, or a building or structure…where the location itself possesses historic, cultural, or archeological value." (USNPS-IRD, 1991:15)

2 The federal definitions of cultural resource, historic property or historic resource, traditional use area, sacred resources are reviewed below and are typically applied to non-federal projects.

A cultural resource may be defined as a phenomenon associated with prehistory, historical events or individuals or extant cultural systems. These include archaeological sites, districts and objects; standing historic structures, districts and objects; locations of important historic events; and, places, objects and living or non-living things that are important to the practice and continuity of traditional cultures. Cultural resources may involve historic properties, traditional use areas and sacred resource areas.

Historic property or historic resource means any prehistoric district, site building, structure or object included in, or eligible for, inclusion in the National Register of Historic Places. The definition also includes artifacts, records and remains that are related to such a district, site, building, structure or object.

Traditional use area refers to an area or landscape identified by a cultural group to be necessary for the perpetuation of the traditional culture. The concept can include areas for the collection of food and non-food resources, occupation sites and ceremonial and/or sacred areas.

Sacred resources applies to traditional sites, places or objects that Native American tribes or groups, or their members, perceive as having religious significance.

who incorporated the results of several documents, including: Mirant (2001a, b), SECAL (2000a-c, 2001a-d), URS/Dames & Moore (2000), and Wirth Associates (1979).

8.3.2 Laws, Ordinances, Regulations, and Standards

Cultural resources are indirectly protected under provisions of the federal Antiquities Act of 1906 (Title 16, United States Code, Section 431 et seq.) and subsequent related legislation, policies, and federal agency regulations and guidelines for implementation of the Antiquities Act.

The following laws, ordinances, regulations, standards, and policies apply to the protection of cultural resources in California. Projects licensed by the Energy Commission are reviewed to ensure compliance with these laws. Table 8.3-1 summarizes applicable LORS.

8.3.2.1 Federal

National Historic Preservation Act (NHPA), 16 USC 470, requires federal agencies to take into account the effects of their undertakings on historic properties through consultations beginning at the early stages of project planning. This law is applicable to projects that involve federal property, permits, loans, or other direct federal involvement. Regulations revised in 2004 (36 CFR Part 800 et seq.) set forth procedures to be followed for determining eligibility for nomination, the nomination, and the listing of cultural resources in the National Register of Historic Places (NRHP). The eligibility criteria and the process are used by federal, state, and local agencies to determine significance of cultural resources. Properties that meet the criteria for listing in the NRHP are called historic properties. Very similar criteria and procedures are used by the state in identifying cultural resources eligible for listing in the California Register of Historic Resources. The NHPA does not apply to the SFERP project because there is no federal land or federal permit involved in licensing the project. The law is described here because it is possible that project design changes after licensing could lead to federal permitting and because the NHPA provides a model for California state laws that protect significant cultural resources.

8.3.2.2 State

Public Resources Code, Section 5024.1 establishes a California Register of Historical Resources [CRHR]; sets forth criteria to determine significance; defines eligible properties; and lists nomination procedures.

Public Resources Code, Section 5097.5 states that any unauthorized removal or destruction of archaeologic or paleontologic resources on sites located on public land is a misdemeanor. As used in this section, “public lands” means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

Public Resources Code, Section 5097.9 prohibits the interference with the free expression of Native American religion as provided in the United States Constitution and the California Constitution; and causing severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine on public property, except on a clear and convincing showing that the public interest and necessity so require.

TABLE 8.3-1
Applicable Cultural Resource Laws, Ordinances, Regulations, and Standards

LORS	Requirements	Applicability
California Public Resources Code Section 5024.1	Establishes California Register of Historical Resources	Yes
California Public Resources Code Section 5097.5/5097.9	Prohibits causing severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require.	Yes
California Public Resources Code Section 5097.98/5097.99	Requires notification to most likely descendants in the event a Native American grave is encountered. Imposes penalties for obtaining or possessing Native American human remains or artifacts.	Yes, if burials are discovered
California Public Resources Code Section 21083.2	Provides that if a lead agency determines that project has significant effect on “unique” archaeological resources the environmental impact report must address those issues.	Yes
California Public Resources Code Section 21084.1	Equates a significant effect on the environment with a substantial adverse change in significance of a historic resource.	Yes
California Administrative Code, Title 14 Section 4307	Prohibits destruction of paleontological, archaeological and historical objects.	Yes
CEQA Guidelines, Title 14 Code of Regulations Section 15126.4(b)	Discusses mitigation measures related to historical resources.	Yes
CEQA Guidelines, Title 14 Code of Regulations Section 15064.5	Defines “historical resources”, determines significance of impacts to archaeological and historical resources.	Yes
CEQA Guidelines, Title 14 Code of Regulations Section 15064.7	Defines “cumulatively significant”, describes “thresholds of significance.”	Yes
California Penal Code, Section 622.5	Makes it a misdemeanor to willfully damage objects or things of archaeological or historical interest.	Yes
California Health and Safety Code, Section 7050.5	Requires that in the event of discovery of human remains, all excavation must cease until the coroner of the relevant county makes certain findings.	Yes, if burials are discovered
San Francisco Building Code, Chapters 16B and 16C	Requires owners to undertake structural analysis of each unreinforced masonry wall; and to undertake alterations to conform to code or to demolish the structure.	Yes
San Francisco Planning Code, Article 10	Provides for the designation of landmarks and historic districts, and recognition of structures of historic, architectural and aesthetic merit.	Yes, if properties are eligible for landmark designation

Pubic Resources Code, Section 5097.99 prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn and sets penalties for these actions.

Public Resources Code, Section 21083.2 states that if a project may affect a resource that has not met the definition of an historical resource set forth in Section 21084, then the lead agency may determine whether a project may have a significant effect on "unique" archaeological resources; if so, an Environmental Investigation Report (EIR) shall address these resources. If a potential for damage to unique archaeological resources can be demonstrated, such damage must be avoided. If they cannot be avoided, mitigation measures shall be required. The law also discusses excavation as mitigation; discusses the costs of mitigation for several types of projects; sets time frames for excavation; defines "unique and non-unique archaeological resources;" provides for mitigation of unexpected resources; and sets financial limitations for mitigation under the section.

Public Resources Code, Section 21084.1 indicates that a project may have a significant effect on the environment if it causes a substantial adverse change in the significance of a historic resource; the section further defines a "historical resource" and describes what constitutes a "significant" historical resource.

Title 14, California Code of Regulation (CCR) Section 4307 (14 CCR 4307), states that no person shall remove, injure, deface or destroy any object of paleontological, archaeological, or historical interest or value.

CEQA Guidelines, 14 CCR 15126.4, *Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects,* subsection (b) discusses impacts of maintenance, repair, stabilization, restoration, conservation, or reconstruction of a historical resource. Subsection (b) also discusses mitigation through avoidance of damaging effects on any historical resource of an archaeological nature, preferably by preservation in place, or by data recovery through excavation if avoidance or preservation in place is not feasible. Data recovery must be conducted in accordance with an adopted data recovery plan.

CEQA Guidelines, Title 14 CCR 15064.5, *Determining the Significance of Impacts to Archaeological and Historical Resources*. Subsection (a) defines the term "historical resources." Subsection (b) explains when a project may be deemed to have a significant effect on historical resources and defines terms used in describing those situations. Subsection (c) describes CEQA's applicability to archaeological sites and provides a bridge between the application of the terms "historical" resources and a "unique" archaeological resource.

CEQA Guidelines, 14 CCR 15064.7, *Thresholds of Significance*. This section encourages agencies to develop thresholds of significance to be used in determining potential impacts and defines the term "cumulatively significant."

California Penal Code, Section 622.5. This section provides that anyone who willfully damages an object or thing of archaeological or historic interest can be found guilty of a misdemeanor.

California Health and Safety Code, Section 7050.5. If human remains are discovered during construction, the project owner is required to contact the county coroner.

California Public Resources Code, Section 5097.98. If the county coroner determines that the remains are Native American, the coroner is required to contact the Native American

Heritage Commission, which is then required to determine the "Most Likely Descendant" to inspect the burial and to make recommendations for treatment or disposition of the remains and any associated burial items.

8.3.2.2.1 State CEQA Process. CEQA requires a review to determine if a project will have a significant effect on archaeological sites or a property of historic or cultural significance to a community or ethnic group eligible for inclusion in the CRHR (CEQA Guidelines).

CEQA provides that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment (Section 21084.1 of the Public Resources Code). CEQA defines substantial adverse change as demolition, destruction, relocation, or alteration that the significance of a historical resource would be impaired (Section 5020.1). Section 21084.1 stipulates that any resource listed in, or eligible for listing in, the CRHR[3] is presumed to be historically or culturally significant unless the preponderance of evidence demonstrates the contrary.[4]

Resources listed in a local historic register or deemed significant in a historical resource survey (as provided under Section 5024.1g) are presumed to be historically or culturally significant unless the preponderance of evidence demonstrates they are not.

A resource may be historically significant even if it is: 1) not listed in, or determined to be eligible for listing in, the CRHR, 2) not included in a local register of historic resources, and 3) not deemed significant in a historical resource survey (Section 21084.1; see Section 21098.1).

CEQA requires a Lead Agency to identify and examine environmental effects that may result in significant adverse effects. Where a project may adversely affect a unique archaeological resource,[5] Section 21083.2 requires the Lead Agency to treat that effect as a significant environmental effect and prepare an EIR. When an archaeological resource is listed in, or is eligible to be listed in, the CRHR, Section 21084.1 requires that any substantial adverse effect to that resource be considered a significant environmental effect. Sections 21083.2 and 21084.1 operate independently to ensure that potential effects on archaeological resources are considered as part of a project's environmental analysis. Either of these

3 The California Register of Historical Resources is a listing of "those properties which are to be protected from substantial adverse change." Any resource eligible for listing in the California Register is also to be considered under CEQA.

4 A historical resource may be listed in the California Register of Historical Resources if it meets one or more of the following criteria: "(1) is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; (2) is associated with the lives of persons important to local, California or national history; (3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or, (4) has yielded or has the potential to yield information important in prehistory or history (…of the local area, California or the nation)" (Public Resources Code §§5024.1, Title 14 CCR, Section 4852). Automatic CRHR listings include National Register of Historic Places (NRHP) listed and determined eligible historic properties (either by the Keeper of the NRHP or through a consensus determination on a project review); State Historical Landmarks from number 770 onward; Points of Interest nominated from January 1998 onward. Landmarks prior to 770 and Points of Historical Interest may be listed through an action of the State Historical Resources Commission.

5 Public Resources Code 21083.2 (g) defines a unique archaeological resource to be: An archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information; (2) has a special and particular quality such as being the oldest of its type or the best available example of its type; or, (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

benchmarks may indicate that a project may potentially have an adverse effect on archaeological resources.

Other state-level requirements for cultural resources management appear in the California Public Resources Code Chapter 1.7, Section 5097.5 (Archaeological, Paleontological, and Historical Sites), and Chapter 1.75, beginning at Section 5097.9 (Native American Historical, Cultural, and Sacred Sites) for lands owned by the state or a state agency.

The disposition of Native American burials is governed by Section 7050.5 of the California Health and Safety Code and Sections 5097.94 and 5097.98 of the Public Resources Code, and falls within the jurisdiction of the Native American Heritage Commission (NAHC).

If human remains are discovered, the San Francisco Medical Examiner (Coroner) must be notified within 48 hours and, until his arrival, there should be no further disturbance to the site where the remains were found. If the remains are determined by the coroner to be Native American, the Coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to Section 5097.98, will immediately notify those persons it believes to be most likely descended from the deceased Native American so they can inspect the burial site and make recommendations for treatment or disposal.

8.3.2.3 Local

8.3.2.3.1 San Francisco City and County. The San Francisco Building Code, Chapters 16B and 16C, requires owners of unreinforced masonry walls to undertake a structural analysis. If the building does not meet the minimum standards of the code and any exceptions, the owner must structurally alter the building to conform to the code or have the building demolished. San Francisco Planning Code Article 10 provides a mechanism to encourage historic preservation in the case of permits for the alteration or demolition of buildings that are (1) initiated as land marks, (2) designated as land marks, or (3) located within a district that has been designated as a historic district under Article 10. This article allows the City to maintain a list of buildings and structures which have been "officially designated by agencies of the State or federal government."

8.3.3 Affected Environment

The project area is located on the San Francisco Peninsula, a northward extension of the Santa Cruz Mountains that separates San Francisco Bay from the Pacific Ocean. The project area is an industrial area within the City of San Francisco. The project is located on land reclaimed from San Francisco Bay south of Potrero Point on the western shoreline of San Francisco Bay about 1.8 miles south of the Bay Bridge. Potrero Hill rises to an elevation of approximately 300 feet above sea level, one-half mile northwest of the project. The project area is industrial with warehouses to the north and south and the Port of San Francisco Pier 80 shipping complex to the southeast. To the immediate west of the site is an open field to be developed as a MUNI Operations and Maintenance Facility and to the northwest is a residential area at the base of Potrero Hill, known as the Dogpatch Neighborhood.

There are two officially-recognized and eligible historic districts, Dogpatch and Pier 70, both of which are completely within the boundaries of, and are part of, a third, larger historic

district called the Central Waterfront District (CWD).[6] These districts share common historical themes, focusing on the industrial nature of the area, along with the theme of residential and commercial development for local industrial workers and of the City of San Francisco.

The Central Waterfront District, with its embedded Dogpatch and Pier 70 historical areas, contains 243 buildings of CRHR status levels (status codes of 1, 2, 3, 4, 5, 7) in the state historic property file (or CHRIS List) that are individually listed on the NRHP (code 1), determined eligible (code 2), appear to be eligible (code 3), may become eligible (code 4), are eligible for local list only (code 5), or have not been evaluated or whose status is underdetermined (code 7). These include resources that might be contributors either to the larger district or the individual districts. Another 32 buildings have been evaluated as code 6 (determined ineligible or delisted); 29 are 6Z1 (found ineligible with no potential for listing); two are 6Z (found ineligible); and one is 6Y2 (found ineligible by consensus determination but not evaluated for local listing).

8.3.3.1 The San Francisco Electric Reliability Project (SFERP)

The area around the proposed SFERP 145 MW power plant and switchyard—an area about one mile in diameter and roughly bounded by Potrero Hill/I-280 on the west, San Francisco Bay on the east, Islais Creek on the south, and Mariposa Avenue on the north—has been the subject of a number of historic property inventory and evaluation efforts over the past two decades, often focused on areas immediately adjacent to the project site. During the course of these efforts almost every building over 50 years old has been evaluated for its eligibility under criteria of significance and integrity established by the NRHP or CRHR. The result of these surveys is that the historic architectural resources in the area of the project site are well known and understood.

The project site and proposed laydown area (bounded roughly 25th Street on the north, Cesar Chavez Street on the south, the bay on the east, and Michigan Street on the west) were examined as a part of the Central Waterfront District survey and the present project. Since the area is fenced, there was limited access to the site; however, it appears (from the public right-of-way) to have no historic period structures (at least 45 years old). A concrete mixing plant, temporary offices, and containers are currently located on the site. An aerial photograph dated July 1993 shows the area as completely vacant (TerraServer, 2003).

Given the existence of various inventory projects, no additional historic buildings and structures inventory or evaluation was undertaken. Rather, this section addresses the impacts the project may have on the known and existing historical resources on or around the project site as defined under state law and local ordinances. The following section briefly summarizes the history of the project area, discusses the main themes and contexts, describes the resources on the project site and in the project area.

---

6 The inventory of the Central Waterfront District was completed in October of 2001 under a grant from the SHPO to the San Francisco Planning Department. It was approved by the San Francisco Planning Commission and is currently under review at the SHPO for its potential to be included in the CRHR. See: San Francisco Planning Department, "Central Waterfront Cultural Resources Survey Summary Report and Draft Context Statement, October 2000 – October 2001." CEC Dockets, 00-AFC-4.

8.3.3.2 Prehistoric Setting

The earliest documented occupation of the area between San Francisco and Monterey bays dates to about 8,000 years before present (BP). Prior to about 2,000 BP, archaeological evidence suggests that this area was occupied by small groups of hunter-gatherers that exploited both terrestrial and marine resources (mostly shellfish). Approximately 2,500 BP, large shellmound sites began to be occupied around San Francisco Bay. These sites were likely habitation sites with dense shell midden, flaked and ground stone tools, bone tools, beads, ornaments, charmstones, and burials. The shellmounds were occupied until the arrival of the Spanish.

The main marine resource used was shellfish, mostly oysters and bentnose clams. The most important upland resource was acorns gathered from oak trees in the fall. Acorn processing (leaching out the tannic acid and grinding into acorn meal) required a significant amount of labor. Use of acorns as early as 2,500 BP indicates intensification of resource procurement at a relatively early period in prehistory in this area. The beginning of the use of the shellmound sites around San Francisco Bay may correspond with the arrival of Utian language speakers from the Sacramento-San Joaquin Delta area. These Utian speakers were the ancestors of the Costanoans who occupied the Bay Area when the Spanish arrived.

8.3.3.3 Ethnographic Background

The project area lies within the territory occupied by the Native American group (known to the Spanish and 20th century ethnographers) as the Costanoan (Figure 8.3-1). The contemporary descendants of this group are members of the Ohlone Indian Tribe. The Costanoan group occupied the coast of California from San Francisco to Monterey and inland to include the coastal mountains from the southern side of the Carquinez Straits to the eastern side of the Salinas River south of Chalone Creek. Costanoan refers to a language family consisting of eight related languages. Each language was spoken by different ethnic groups within their established geographical area. The political units within each ethnic group were tribelets; each tribelet varied from 50 to 500 people with the average being about 200. Each tribelet had one or more permanent villages and several temporary camps within its territory. Hunting and gathering groups lived in temporary camps when securing resources within the tribelet territory away from the village.

The Ramaytush language speakers occupied the project area. It is estimated that some 1,400 speakers were present in 1770. The Ramaytush speakers were divided into at least 10 tribelets. Each tribelet had a chief, a position inherited patrilineally (through the father's side). The chief fed visitors, directed ceremonial activities, organized hunting, fishing, and gathering activities and directed warfare expeditions. The coastal Costanoan traded with the inland Yokuts (mussels, abalone shells, dried abalone meat, and salt for piñon nuts and other inland products). Acorns from four species of oak were the most important plant food. Nuts, berries, seeds, and roots were also important. Costanoan groups practiced controlled burning of the chaparral to encourage sprouting of seed plants and improve deer and elk browse. The most important foods were deer, rabbit, steelhead, salmon, sturgeon, lampreys, oysters and clams.

The Costanoan lived in thatched dome houses with rectangular doorways and a central hearth. Other structures in the villages included sweathouses, dance enclosures, and an assembly house. Technology included tule balsa canoes, bows and arrows, and baskets.

Chipped stone tools were made from chert obtained locally and obsidian obtained in trade with others. Between 1770 and 1797, the Spanish established seven missions in Costanoan territory. Due to introduced European diseases and a declining birth rate, their population decreased from about 10,000 to 2,000 by 1832.

8.3.3.4 Historic Setting

Spanish explorers intent on settling the Pacific Coast first reached the San Francisco Bay in 1769, and by 1776, Juan Bautista de Anza, Jose Joaquin Moraga and Fathers Francisco Palou and Pedro Cambon established the Mission Dolores (San Francisco) and the San Francisco Presidio. Mission Dolores was one of 21 Spanish missions extending from San Diego in the south to the mission San Francisco Solano in Sonoma in the north, all established between 1769 and 1823. The presidio was one of four established by the Spanish prior to 1800. In 1774, a fort was also established at Castillo de San Joaquin, later Fort Point. The early history of California is well documented in many sources, including Rice, et al. (1996) and Hoover, et al. (1990).

The Spanish era ended when Mexico won its independence from Spain in 1821. The missions were secularized by the mid-1830s, and former mission lands were granted to soldiers and other Mexican citizens for use as cattle ranches. Mexicans, Europeans, and Americans came to California to take advantage of the generous land grants of the Mexican government. The end of Spain's imperialist policies led, by the 1830s, to a lively hide and tallow trade between the inland ranches and the settlements in the San Francisco Bay Area. The little cove settlement of Yerba Buena, the forerunner of the City of San Francisco, was founded by Captain William A. Richardson in 1835. As Pacific Coast trade increased through the 1830s and 1840s, the center of activity in the Bay Area was the natural anchorage for trading ships at Yerba Buena. In the summer of 1846, war between Mexico and the US led to the American occupation of San Francisco (see Cole, 1981:13-19 and Hoover, et al., 1990:331-334).

American success in the Mexican-American War in 1848, followed by the Gold Rush of 1849, brought large numbers of Anglo-Americans to San Francisco. As a result, the city experienced many significant changes because it was the seaport nearest the gold fields. San Francisco quickly developed into a shipping and transportation center for a state that was remote and isolated from the rest of the country. Other towns, such as Oakland (incorporated in 1852) and San Jose (which served as the State's first capital in 1849), grew up around the Bay Area. However, San Francisco's growth far outpaced growth in these other areas. Oakland developed more fully after the transcontinental railroad was completed in the Bay Area in 1869. Bay Area towns provided commercial, warehousing, financial, and manufacturing services for the inland mining and agricultural areas of the state (Hoover, et al., 1990:335; Beck and Haase, 1974:30).

In 1847, the local government changed the name of Yerba Buena to San Francisco. As noted, at that time it was a small village fronting a large mud flat and cove that became an instant city in a few short years. Speculators and promoters surveyed a town site in 1847 and began selling lots, some of which were under water. Starting in 1848, the Gold Rush was like a spark that set off a wild rush of development and speculation. Fortune-seekers arrived from all parts of the globe. Sailors abandoned ship to head off for the gold fields. Portions of the Bay and Yerba Buena Cove were filled with the hulks of abandoned ships and other

material to create more land for development. By late 1849 development of the City had spread well beyond the bounds of Yerba Buena Cove onto the surrounding area's flats and hills. Shipping companies built wharves hundreds of yards into the bay during the early 1850s. Wells Fargo, Adams and Company, and the Merchants Exchange established headquarters in San Francisco in 1853, as did other commercial institutions soon thereafter; making the City the center of the State's economic activity. The population of San Francisco reached 57,000 in 1860 (Rice, et al., 1996:221-226; Soule, 1855:301-305, 437-441; and Cole, 1981:43-44).

The City expanded along the waterfront to the south and west from Yerba Buena Cove, which was located on the northeast end of the San Francisco peninsula. The Potrero Point area, where the project area is located, is a small finger of land projecting out into the bay south of the core of San Francisco. The city's industrialists developed it as an early industrial area. This area extended from the waterfront to Potrero Hill, located approximately one mile inland. The area was well located at the southern end of the city, close enough to serve as a convenient industrial location but south of the main portion of the new city. By 1855, heavy industry began locating at Potrero Point. A black powder plant was located at the point because of its isolated location. The explosives industry remained at the point until about 1880, when encroachment by residential areas led to its relocation to other areas (San Francisco Planning Department, 2001).

By the 1880s, the Potrero Point area consisted of a grid of streets sparsely populated with warehouses, docks and industrial complexes, roughly bounded by 16th Street on the north and 26th Street on the south. There were numerous substantial industrial and commercial establishments located at Potrero Point in the vicinity of the waterfront. These included the Pacific Rolling Mills Company, Union Iron Works, and the San Francisco Cordage Factory and Rope Works on the north side of the point, and the California Sugar Refinery and the works of the City Gas Company on the southern end. The California Sugar Refinery was established by Claus Spreckels in 1881, was renamed the Western Sugar Refinery in 1891, and eventually expanded to border Louisiana and Humboldt streets on the east and north and the waterfront on the south and west. North of the California Sugar Refinery was the gas manufacturing plant of the City Gas Company, established at Potrero Point in 1872. The plant was located on blocks bounded by Georgia, Massachusetts, and Humboldt Streets, and its facilities included two 1,038,000-cubic-foot gas storage tanks. Portions of this well-equipped complex survived, and were later incorporated into the PG&E plant built at the site. The industrial and storage works of the California Sugar Refinery, and the City Gas Company plant, were the first major developments to occur in the project location (San Francisco Planning Department, 2001:8-9; Sanborn, 1886-1887, 1900; USGS, 1895, 1899; and Coleman, 1952:28-29).

The Western Sugar Refinery complex at Potrero Point was established to refine and produce sugar made from Hawaiian sugar cane. It eventually became the largest sugar refinery in the western United States. The facility consisted of several multi-story brick buildings that functioned as a refinery, and filter house. The complex also consisted of several brick warehouses, coal bunkers, storage tanks, a sack house, stock corrals, a large storage reservoir, and wharves. A Southern Pacific Railroad spur ran down 23rd street to the wharf. The refinery operated until 1949, when it was purchased by its major competitor, the California and Hawaiian Sugar Refining Corporation (C&H) (Sanborn Fire Insurance Maps, 1900, 1915,

1950; San Francisco Planning Department, 2001:10-11). C&H also had an extensive factory complex with ocean-shipping facilities in Crockett on the Carquinez Straits.

The first decades of the 20th century were a period of rapid expansion in the Bay Area. In the Potrero area, industrialists filled the shallows in the Bay to the south of Potrero Point between 1899 and 1914, and constructed a wharf along the south end of Potrero Point. During the same period the San Francisco Shipyard was constructed on the north end of Potrero Point. The area underwent a period of reconstruction and further expansion after the devastating 1906 earthquake that destroyed many 19th century buildings and structures in San Francisco (USGS, 1899, 1915). Buildings in the gas works and in the sugar complex survived the disaster.

The San Francisco Gas and Electric Company (SFG&E) purchased the City Gas Works Plant at Potrero Point in 1897. Formed from a consolidation of the San Francisco Gas and Light Company and Edison Light and Power Company in 1896, SFG&E had absorbed many smaller competitors by 1901. However, at that time there were other companies competing for customers in a rapidly expanding utility industry, resulting in an intense rate war.

This rate war was illustrated by two competing utility companies with plants at Potrero Point. One of SFG&E's competitors was Claus Spreckels, who, in 1899 and 1901, incorporated the Independent Electric Light and Power Company and Independent Gas and Power Company. In 1901, Spreckels built an electric generating plant adjoining his Western Sugar Refinery at Potrero Point, located south of the SFG&E plant at Potrero. The state-of-the-art plant consisted of a large brick structure that housed a steam-powered electrical generating plant with a 5,000-kilowatt capacity, and had an adjoined gas plant. The plant was constructed on the west side of Louisiana Street, on the site formerly owned by the California Barrel Company. The rate war ensued until 1903, when Spreckels and others sold their works to SFG&E, ending the competition. In 1906, the San Francisco Gas & Electric was renamed Pacific Gas & Electric (PG&E), and the former Spreckels facility at Potrero, which was more modern and up-to-date than the other SFG&E facility at Potrero, became known as Station A. It was one of two power plants in the area that survived the 1906 earthquake and was subsequently expanded as the city was rebuilt. By 1914, the PG&E facility was expanded to the west between Louisiana and Michigan Streets, including the construction of large 1- and 5-million-cubic-foot gas holders. During this year the Meter House was constructed. The plant was also expanded to the south of 23rd Street, with a gas pump and gas holder constructed near the south wharf at Potrero Point (Coleman, 1952:82-91, 236; Sanborn Fire Insurance Maps, 1900, 1914).

PG&E's Station A was the largest steam electric plant west of the Rocky Mountains from 1903 through 1913, and supplied almost all of San Francisco's electricity during this period. In 1924, the Compressor House was constructed on the site. Later, when PG&E developed cheaper hydroelectric power, Station A was used to supplement the hydroelectric power during periods of peak use. PG&E modernized the station's equipment throughout the years, and with the continuing upgrades Station A remained in operation until 1983. The company placed the Potrero gas plant on standby from 1929 to 1960, when much of it was demolished (California Energy Commission, 2002:5.4.7).

Fire insurance maps prepared between 1915 and 1950 show that the south end of Potrero Point was occupied by the PG&E facility and the Western Sugar Refinery (C&H). During

this period Kentucky Street was renamed Third Street. Between 1915 and the early 1940s many of the PG&E and Western Sugar Refinery structures remained at the waterfront between 22nd and 23rd street, but the structures along the south wharf were replaced. By the 1950s, much of the C&H sugary refinery had been removed, and by the mid-1960s, many of the PG&E structures north of Humboldt Street had also been removed (Sanborn Fire Insurance Maps, 1914, 1950; USGS 1915, 1942, 1946, 1947a,b, 1948, 1950, 1956, and 1968; San Francisco Planning Department, 2001:10-11). The dense concentration of industrial buildings on the location of the PG&E and C&H complexes can be seen in several historic photographs included in the CWD report (especially Figure 6, an aerial photograph taken between 1929 and 1934). This image shows the complex of buildings that served the sugar industry east of Station A, all of which have since been removed (San Francisco Planning Department, 2001:14).

8.3.3.5 Potential for Buried Archaeological Resources

The SFERP is located in an area that was formerly part of the Islais Creek Cove on the San Francisco Bay shoreline. In fact, much of the project site route is located in areas that were part of the Bay as late as 1931 (AGS, 1999). Construction of the water supply pipeline will cross areas of fill that are likely to be of low sensitivity for prehistoric and historic archaeological resources, with some exceptions. The electrical transmission line will cross the prehistoric shoreline into areas that are of high sensitivity for prehistoric resources. For these reasons, a brief discussion of the local history of San Francisco Bay fill development is appropriate to foresee in which areas significant buried resources might be found. A similar analysis was conducted on behalf of the Mirant Corporation for its Cooling Tower System Amendment to the Application for Certification, Potrero Power Plant Unit 7 (00-AFC-04), response Staff Data Requests 216 through 220 (Mirant Corporation, 2003). Figure 8.3-2 shows the pipeline route in relation to the prehistoric shoreline and other features.

The history of land use and Bay filling in the area provides some clues to the kinds of buried cultural resources that might be present. This account closely follows the historic context statement for the Central Waterfront District historic resources survey report and the Dogpatch Historic District context statement (San Francisco Planning Department, 2001; VerPlanck, 2001).

The Potrero Point area was first occupied by industry about 1854, when the E.I. duPont deNemours Company constructed a black powder magazine to the northwest of the SFERP site. At this time, Potrero Point was a rocky peninsula located between Mission Bay to the north and the Islais Creek Cove to the south. One year later, the Hazard Powder Company constructed a similar facility along what was at that time the southern shore of Potrero Point (near what is now 23rd Street). Powder was in great demand for mining and general construction uses. Later both companies constructed wharves for loading the powder onto ships. By 1881, both companies had sold their interests to the Claus Spreckels sugar company, due to the increasing encroachment of residential areas.

Another early industry in the Potrero Point area was the San Francisco Cordage Manufactory, later called Tubbs Cordage Company. Established in 1857, the company made ropes, largely for marine and mining purposes. For many years, Tubbs Cordage was a major area employer, although the company gradually declined before closure in 1962. Tubbs was located northwest of the SFERP site, along 3rd (Kentucky) Street, between 22nd and 23rd

streets. One very interesting feature of the Tubbs operation was the Tubbs Cordage rope walk, as depicted in the Sanborn Insurance Maps for 1899 (Sanborn Inc., 1900). The rope walk was a long (at first, 1,000 feet, later 1,500 feet), covered walkway that extended out into the Bay on piers. It was used by the cordage workers as they twisted fiber strands together to make long ropes. The rope walk ran in a southeastern direction from the cordage plant, crossing into the Bay from 3rd Street north of 23rd Street. In doing so, it crossed the location of the SFERP underground electrical transmission line along what is now 23rd Street near Illinois Street (see Figure 8.3-2).

Another important local early development was the construction of the Potrero, Hunters Point, and Bay View (P&BV) Railroad and its bridges, the Long Bridge and 3rd Street Trestle. The Long Bridge was a rail trestle constructed across Mission Bay in 1867 and the 3rd Street Trestle crossed Islais Creek Cove a year later (U.S. Coastal Survey, 1869). The railway was constructed as a north-south connector between downtown San Francisco and the Bay View area, and was double-tracked for two-way horse-drawn trolleys. The railroads that constructed the P&BV line and the bridges (Southern Pacific and Atchison, Topeka, and Santa Fe), acquired real estate rights to adjacent lands on the condition that they fill Mission Bay and the Islais Creek Cove to make industrial land. The filling of Islais Cove was delayed; however, until after the turn of the century. The SFERP process water pipeline crosses the 3rd Street trestle alignment at right angles on Cesar Chavez Street. By 1899, Cesar Chavez Street (then Army Street) extended eastward to meet the trestle in the Bay. It is not clear whether the Army Street connector was created on fill or on a trestle. The trends in bay fill are shown on early topographic maps (U.S. Coastal Survey, 1869; U.S. Geological Survey, 1896, 1896, 1915a, 1915b, 1942, 1947; Sanborn Inc., 1900).

By 1915, the Western Pacific Railway had constructed a spur that extended the 25th Street alignment east to the 3rd Street trestle and beyond it to a jetty along what is now 25th Street. Though Mission Bay had been filled by this time and the 3rd Street rail corridor had been widened, the former Islais Creek Cove was still unfilled.

8.3.3.6 Resources Inventory

A California Historic Resources Information System records search (NWIC 03-548) was conducted on February 3, 2004 for the original project site to check for recorded resources. A second record search was conducted for the new project site on January 26, 2005.

Previous investigations for the Mirant Potrero Unit 7 Project (00-AFC-4) (Wirth Associates 1979) did not identify any archaeological resources in the SFERP project area, but concluded that there was a low to moderate potential for buried prehistoric resources and a moderate to high potential for buried historic resources. Several industrial buildings more than 50 years old were identified in the project vicinity, mostly located west of Third Street. The I.M. Scott School, built in 1895 and located at 1060 Tennessee Street, is San Francisco Historical Landmark 138 (SECAL, 2000c).

In 2002 the San Francisco Department of Planning conducted a cultural resources survey of the Central Waterfront (which included the proposed project site) sponsored by the State Office of Historic Preservation (see San Francisco Planning Commission, 2001). The survey was accepted by the San Francisco Planning Commission and forwarded to the State Office of Historic Preservation to review the eligibility of the District for listing in the CRHR. The

CWD report recommended that "at the very minimum, the Central Waterfront area's historic resources should be given special consideration" in local land use planning (San Francisco Planning Commission, 2001:10, 27).

CHRIS records search NWIC 03-548 revealed no recorded archaeological resources in the SFERP project area. A prehistoric archaeological site, CA-SFR-15 (P-38-000015) is recorded approximately 0.5 miles south of Marin Street (which is the terminus of the proposed water supply pipeline). A historic resource (P-38-004274) is located just south of CA-SFR-15 (and is approximately 0.6 miles south of Marin Street). Resource P-38-004274 is the Islais Creek Sewage Treatment Plant, which was recommended by its recorder as NRHP Status Code 3S (eligible under Criterion C for design qualities at the local and regional levels of significance) (Kelley, 2002). No resources are recorded on or adjacent to the project site or construction laydown site.

The 2005 CHRIS records search (NWIC 04-687) revealed no newly recorded cultural resources located within or near the project site, laydown area, or linear facilities. Based on historic maps and aerial photographs, the project site was reclaimed from Islais Creek Cove of San Francisco Bay sometime between 1931 and 1942. Filling began to the northwest of the project site approximately 1931, when the Western Pacific Ferry slip was constructed at 25th and Delaware Streets (AGS, 1999). Sometime after 1935, Western Pacific filled the northern half of the property for a railyard serving the ferry terminal. This yard included extensive trackage across the project site, and served as a switchyard for ferried freight cars. Maps of the 1940s (USGS 1942, 1946, 1947, 1948) show a series of railroad tracks along the current 25th Street alignment, expanding to cover the northern third or so of the project site by 1947. The site assessment conducted for the San Francisco Municipal Railway system (AGS, 1999) interprets maps and aerial photographs as indicating a possible storage shed area just to east of the southern part of the project site, a machine shop and maintenance area to the west, and "general track" on the north end of the parcel, with a possible engine house or maintenance building at the north (25th Street) end of the parcel. Also according to this study, the remainder of the fill that is in place today in the project area north of the Islais Creek channel was placed there between 1955 and 1966, as Cesar Chavez (then Army) Street was extended for construction of the Port of San Francisco Pier 80 terminal.

8.3.3.6.1 Field Surveys. Previous geotechnical studies for the former PG&E Potrero project provide some insights regarding the potential for encountering submerged buried cultural resources in the bay. Eucalyptus fragments found in a geotechnical boring at a depth of 9 to 23 feet suggest the presence of a wood pile at the location. Small wood fragments were found in 8 of the 31 sediment samples. No other historical material was recovered. The eucalyptus wood pile and small wood fragments were interpreted as representing remnants of the East Wharf/Sugar Dock associated with the Western Sugar Refinery. The wharf was the only structure built in the water in the Potrero project area and was demolished sometime between 1950 and 1975. The eucalyptus wood pile may have supported the wharf. The small wood fragments probably represent remnants of the wharf material deposited on the bayfloor after demolition (SECAL, 2000c). It is not likely that historical material dating prior to the 20th century exists on the bay floor in the project area. This area was probably dredged in order to accommodate large ships carrying sugar that moored at the East Wharf. Vessels over 400 feet in length are shown moored at the East Wharf of the Western Sugar Refinery in photos dating to the 1930s and 1940s (SECAL, 2000c).

Archaeological field surveys were conducted for the original (23rd Street) SFERP project site and laydown area in 2004. Additional field surveys of the new site, the underground transmission alignment, natural gas pipeline route, and water supply pipelines (Process and Potable) were conducted on February 21, 2005. The water supply pipelines, electrical transmission line and natural gas pipeline will be installed in trenches within the existing street network, and the process water supply pipeline will enter an existing concrete utility box within Cesar Chavez Street. Native soils underlying these streets are covered by pavement and so were not directly inspected during the survey.

The project site consists of three sections. The northern third of the site is covered by the Pacific Cement Corporation concrete batch plant. At the time of survey, the ground surface in this area was covered entirely by cement and gravel processing equipment, gravel, rock, and cement piles, concrete paving, and water. There do not appear to be remnants of the railroad track or railroad maintenance shed in this area. The central third of the site is vacant, and used for storage of a few large concrete pilings. Ground visibility in this area was excellent on the day of survey. This section is covered in sandy fill with some gravel, rock, concrete, and brick rubble inclusions that are apparently part of the site fill. The southern third of the site is covered in gravel and the ground is not visible. There is a construction trailer on site, apparently associated with development of the adjacent Municipal Railway parcel to the west. Other than the trailer and a very recent area used for testing concrete and other pavement treatments, this section of the parcel was vacant at the time of survey. There were no indications of the previous uses as a railroad yard or of railroad storage or maintenance on the project parcel and no other artifacts or features potentially older than 50 years were identified there.

8.3.3.6.2 Resources on the Project Site. There are no archaeological or historical resources located on or adjacent to the project site. The site lies on land that was reclaimed from San Francisco Bay early in the twentieth century, so there will be no buried in situ prehistoric archaeological resources located there. There are no standing structures at the project site and are no archaeological resources of the historic era on the site surface.

8.3.3.6.3 Resources on the Laydown Site. There are no previously recorded archaeological sites standing buildings or structures on the laydown site. The laydown site lies on land that was reclaimed from San Francisco Bay in the early decades of the 20th century.

8.3.3.6.4 Resources along the Water Pipeline Corridor. There are no previously recorded archaeological sites or standing buildings or structures within the proposed Process water pipeline corridor. A portion of the pipeline is routed within a concrete pipe collection box and along existing streets and will not encroach upon existing buildings or structures that flank the affected streets. Like the laydown site, much of the proposed Process and Potable Water pipeline route lies on land that was reclaimed from San Francisco Bay in the early decades of the 20th century. The western most portion of the proposed pipeline route (Marin and Mississippi Streets) appears to correspond to former bayshore or upland that once surrounded the saltwater wetlands associated with Islais Creek in the late 19th century (USGS, 1896). The western portion of the proposed pipeline route may be an area of high probability for the presence of prehistoric archaeological resources. However, the pipeline will be contained within an existing collection box from Cesar Chavez and Indiana streets to its terminus at Marin Street (see Figure 2-1). The CHRIS records search conducted on

January 26, 2005 revealed that the closest recorded archaeological site (CA-SFR-15) is located about 0.5 miles south of the southern terminus of the water pipeline at Marin Street.

8.3.3.6.5 Resources along the Electrical Transmission Corridor. There are no previously recorded archaeological sites and no standing buildings or structures within the proposed electrical transmission line corridor. The transmission line will be placed underground in portions of 25th, Michigan, 24th, 22nd, and Illinois Streets. From the project site, this line runs in bay fill, crossing into the prehistoric shoreline area along Illinois near Humboldt Street.

8.3.3.6.6 Resources outside the Project Site that May Be Subject to Indirect Impacts. As noted above, the area within the general boundaries of the Central Waterfront District (CWD) (which includes within its boundaries the Dogpatch and Pier 70 districts) has been thoroughly inventoried and, in most cases, its resources 50 years old or older have been evaluated. The CWD inventories included recording and evaluation of two building complexes that are located on lots adjacent to the project parcel. These are the complex of buildings that occupy the large, developed area between Michigan and Maryland streets (east-west) and between 24th and 25th Streets (north-south) immediately north of the project parcel and the two warehouses located on Cesar Chavez Street south of the project parcel.

The large complex of buildings and industrial utility yards north of the project site is known as the Eaton and Smith Plant (1215-1275 Michigan Street) or the Sheedy Drayage Company Plant, according to the CWD site record (Kelley, 2001). There are several shops and warehouses located on the property, and a truck parking shed. The buildings were constructed by General Contractor Eaton and Smith during the 1950s. The CWD survey concluded that the property does not have particular cultural or historic value and is not eligible for listing in the California Register of Historical Resources.

There are two standing structures near the project site that were included in the CWD inventory. These are the two warehouses at 800 Cesar Chavez Street (a.k.a. 640 Army Street, APN 4310-003), just south of the project parcel. One building is a large steel-frame warehouse with corrugated metal panel walls, consisting of two parallel gables. The warehouse was constructed in 1952 by Western Pacific Railroad Company as an industrial development and was first occupied by the Moore Dry Dock Company, according to the CWD site record (Kelley, 2001). The second building is a small warehouse built in 1975 for the Burns Draying Company and used for vehicle maintenance. The CWD survey concluded that these buildings do not have distinctive cultural or historical value and are not eligible for listing in the California Register of Historical Resources.

8.3.3.6.7 Native American Contacts. SECAL/Mirant contacted the Native American Heritage Commission (NAHC) to obtain a list of concerned Native Americans living in the San Francisco Area. SECAL/Mirant sent letters to the Native Americans describing the project and asked about concerns. No responses were received. CH2M HILL also contacted the NAHC in December 2003, and received a list of concerned Native Americans. Letters were also sent to the listed Native Americans. No responses have been received through January 29, 2005 (Appendix 8.3C).

8.3.4 Environmental Consequences

This subsection assesses the potential environmental impacts of the project on cultural resources. Laws governing the treatment of cultural resources require the Energy Commission to categorize resources by determining whether they meet several sets of specified criteria. These categories then in turn influence the analysis of potential impacts (environmental consequences) to the resources and the mitigation that may be required to ameliorate any such impacts.

8.3.4.1 Significance Criteria

Under federal law, only historical or prehistoric sites, objects, or features, or architectural resources that are determined by a qualified researcher to be "important" or "significant" in accordance with federal guidelines need to be assessed for potential impacts. The significance of historical and prehistoric cultural resources is judged in accordance with the criteria for eligibility for nomination to the National Register of Historic Places (NRHP) as defined in 36 CFR 60.4. If such resources are determined to be significant, and therefore eligible for listing in the NRHP, as well as the California Register, they are afforded certain consideration under the National Historic Preservation Act and/or CEQA. The federal laws are not applicable to the SFERP project at this time because there is no known federal nexus.

The NRHP criteria state that "eligible historic properties" are: districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that (a) are associated with events that have made a significant contribution to the broad patterns of our history; or (b) that are associated with the lives of persons significant in our past; or (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or (d) that have yielded, or may be likely to yield, information important to history or prehistory. Isolated finds by definition do not meet these criteria.

Under federal law, resources determined not to be significant, that is, not eligible for NRHP listing, are subject to recording and documentation only, and are afforded no further protection. However, occasionally certain resources, although they may not be assessed as "significant," may nonetheless be of local or regional importance such that mitigation may be warranted regardless of their assessed significance. Energy Commission staff evaluates the survey reports and site records for any known resources located within or adjacent to the project area potential effects (APE) to determine whether they meet the eligibility criteria.

CEQA Guidelines now explicitly require the lead agency (the Energy Commission) to make a determination of whether a proposed project will affect "historical resources." The guidelines provide a definition for historical resources and set forth a listing of criteria for the California Register of Historical Resources (CRHR). These are essentially the same as the eligibility criteria of the NRHP. In addition, as with the NRHP, historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. If the criteria are met and the resource is determined eligible for the CRHR, the Energy Commission must evaluate whether the project will cause a "substantial adverse change in the significance of the historical resource."

CEQA also contains a section addressing "unique" archaeological resources and provides a definition of such resources (Public Resources Code, Section 21083.2). This section

establishes limitations on analysis and prohibits imposition of mitigation measures for impacts to archaeological resources that are not unique. However, the CEQA Guidelines state that the limitations in this section do not apply when an archaeological resource has already met the definition of a historical resource (14 CCR 15064.5).

8.3.4.2 Potential Environmental Impacts to Historic Properties

8.3.4.2.1 Power Plant Site. There are no known cultural resources at the project site, so the project would not cause any impacts to historic properties there. The project would, furthermore, not cause adverse indirect impacts to cultural resources located on adjacent properties because buildings and structures on adjacent parcels have been evaluated and it has been determined that they do not meet the criteria for listing in the California Register of Historical Resources.

8.3.4.2.2 Laydown Site. The construction laydown site is vacant land that has been reclaimed from San Francisco Bay in past decades. All laydown operations will rest on existing graded/graveled surfaces. No subsurface ground alteration will take place; therefore, there would be no possibility that laydown operations could disturb any buried historic archaeological resources (if any are present). A CHRIS records search initiated January 26, 2005 is provided as confidential Appendix 8.3D.

8.3.4.2.3 Water Supply Pipelines, Underground Transmission Line, and Natural Gas Pipeline Corridors. As currently configured, the process water supply pipeline will be constructed within a concrete collection box or along the shoulder of existing city streets (Cesar Chavez Street, Mississippi Street and part of Marin Street) (see Figure 8.3-1). Similarly the underground electrical transmission line will run in Michigan, 24th, 22nd, and Illinois Streets; and the natural gas pipeline, in 25th Street. Construction confined within the existing city streets will not affect the historic built environment. The potable water supply pipeline will be a trenched pipeline that will exit the project site on the southeastern corner, running due south to Cesar Chavez Street.

Pipelines or underground transmission line construction could affect historic or prehistoric archaeological resources that may be present beneath the city streets. Because the street grid pattern in this area has been stable since the end of the 19th century, construction in the existing streets is not expected to encounter historic building foundations. The potential exists, however, for construction to encounter historic debris that pre-dates the original paving of these streets (either by paving stones or by asphalt). The potential also exists for construction to encounter buried prehistoric archaeological resources, if any are present along the streets that now cover the Islais Creek locale (Marin, Mississippi and Cesar Chavez Streets), or in the prehistoric shoreline area along the underground transmission line in Illinois Street. This is discussed in greater detail below.

8.3.4.3 Potential Environmental Impacts to Subsurface Archeological Resources

Given the history of land filling to reclaim lands from San Francisco Bay in the project area (see Subsection 8.3.3.5), there are several general statements that we can make regarding the likelihood of discovering different kinds of buried archaeological or historic resources during excavation for the process water pipeline.

1. Buried prehistoric Native American resources are likely to be found in the former shoreline areas. Prehistoric shoreline and marsh-edge site types such as special extraction camps, fishing camps, and shell midden mounds are very likely to occur in these areas. The underground transmission line route crosses into the prehistoric shoreline zone north of the SFERP site between 22nd and 23rd Streets on Illinois Street. The process water supply pipeline route does not approach the shoreline, since it enters the utility collection box on Cesar Chavez Street at Indiana, which is within the Islais Creek Cove fill area.
2. Remnants of the 3rd Street trestle may possibly be located where Cesar Chavez Street crosses 3rd. However, Wirth Associates (1979) excavated a 12-foot-deep trench in the area of 23rd and 3rd, and did not find remnants of the trestle or of the Tubbs Cordage rope walk.
3. The entire gas pipeline and water supply pipeline routes, and much of the electrical transmission line route run through bay fill. It is possible, though unlikely, that buried boats, ships, or wharves could be encountered during excavations in these areas. The electrical transmission route crosses the former location of the Tubbs Cordage rope walk just north of 23rd Street. The U.S. Coastal Service map for 1869, shows a long wharf extending eastward into Islais Creek Cove in the vicinity of 25th Street, and this same route was later taken by the Western Pacific Railroad for its jetty, extending beyond 3rd Street along the natural gas pipeline route.
4. The pipeline route along Cesar Chavez Street west of 3rd Street was either trestle or fill by 1899. It is thus possible that excavations here will encounter trestle pilings.

8.3.5 Cumulative Impacts

Impacts to subsurface archaeological resources from the proposed project and other projects in the vicinity could occur. However, project proponents for this and future projects in the area can mitigate impacts to as yet undiscovered subsurface archaeological sites by implementing mitigation measures requiring construction monitoring, evaluation of resources discovered during monitoring, and avoidance or data recovery for resources evaluated as significant (eligible for the CRHR or NRHP).

8.3.6 Mitigation Measures

The City will retain a qualified archaeologist to monitor during construction at the plant site and along the water supply pipelines, natural gas pipeline, and underground electrical transmission line corridors. Monitoring of the laydown site is not required because there will be no subsurface disturbance of the laydown site. If archaeological material is observed by the monitoring archaeologist, ground disturbing activity will be halted in the vicinity of the find so that its significance (CRHR eligibility) can be determined. If evaluated as significant, mitigation measures (avoidance or data recovery) will be developed in consultation with the CEC. A worker education program will be undertaken to ensure that buried archaeological resources are recognized by construction crews. Such a program will include information about the kinds of archaeological material that could be encountered and the procedures to be followed if such material is discovered.

8.3.7 Involved Agencies and Agency Contacts

Table 8.3-2 provides a list of agencies and contact persons of potentially responsible agencies.

TABLE 8.3-2
Agencies and Agency Contacts for SFERP Cultural Resources

Agency	Contact/Title	Phone Number	Address
California Office of Historic Preservation	Milford Wayne Donaldson, State Historic Preservation Officer	916-653-6624	1416 Ninth Street, Sacramento, Room 1442
City of San Francisco	N. Moses Corrette, San Francisco Planning Department	415-558-6295	1660 Mission Street San Francisco
Port of San Francisco	Mark Paes, Planner Port of San Francisco	415-705-8674	Pier 1 San Francisco
Native American Heritage Commission	Larry Myers, Executive Secretary	916-653-4082	915 Capitol Mall, Sacramento

8.3.8 Permits and Permitting Schedule

Permits dealing with the effects on cultural resources are addressed as part of the building permit process.

8.3.9 References

AGS, Inc. 1999. Final Site Characterization/Corrective Measure Study and Article 22A Soil Characterization Report, MUNI Metro East Light Rail Vehicle Maintenance and Operations Facility, San Francisco Municipal Railway. Prepared for San Francisco Municipal Railway, City and County of San Francisco, San Francisco, California.

Beck, W.A. and Y.D. Haase. 1974. *Historical Atlas of California.* Norman, University of Oklahoma Press.

California Energy Commission. 2002. *Potrero Power Plant Unit 7 Project Final Staff Assessment, February 13, 2002*. Sacramento.

Cole, T. 1981. *A Short History of San Francisco*. San Francisco, Lexikos.

Coleman, C.E. 1952. *PG & E of California: The Centennial Story of Pacific Gas and Electric Company, 1852-1952.* New York, McGraw-Hill.

Hoover, M.B., et. al. 1990. *Historic Spots in California.* Stanford, Stanford University Press.

Kelley, T.J. 2001. Department of Parks and Recreation Form DPR-543A, 800 Cesar Chavez Street. Department of Parks and Recreation Form DPR-543A, 1215-1275 Michigan Street, Central Waterfront Survey Advisory Committee. July 20.

Kelley, T.J. 2002. *Primary Record Form P-38-004274 – Islais Creek Sewage Treatment Plant.* Primary Record Form on file, California Historical Resources Information System, Sonoma State University, Rohnert Park.

Mirant Corporation. 2001a. Mirant 2001 D Res 4. *Southern Energy California response to staff Data Requests, Set 4, Nos. 170 through 194, Potrero Power Plant Unit 7 Project (00-AFC-4).* Submitted to California Energy Commission March 27.

Mirant Corporation. 2001b. Mirant 2001 D Res CBE, *Mirant responses to Communities for a Better Environment, Data Requests, Nos. 1 through 113, Potrero Power Plant Unit Project (00-AFC-4).* Submitted to California Energy Commission April.

Mirant Corporation, 2003. Response to California Energy Commission Staff Data Requests, Set 6, (Cultural Resources) Nos. 216 through 220, Cooling Tower System Amendment to the Potrero Power Plant Unit 7 Project (00-AFC-4). Submitted to California Energy Commission, September 11.

Reinoehl, G. and R. Mason. 2002. *Cultural Resources, Testimony of Gary Reinoehl and Roger Mason.* California Energy Commission Final Staff Report, February 13.

Rice, R.B., et. al. 1996. *The Elusive Eden: A New History of California*. New York, McGraw-Hill.

Sanborn, Inc. 1886-1887. *Fire Insurance Maps* (of the City of San Francisco). Sanborn Insurance Company.

Sanborn, Inc. 1900. *Fire Insurance Maps* (of the City of San Francisco). Sanborn Insurance Company.

Sanborn, Inc. 1914. *Fire Insurance Maps* (of the City of San Francisco). Sanborn Insurance Company.

Sanborn, Inc. 1915. *Fire Insurance Maps* (of the City of San Francisco). Sanborn Insurance Company.

Sanborn, Inc. 1950. *Fire Insurance Maps* (of the City of San Francisco). Sanborn Insurance Company.

San Francisco Planning Department. 2001. *Central Waterfront Cultural Resources Survey Summary Report and Draft Context Statement, October 2000 – October 2001.* 8. CEC Dockets, 00-AFC-4.

SECAL (Southern Energy California). 2000a. *Application for Certification, Potrero Power Plant Unit 7 Project (00-AFC-4).* Submitted to the California Energy Commission, May 31.

SECAL (Southern Energy California). 2000b. *SEP 2000 D Res 1. Southern Energy California response to staff Data Requests, Set 1, Nos. 1 through 139, Potrero Power Plant Unit 7 Project (00-AFC-4).* Submitted to California Energy Commission, December 7.

SECAL (Southern Energy California). 2000c. *SEP 2000 D Res 2. Southern Energy California response to staff Data Requests, Set 2, Nos. 140 through 161, Potrero Power Plant Unit 7 Project (00-AFC-4).* Submitted to California Energy Commission, December 21.

SECAL (Southern Energy California). 2001a. *Amendment to the Application for Certification, Potrero Power Plant Unit 7 Project (00-AFC-4). Addresses data responses to staff's Data Requests 30-32 (Cultural Resources), revises AFC Section 8.3, Cultural Resources, and AFC Appendix R, Cultural Resources.* Submitted to the California Energy Commission, January 31.

SECAL (Southern Energy California). 2001b. *Appendix R1. Amendment to the Application for Certification, Potrero Power Plant Unit 7 Project (00-AFC-4). Appendix R1, Historic Resources Report: Southern Waterfront, San Francisco, California*. Submitted to California Energy Commission, January 31.

SECAL (Southern Energy California). 2001c. *Appendix R2. Amendment to the Application for Certification, Potrero Power Plant Unit 7 Project (00-AFC-4). Appendix R2, Draft Historic Architecture Report: Station A Potrero Power Plant in the City and County of San Francisco*. Submitted to California Energy Commission, January 31.

SECAL (Southern Energy California). 2001d. *Appendix R3. Amendment to the Application for Certification, Potrero Power Plant Unit 7 Project (00-AFC-4). Appendix R3, Historic Architecture Report: 435 23rd Street, City and County of San Francisco*. Submitted to California Energy Commission, January 31.

Soule, F. 1855. *The Annals of Scan Francisco.* New York. Appelton and Company.

TerraServer. 2003. http://terraserver-usa.com/printimage.aspx?T=1&S=10&X=2771&Y=20892&Z=10&P=San+Francisco%2c+California%2c+United+States&D=10+Jul+1993, accessed December 20.

URS/Dames & Moore. 2000. *Potrero Power Plant Unit 7 Project: Research Design for Limited Subsurface Archaeological Investigations (Confidential).* Submitted to Southern Energy Potrero, December 5.

U.S. Coastal Survey. 1869. *San Francisco Peninsula, North Point to Visitacion Point*.

USGS. 1895. *San Francisco*, *15 minute quadrangle map*. United States Geological Survey, Washington, D.C.

USGS. 1896. *San Mateo, California, 15 minute quadrangle map.* United States Geological Survey.

USGS. 1899. *San Francisco, 15 minute quadrangle map*. United States Geological Survey, Washington, D.C.

USGS. 1915a. *San Francisco, 15 minute quadrangle map*. United States Geological Survey, Washington, D.C.

USGS. 1915b. San Mateo, California, *15 minute quadrangle map*. United States Geological Survey, Washington, D.C.

USGS. 1942. *San Francisco, 15 minute quadrangle map*. United States Geological Survey, Washington, D.C.

USGS. 1946. *San Francisco, 15 minute quadrangle map*. United States Geological Survey, Washington, D.C.

USGS. 1947a. *San Francisco, 15 minute quadrangle map*. United States Geological Survey, Washington, D.C.

USGS. 1947b. *San Francisco North, 7.5 minute quadrangle map*. United States Geological Survey, Washington, D.C.

USGS. 1948. *San Francisco, 15 minute quadrangle map*. United States Geological Survey, Washington, D.C.

USGS. 1950. *San Francisco North, 7.5 minute quadrangle map*. United States Geological Survey, Washington, D.C.

USGS. 1956. *San Francisco North, 7.5 minute quadrangle map*. United States Geological Survey, Washington, D.C.

USGS. 1968. *San Francisco North, 7.5 minute quadrangle map*. United States Geological Survey, Washington, D.C.

VerPlanck, Christopher. 2001. Context Statement, Dogpatch Historic District Resource Survey. Appendix D in San Francisco Planning Department.

Wirth Associates, Inc. 1979. *Potrero 7: Phase II, Archaeological Test Excavations. Prepared for Pacific Gas & Electric Company*. Report S-14074 on file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park.

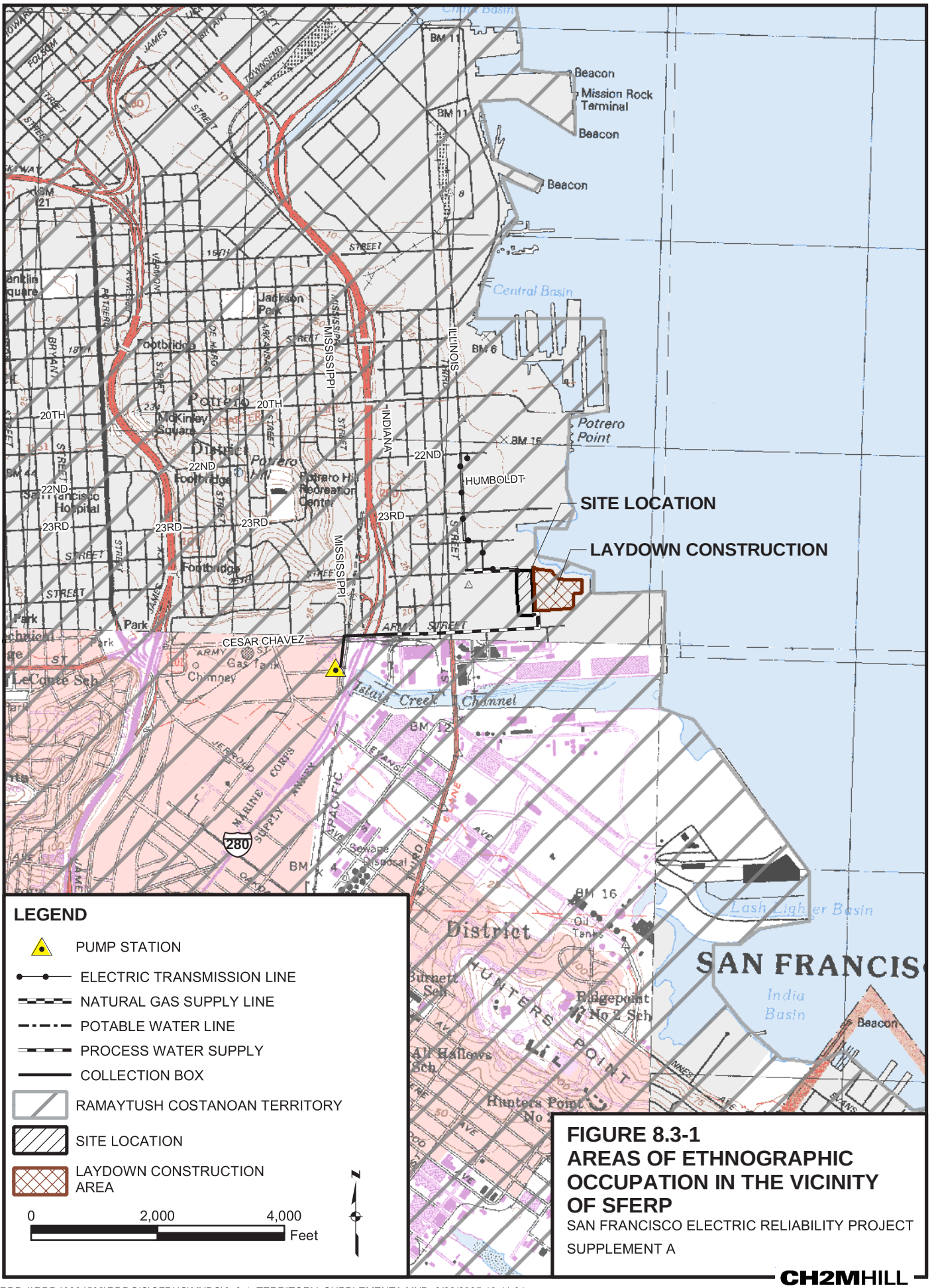

FIGURE 8.3-1
AREAS OF ETHNOGRAPHIC OCCUPATION IN THE VICINITY OF SFERP
SAN FRANCISCO ELECTRIC RELIABILITY PROJECT
SUPPLEMENT A

CH2MHILL

RDD \\RDD40004508\RDDGIS\SFPUC\MXDS\8_3-1_TERRITORY_SUPPLEMENTA.MXD 2/28/2005 13:41:01

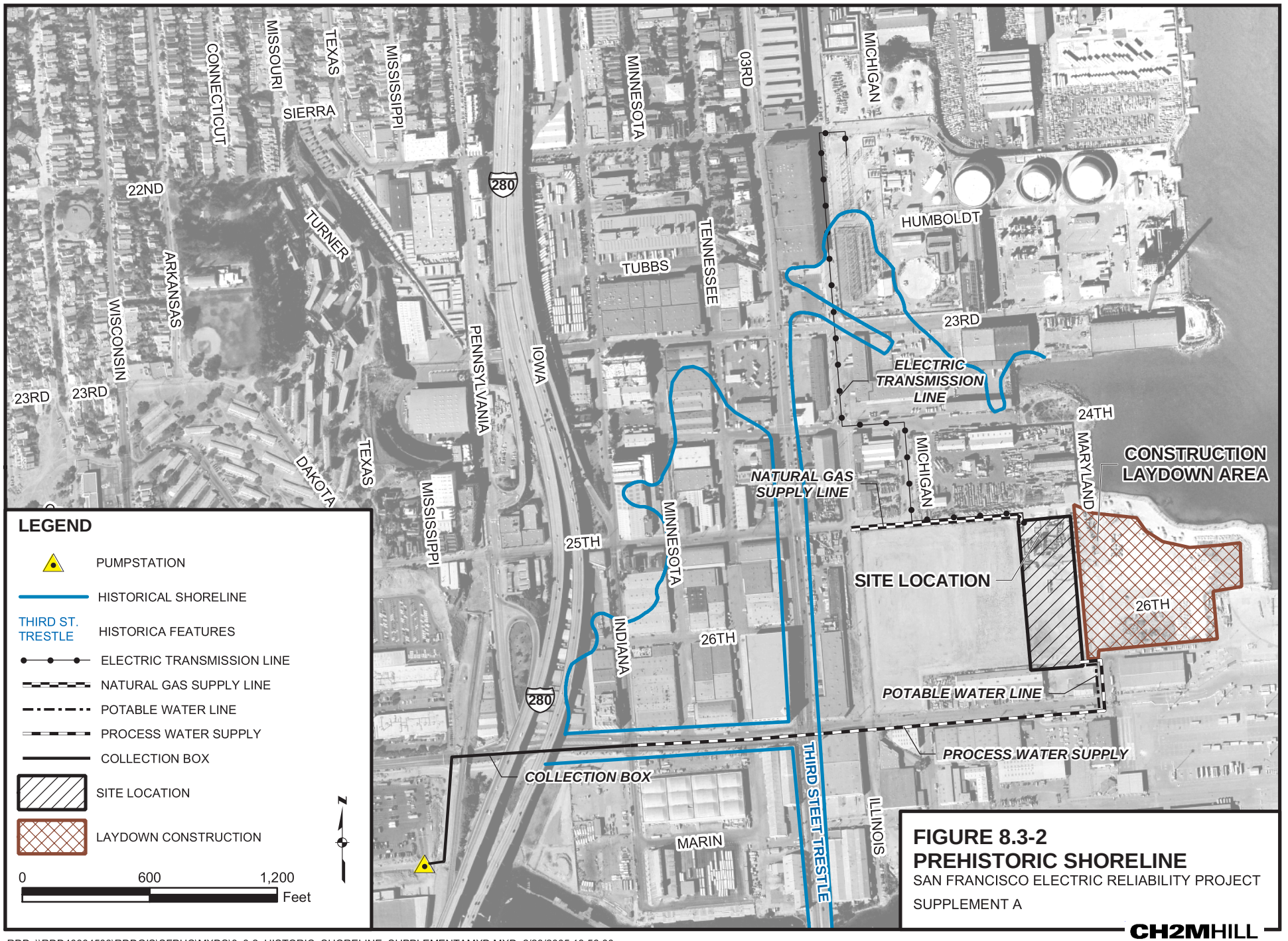

FIGURE 8.3-2
PREHISTORIC SHORELINE
SAN FRANCISCO ELECTRIC RELIABILITY PROJECT
SUPPLEMENT A

CH2MHILL

RDD \\RDD40004508\RDDGIS\SFPUC\MXDS\8_3-2_HISTORIC_SHORELINE_SUPPLEMENTAMXD.MXD 2/28/2005 13:56:00