4.4 CULTURAL RESOURCES

4.4.1 Introduction

This section presents information on known and potentially existing cultural resources at the RBC site and analyzes the potential for development under the proposed 2014 LRDP to affect those resources. Information and analysis in this section is based on previous archaeological surveys (see Section 4.4.5) and those conducted for the current project: *Cultural Resources Inventory Report for the Richmond Bay Campus, Alameda County* (GANDA 2013) and *Historic Properties Survey Report for Richmond Bay Campus* (Tetra Tech 2013).

Cultural resources can be prehistoric, Native American, or historic. Prehistoric resources are artifacts from human activities that predate written records; these are generally identified in isolated finds or sites. Prehistoric resources are typically archaeological and can include village sites, temporary camps, lithic scatters, roasting pits/hearths, milling features, petroglyphs, rock features, and burial plots.

Historic resources are properties, structures, or built items from human activities that coincide with the epoch of written records. Historic resources can include archaeological remains and architectural structures. Historic archaeological sites include townsites, homesteads, agricultural or ranching features, mining-related features, refuse concentrations, and features or artifacts associated with early military and industrial land uses. Historic architectural resources can include houses, cabins, barns, lighthouses, other constructed buildings, and bridges. Generally, architectural resources that are over 50 years old are considered for evaluation for their historic significance.

Public and agency NOP comments related to cultural resources are summarized below:

- For construction activities proposed in a state right-of-way, Caltrans requires that project environmental documentation include results of a current Northwest Information Center archaeological records search.
- A private individual proposes that the Berkeley and Albany waterfront, grouped together, is eligible for inclusion in the National Register of Historic Places (NRHP) under 36 CFR 800.16 as a Cultural Landscape under the federal criteria for listing.

4.4.2 Environmental Setting

Archaeological

Prehistoric Context

Archaeological investigations in Central California and elsewhere seek to explain past human behavior, cultural continuity, and change. Archaeological interpretation of material remains can address many aspects of human behavior, including when and at what time of year people occupied an area; the technological and natural resources available; social organization; settlement patterns; trade, competition, and conflict relationships with neighboring groups; ceremonial systems; and external environmental issues affecting indigenous populations. Current archaeological research seeks to answer a wide array of questions regarding prehistoric human culture and adaptive responses.

Archaeological research throughout the Central Valley and Central California regions has resulted in the documentation of numerous prehistoric habitation sites. These early archaeological sites were typically near the shoreline of lakes, marshes, creeks, and rivers. Archaeologists now

recognize three general patterns of cultural adaptation throughout the Central Valley Region based on artifact assemblages and mortuary practices during the period between 5,000 Before Present (BP)[10] and 200 BP. The three primary time periods are the Early Period (5000–2500 BP), the Middle Period (2500–1300 BP), and the Late Period (1300–200 BP or contact). Fredrickson (1973, 1974, and 1994) delineated distinct time-period divisions based on general economic, technological, and mortuary traits. He introduced three cultural patterns, the Windmiller, Berkeley, and Augustine Patterns, and he correlated them respectively to the Early, Middle, and Late horizons of the California Central Taxonomic System (Rosenthal et al. in Jones and Klar 2007:154). A brief description of each:

The Early Period/Windmiller Pattern (5000–2500 BP) is divided into the Early, Middle, and Late Windmiller, named for the Windmiller Pattern first identified in the Sacramento–San Joaquin Delta as the oldest archaeological complex (Lillard et al. 1939). The Windmiller Pattern is thought to be composed of a mixed economy of game procurement and the use of wild plant foods. The archaeological assemblages of this period contain numerous projectile points, with large obsidian concave base and stemmed points; rectangular *Olivella* beads; and a wide range of faunal remains (Erlandson and Jones eds. 2002). The Windmiller Pattern reflects a seasonal adaptation in which valley sites were occupied during the winter months and foothill camps were inhabited in the summer (Rosenthal et. al. in Jones and Klar 2007:154; Moratto 1984:201-207).

The Middle Period/Berkeley Pattern (2500-1300 BP) shifted to a more specialized adaptation called the Berkeley Pattern that spanned approximately 1,200 years. Fredrickson (1974) defined the Berkeley Pattern based on the economic adaptive strategies developed around the area's extensive and rich resources. Deeply stratified midden deposits, developed over generations of occupation, are common to Berkeley Pattern sites exemplified by the Emeryville Shellmound (CA-ALA-309) southwest of the project area on the east shore of the San Francisco Bay. These middens contain numerous milling and grinding stones for food preparation. Early representations of the Berkeley Pattern resemble the Windmiller Pattern but shift to larger occupation sites near water sources with the presence of projectile points and atlatls (Rosenthal et. al. in Jones and Klar 2007:156; Hughes 1994; Moratto 1984:207-211).

The Late Period/Augustine Pattern (1300 BP–contact) followed the Berkeley Pattern. The Augustine Pattern exhibits elaborate ceremonial and social organization and the development of social stratification. Exchange became well developed. A more intensive emphasis was placed on acorn usage, as evidenced by the archaeological record of shaped mortars and pestles and numerous hopper mortars. Other Augustine Pattern traits include the introduction of pre-interment burning of offerings in a grave pit during mortuary rituals, increased village sedentism, population growth, and an incipient monetary economy in which beads were used as a standard of exchange (Rosenthal et. al. in Jones and Klar 2007:157; Moratto 1984:211-214).

Ethnographic Context

The project site is in the area ethnographically attributed to the Ohlone (also known as Costanoan). The term "Costanoan" derives from the Spanish word Costaños or "coast people." It refers to an ethno-linguistically distinct people who lived along the San Francisco peninsula before contact with European Americans. Ethnographic and ethnohistoric information about the Ohlone derives primarily from the accounts of early explorers and missionaries. The territory of

[10] "Before Present (BP)" is a dating metric often used in archaeology, geology, and other scientific disciplines. Past events are measured counting back a specified number of years from the originating date of January 1, 1950. So, for example, the Central Valley Region Early Period of 5,000—2500 BP correlates to 2,500—550 BC under the Gregorian or Western calendar system.

the Ohlone is purported to have extended from the Central Coast Ranges between San Pablo Bay in the north to Monterey in the south. The Ohlone tribal territory eastern boundary is not precisely known but is understood to extend to the Mount Diablo Range (Kroeber 1925:462; Moratto 1984:225).

The Ohlone language is one of the eight major linguistic subdivisions of Miwok-Costanoan, which belonged to the Utian family in the Penutian language family (Shipley 1978:82-84). Linguistic evidence suggests that the Ohlone entered the San Francisco and Monterey Bay areas about 1,500 BP (Levy 1978:486). The Ohlone were politically organized by tribelets, each having a designated territory. A tribelet consisted of one or more villages and camps in a physiographically defined territory. Tribelets generally had 200 to 250 members (Levy 1978:485; Margolin 1978:1). Each tribelet consisted of villages every three to five miles (as noted by early Spanish explorers) that contained an average of 60 to 90 persons (Milliken 1995:19). The project site is in the *Huchiun* triblet ethnographic territory, where *Chochenyo*/*East Bay Costanoan* was the common spoken language (Levy 1978:485; Margolin 1978:2).

The acorn was among the most important food resources for Ohlone, who preferred the area's abundant tanbark oak, valley oak, and California black oak. The large oak tree stands created a readily accessible staple. These could be stored in granaries and used through the winter months. Acorns were ground into meal and leached to remove tannins. Other important food resources were buckeye nuts, leached and made into a mush, and the seeds of dock, gray pine, and tarweed, all of which were roasted in baskets with hot coals before being eaten. The Ohlone gathered berries and fruits including gooseberries, blackberries, madrone, and wild grapes along with root resources such as wild onion, cattail, and wild carrot (Levy 1978:491).

Shellfish and marine mammals were important Ohlone dietary resources, particularly for coastal populations. Shellmound midden throughout the Bay Area attest to the importance of shellfish in the Ohlone diet. The Emeryville Shellmound (CA-ALA-309; documented by Nels Nelson in 1909), once a complex of mounds, is approximately 2.5 miles southwest of the project site on the San Francisco Bay eastern shoreline. Terrestrial mammals, including rabbits, black-tailed deer, Tule elk, and pronghorn sheep, were important to coastal and inland Ohlone populations. These were hunted and trapped using drive and snare methods. Hunting parties were communal, often bulk harvesting meat for immediate consumption or for winter storage for the various village groups (Lightfoot and Parrish 2009:212). Migratory waterfowl, particularly geese, ducks, and coots, the most important avian resources, were captured with nets; local quail were caught in traps. The Ohlone fished for salmon, sturgeon, and lampreys, and built Tule balsas (rafts) to move about the waterways. The Ohlone traded with surrounding tribes such as the Miwok (to the northeast), and the Northern Valley Yokuts (to the east). Mussels, abalone shells, dried abalone, and salt were exchanged for piñon nuts with the Yokuts. *Olivella* shells (the shell of a small predatory sea snail) were traded with the Sierra Miwok. Bows were traded with the Plains Miwok (Levy 1978:488).

Historic Period

In 1772, Europeans arrived in what would become Contra Costa County when a Spanish expedition led by Pedro Fages discovered the San Pablo Bay and the confluence of the Sacramento and San Joaquin rivers.[11] Though subsequent Spanish expeditions passed through the region, the Spanish did not appear to settle in the Richmond area during the Mission Period of 1769 through 1833. In the 1820s and 1830s, the Mexican government began granting large tracts

[11] Mildred B. Hoover, Hero E. Rensch, Ethel G. Rensch, Douglas E. Kyle, *Historic Spots in California*, *Fourth Edition*, Stanford University Press, Stanford, California: 1958, p. 129.

of land in the area to its citizens, including Ranchos San Pablo, San Ramon, and Pinole. The first permanent non-native settlers were Francisco Castro and his wife Maria Gabriela Berryessa. The Mexican government granted the 18,000 acre Rancho San Pablo to the Castros in 1823.[12] Americans began farming in Contra Costa County in the late 1830s, and by 1882, two-thirds of the cultivated land in the county was devoted to wheat production.[13]

In 1852 and 1853, Minna C. C. Quilfelt (or Quilfeldt) purchased 600 acres of Rancho San Pablo adjacent to the San Francisco Bay; this eventually became the southern portion of the City of Richmond.[14] In the 1860s, a wharf and produce warehouse were constructed to ship agricultural produce from Rancho San Pablo and Quilfelt Ranch to San Francisco markets. German native Richard Stege settled on Rancho San Pablo in the late 1860s after stints in the gold fields and the Siberian fur trade. A town named Stege formed on Richard Stege's holdings, and by the early twentieth century it boasted several industries, including the California Cap Works (located on the RBC site), the United States Briquette Company, the Stauffer Chemical Works, and the Stege Lumber Manufacturing Company.[15] Richmond incorporated in 1905, and by 1917 it was the largest city in Contra Costa County.[16]

California Cap Company

In 1877, William Letts Oliver, who was born in Chile to English parents, established the Tonite Powder Company adjacent to the Stege Ranch. Oliver was a mining engineer who developed an explosive called "*Tonite*" that could be used at high heat and was instrumental in construction of the Sutro Tunnel in the Comstock Lode.[17] This drainage tunnel allowed access to deeper mineral exploration. Mine flooding and inadequate pumps had inhibited some exploration activities up to that time.

To ensure a steady supply of blasting caps, otherwise imported from Europe, Oliver and partner Freeborn Fletter founded the California Cap Company.[18] The California Cap Company occupied a 160-acre parcel adjacent to the bay at the southern end of the Stege Ranch.

The California Cap Company, which operated on the site for nearly seven decades, was the first manufacturer of blasting caps in the United States. Richard Stege continued to reside on the ranch and contracted with Tonite Powder and California Cap to transport their products to the railroad.[19] The California Cap Company was on the parcel that is currently the RFS. The Tonite Powder Company appears to have been to the east of the RFS on the parcel that became the Stauffer Chemical Company and later the Zeneca site, although its exact location is unclear.[20]

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[12] Donald Bastin, *Images of America: Richmond*, Arcadia Publishing, Charleston SC: 2003, p. 9.

[13] J.P. Munro-Fraser, *History of Contra Costa County, California,* W.A. Slocum & Co., San Francisco: 1882, p. 55 – 57.

[14] Evan Griffins, "Early History of Richmond", December 1938, El Cerrito Historical Society, website: http://www.elcerritowire.com/history/pages/EarlyRichmond.htm, accessed January 2013.

[15] Frederick J. Hulaniski, *The History of Contra Costa County, California*. Elms Publishing Company, Berkeley, California: 1917, p. 354.

[16] Hulanski p. 288.

[17] Oliver, p. 1.

[18] Pacific Mining News, Supplement to Engineering & Mining Journal-Press, "Industrial Notes: Developing of the Blasting Cap Industry", Vol. 1, No. 7, November 1922, p. 222.

[19] Nilda Rego, "Enterprising Stege lost all and died without a penny," Time Out, March 27, 1994, p. 2, column 4.

[20] Nilda Rego, "Enterprising Stege lost all and died without a penny", Time Out, March 27, 1994, p. 2, column 4.

The Tonite and California Cap factories, the first of several gunpowder and chemical companies in the region, were separated by the Stege agricultural warehouse for safety. [21] Eventually the Tonite factory was incorporated into the California Cap Company. By 1916 there were at least a dozen buildings on the site. World War II brought thousands of defense industry jobs to Richmond. The California Cap Company was one of the most important local employers, but it did not survive the transition to a peacetime economy, and by 1949 the plant was shuttered and the Oliver family began looking for a buyer.

After World War II, UC Berkeley's Engineering Department needed an off-campus location to do experiments requiring more space than a laboratory. The University purchased the California Cap Company site from the Oliver family for the use by the Engineering Department in 1950 for $750,000.[22] The University named the acquired property the Richmond Field Station.

The RFS has been the location of a research overseen by numerous UC Berkeley departments over the years. The Sanitary Engineering Research Laboratory was the first department to do research at the site. This laboratory focused primarily on sewage treatment technology; it supported research on pollution control and disposal of solid and liquid waste.[23] At first the University used the buildings left behind by the California Cap Company. The Engineering Department established a machine shop, computer shop, receiving facility, mail service, and other facilities in the old blasting company buildings.[24] By the 1970s, the department had done many experiments at the RFS.

Records Searches and Cultural Resources Sites and Buildings

Archaeological and Landscape Resources

A records search at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University, Rohnert Park was conducted on January 16, 2013 (File No. 12-0713). The records search compiled information regarding the locations of previously recorded cultural resources sites and previous studies within a 0.25-mile radius of the RBC site for the proposed 40-year LRDP undertaking. This defines the area in which eligible properties may be affected by the undertaking, including direct effects (such as destruction of the property) and indirect effects (such as visual, audible, and atmospheric changes that affect the character and setting of the property). This information was used to assess the archaeological sensitivity of the RBC site.

The records search found that 29 cultural resources investigations were completed within a 0.25-mile radius of the RBC site, with four of these on the RBC site. Seven cultural resources, including five prehistoric shell mounds and a historic-period pier and seawall, were recorded within this area. Two of the previously recorded cultural resources are on the RBC site. One of these cultural resources (CA-CCO-157, Loud's No. 299) is in a developed portion of the LRDP development area. The second cultural resource (CA-CCO-753H, Stege Marsh Seawall) is in the development area, but it has been partially dismantled.

In January 2013, a pedestrian survey of a portion of the development area was conducted. The survey found that approximately 70 percent of the 16 acres is developed with buildings, roads,

[21] Oliver, p. 1.

[22] P.H. McGauhey, "The Sanitary Engineering Research Laboratory: Administration, Research and Consultation, 1950-1975–An Interview Conducted by Malca Call", Regional Oral History Office, University of California, Berkeley, 1974, p. 70.

[23] University of California, Berkeley, 2008, p. 13.

[24] McGauhey, p. 71.

parking lots, and a large stock pile of soil. The remaining 30 percent consists of a large grassy field, lawns, landscaping, dirt driveways and parking lots, and wetlands. A small southern portion of the project site was inaccessible. The previously recorded historic period resource in the project site, CA-CCO-753H (Stege Marsh Seawall), could not be located during the survey. This area was inaccessible because it is in the fenced area marked as hazardous waste and habitat restoration. The survey identified two previously unrecorded historic period resources that were assigned temporary field numbers by the researchers. These include two stands of eucalyptus trees, GANDA-622-01, and one isolated bottle, GANDA-ISO-622-01(GANDA 2013).

The University of California, Berkeley Museum of Paleontology conducted a record search for paleontological resources in the area and determined that there have been no prior fossil finds in the RBC. Therefore paleontological resources are not further discussed in the analysis (Holroyd 2013).

The following discussion provides information regarding the known cultural resources in the LRDP development area.

CA-CCO-157/P-07-000099 (Loud's No. 299). In 1915, L. L. Loud originally recorded this resource as an approximately 350-foot wide by 250-foot long shell mound on the end of a slough about 800 feet from the San Francisco Bay's historic shoreline. It is currently under a warehouse and paved parking lot at 3200 Regatta Boulevard in Richmond (Banks 1985a). This resource is in the LRDP development. This resource has not been evaluated for NRHP or California Register of Historical Resources (CRHR) eligibility because it is currently inaccessible.

CA-CCO-753H/P-07-002591 (Stege Marsh Seawall). Constructed in the late 19th or early 20th centuries, this segment of the Stege Marsh Seawall consists of an approximately 18-foot long wood beam mounted in place by two sets of round wood poles. Seventeen 1-foot by 3-inch wood planks form the back of the seawall and the other portion of the seawall has been dismantled. Subsurface portions of it may still be present and buried. This resource was evaluated and recommended as not eligible for listing in the NRHP or the CRHR (Hatoff et al. 2003).

GANDA-622-01 (Eucalyptus Stands 1 and 2). This landscape feature consists of two historic period Eucalyptus stands. Eucalyptus Stand 1 is on the east side of the development area, along the east side of S. 46th Street (Egret Way). Eucalyptus Stand 2 is on the northwest side of the development area, east of Avocet Way. According to the technical report for the Richmond Field Station Remediation Project (S-26851), Richard Stege purchased 600 acres of land and established an estate in 1876. Around the same time, chemical and explosive companies began buying land in the area and constructing manufacturing plants. In 1880, the California Cap Company was established at the Stege property, and trees were planted to serve as a buffer between the manufacturing facility and nearby residents (Hatoff et al. 2003). It is possible that the eucalyptus stands contain many of the same trees planted in the 1880s. The University purchased the property in 1950s and reused many of the existing buildings (Hatoff et al. 2003). It also may have retained the original eucalyptus stands. The eucalyptus stands have been evaluated and are recommended as not eligible for listing in the NRHP or CRHR.

GANDA ISO-622-01. This isolated resource is a late 19th to early 20th century complete aqua whiskey bottle identified on the south side of Building 110. As an isolated artifact that lacks association in the larger historic context of the LRDP, this resource is not eligible for listing in the NRHP or CRHR.

Historical Architectural Resources

There are 81 buildings in the RBC site. In January 2013, a historic properties survey was done for a portion of the RBC development area. Twenty-five buildings were inventoried and recorded. Research was conducted at the Contra Costa Historical Society archives, the DOE Library, the Earth Sciences and Map Library at UC Berkeley, and through the Oakland Public Library's Oakland History Room. A records search at the Northwest Information Center (file No. 12-0776) did not yield any evaluated or eligible buildings or structures. The records search identified one previous historic structure survey by Holman (1989). This study identified the buildings that were over 50 years old and did not include all of the buildings in the current survey population. None of the buildings were considered to be individually significant, but they were not recorded individually or formally evaluated using NRHP or CRHR criteria.

Of the 25 buildings evaluated for listing in the NRHP and CRHR, Tetra Tech determined that two were eligible for listing—Buildings 150 and 175. These buildings were determined eligible under Criterion A/1 for their association with the California Cap Company and its innovation in explosives during the late 1800s through the middle of the 20th century. The other buildings in the surveyed area are not historically significant or do not retain sufficient integrity to be considered eligible for listing on the NRHP or the CRHR individually or as a contributing element to a historic district.

Native American Consultation

As part of the consultation process with Native American organizations and individuals, the Native American Heritage Commission was contacted on January 24, 2013, with a request for information about any sacred lands related to the project site and for a list of interested Native American groups and individuals in Contra Costa County. The Native American Heritage Commission has not responded to date.

4.4.3 Regulatory Considerations

Federal

Section 106 of the NHPA (16 USC 470 [f]), as amended (PL 89-515), and its implementing regulations (36 CFR Part 800.9 [a] and [b]) require federal agencies to consider the effects of their actions on properties listed or eligible for listing on the NRHP. The criteria for inclusion (36 CFR 60.4) are as follows:

A. Association with events that have made a significant contribution to the broad patterns of our history;

B. Association with the lives of persons significant to our past;

C. Resources that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Resources that have yielded or may be likely to yield information important in prehistory or history.

In addition to historic significance, a property must have integrity to be eligible for the NRHP. This is the property's ability to convey its demonstrated historical significance through location, design, setting, materials, workmanship, feeling, and association.

Section 106 describes the procedures for identifying and evaluating eligible properties, assessing the effects of federal actions on eligible properties, and consulting to avoid, reduce, or minimize adverse effects. Eligible properties need not be formally listed on the NRHP, but are afforded the same protections as listed properties. Federal agencies are required to consult with the SHPO as part of the Section 106 process. Section 106 does not require the preservation of historic properties, but it ensures that the decisions of federal agencies concerning the treatment of these properties include meaningful considerations of cultural and historic values and of the options available to protect the properties.

State

California Environment Quality Act

The CEQA Statute and Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts to historical resources, including all resources listed in or formally determined eligible for the NRHP, the CRHR, or local registers. CEQA Guidelines, Section 15064.5(a), defines the term "historical resources" to include:

1) A resource listed in, or determined to be eligible by, the State Historical Resources Commission, for listing in the CRHR (PRC Section 5024.1, Title 14 California Code of Regulations, Division 3, Chapter 11.5 Section 4850 et seq.).

2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k), or identified as significant in an historical resource survey meeting the requirements in PRC Section 5024.1(g), shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

California Register of Historical Resources

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (PRC Section 5024.1, Title 14 CCR Division 3, chapter 11.5, Section 4852). The four eligibility criteria for CRHR listing closely parallel those of the NRHP. Each resource must be determined to be significant at the local, state, or national level under one of these four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California history and colonial heritage; or

2. Is associated with the lives of persons significant in our past; or

3. Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4. Has yielded, or may be likely to yield, information important in prehistory or history. [25]

[25] California Public Resources Code, Sections 4850 through 4858; Office of Historic Preservation, Instructions for Nominating Historical Resources to the California Register of Historical Resources, August, 1997.

A resource may still be considered historical if it does not meet these standards. CEQA Statutes Section 21084.1, states that a resource need not be listed on any register to be historical. CEQA Guidelines Section 15064.5(a)(4) states that "until such time as a structure is evaluated for possible inclusion in the inventory pursuant to subdivisions (b) and (c) of PRC Section 5024.5 (historical significance criteria), state agencies shall assure that any structure which might qualify for listing is not inadvertently transferred or unnecessarily altered."

To be eligible for listing, a resource must also have sufficient integrity. The CRHR definition of integrity is slightly different from that used for the NRHP. Integrity is defined as the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. The CRHR states that eligible resources must retain enough of their historic appearance or character to be recognizable as historic resources and to convey the reasons for their significance, and it lists the same seven aspects of integrity used for evaluating properties under the NRHP criteria.

Regulations Concerning Discovery of Human Remains

California Public Resources Code Section 5097.98 (Notification of Native American human remains, descendants; disposition of human remains and associated grave goods) mandates that the lead agency adhere to the following regulations when a project results in the identification or disturbance of Native American human remains:

a) Whenever the Native American Heritage Commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing of, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

b) Whenever the Native American Heritage Commission is unable to identify a descendent, or the descendent identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendent, and the mediation provided for in subdivision (k) of Section 5097.94 fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property, in a location not subject to further subsurface disturbance.

c) Notwithstanding the provisions of Section 5097.94, the provisions of this section, including those actions taken by the landowner or his or her authorized representative to implement this section, and any action taken to implement an agreement developed pursuant to subdivision (l) of Section 5097.94, shall be exempt from the requirements of the California Environmental Quality Act [Division 13 (commencing with Section 21000)].

d) Notwithstanding the provisions of Section 30244, the provisions of this section, including those actions taken by the landowner or his or her authorized representative to implement this section, and any action taken to implement an agreement developed pursuant to

subdivision (1) of Section 5097.94, shall be exempt from the requirements of the California Coastal Act of 1976 [Division 20 (commencing with Section 30000)].

Local

City of Richmond Historic Structures Code

Historic preservation is implemented in the City of Richmond through the enforcement of its Historic Structures Code (Chapter 6.06 of the Richmond Municipal Code; City of Richmond 2013). The Historic Structures Code includes the following historic resource designation criteria:

On the recommendation of the Committee and approval of the Council a structure, site, or other improvement, not already designated as such, may be designated a historic resource in the City or may be designated an historic district if it meets any of the following criteria:

(1) It exemplifies or reflects valued elements of the City's cultural, social, economic, political, aesthetic, engineering, archaeological, or architectural history; or

(2) It is identified with persons or events important in local, state, or national history; or

(3) It reflects significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning; or

(4) It embodies distinguishing characteristics of an architectural style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship; or

(5) It is representative of the notable work of a builder, designer, or architect whose style influenced the City's architectural development.

A structure, site, or other improvement which meets any of the above criteria at the highest level and whose loss would be a major loss to the City may be designated an outstanding historical resource.

City of Richmond General Plan

Historic Resources, Richmond General Plan 2030, is the Historic Resources Element that provides regulatory guidance for preserving and restoring the city's historic assets. The element is designed to protect cultural assets and to ensure that policies that relate to historic resources will ensure their protection. Three goals, Historic Resource Preservation, Expanded Economic Opportunities Based on Historic Resources, and Increased Public Awareness of Richmond's History, are included in the Historic Resources Element of the General Plan. Policies and implementing procedures associated with these goals are described in the plan.

The 2030 General Plan EIR determined that the effects on cultural resources from future development pursuant to the General Plan would be significant and unavoidable. Development could cause a substantial adverse change in the significance of historical resources because existing and proposed City policies do not explicitly prohibit demolition or inappropriate alteration of historic-period buildings or structures. Mitigation measures would be implemented to reduce potential impacts, but the impact would remain significant and unavoidable. Development could adversely impact archaeological or paleontological resources, but these impacts would be mitigated to less than significant. Cumulative impacts would be cumulatively considerable for historic structures and archaeological resources but less than significant for paleontological resources.

4.4.4 Impacts and Mitigation Measures

CEQA Guidelines Section 15064.5(b) states that "a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment."

Standards of Significance

Cultural resources impacts from the 2014 LRDP implementation would be considered significant if they would exceed the following Standards of Significance, in accordance with Appendix G of the State CEQA Guidelines and the UC CEQA Handbook:

- Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature
- Disturb any human remains, including those interred outside of formal cemeteries

Public Resources Code (PRC) Section 5020.1 and CEQA Guidelines Section 15064.5(b)(1) define a significant effect as one that would materially impair the significance of an historical resource. According to CEQA Guidelines Section 15064.5(b)(2), material impairment of a resource's historic significance could result if the project would:

- Demolish or materially alter in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR as determined by the lead agency
- Demolish or materially alter in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to local ordinance or resolution (PRC Section 5020.1[k]), or its identification in an historical resources survey meeting the requirements of PRC Section 5024.1(g) unless a preponderance of evidence establishes that the resource is not historically or culturally significant
- Demolish or materially alter in an adverse manner those physical characteristics of a resource that convey its historical significance and that justify its eligibility for its inclusion on the CRHR

Although not a standard of significance, CEQA Guidelines Section 15064.5(b)(3) holds that, in general, a project impact on historic resources will be considered mitigated to a less than significant level if mitigation follows the Secretary of the Interior's guidelines.

Analytical Methods

Impacts must be considered when a proposed undertaking has the potential to affect cultural resources, such as those resources described above. CEQA associates a "substantial adverse change" in the significance of an historical resource with a significant impact on the environment. *PRC Section 5020.1* and *CEQA Guidelines Section 15064.5(b)(1)* define the term "substantial adverse change" as demolition, destruction, relocation, or alteration of a historical resource or its immediate surroundings such that a resource's value would be materially impaired. The analysis must determine whether there are historical resources that may be affected by the proposed project and whether the project would result in a substantial adverse change to the extent that the resource's historical value is materially impaired or lost.

The general method for determining whether a significant impact on historical resources could result requires determining a project's region of influence, identifying the presence or absence of cultural resources in that region, evaluating resource significance and/or whether it meets historical resource eligibility criteria, and determining the project's likelihood of causing a substantial adverse change.

In this analysis, there are near-term, reasonably foreseeable actions and longer-term planning actions associated with LRDP implementation. Impacts are determined by reviewing the proposed LRDP development program actions against the region's known or anticipated historical resources. The types, risks, context, and intensity of anticipated impacts are assessed qualitatively using the cultural resource professionals' best judgment.

Known historical resources under CEQA are present in the LRDP development areas. Other "unknown" historical resources may be present, but any such resources are currently unidentified, unevaluated, buried, and/or not yet of historic age. Implementation of the 2014 LRDP have the potential to result in a "substantial adverse change" and a "significant impact" on known and unknown historical resources.

Excavations, trenching, and grading for campus development could disturb or destroy significant archaeological resources in the developable areas identified in the LRDP. Much of the RBC site's ground surface is not visible and has not been examined for archaeological resources. The location of one recorded site is beneath an existing structure. Based on the environmental setting and recognized archaeological sites that were recorded and partially investigated nearly 100 years ago, the RBC site is considered highly sensitive for prehistoric archaeological resources. Likewise the historic industrial use of the LRDP developable area for over 100 years indicates that the RBC site is highly sensitive for historic-era archaeological deposits.

Two of the surveyed buildings have been determined to be eligible for the NRHP and are considered historical resources under CEQA. There are 81 RBC site buildings, only 25 have been formally evaluated. Of the 59 unevaluated buildings, some may currently be of historic age or will be during the life of the plan and may be historic resources under CEQA. Actions that could directly affect historic structures include demolition, seismic retrofitting, and accidents or vibration caused by nearby construction activities.

Given the prehistoric use of the LRDP development area, on-site resources may exist that are of interest to contemporary Native American populations. Ongoing efforts seek to determine whether there are such Native American resources present at the LRDP development sites.

RBC 2014 LRDP Policies

The RBC 2014 LRDP policies related to cultural resources include the following:

- LU2 – Land Use Policy on Character: Provide a setting capable of attracting new research programs and retaining world class researchers
    - Support excellence in building design that is harmonious with the waterfront location and creates visual variety in form and massing. Include iconic structures or buildings on the campus.

LRDP Impacts and Mitigation Measures

LRDP Impact CR-1: **Development under the 2014 LRDP could result in significant impacts on previously undiscovered, unevaluated, or unrecorded archaeological resources or human remains during construction and clearing. (*Potentially Significant; Less than Significant with Mitigation*)**

Although most, if not the entire RBC site, has been disturbed in conjunction with previous site uses, previously unknown archaeological resources or human remains may be encountered during ground-disturbing construction activities. Much of the ground surface is obscured by past development. Based on old maps, the location of site CA-CCO-157/P-07-000099 (Loud's No. 299) is believed to be collocated with an existing building and parking lot. Geo-archaeological and environmental setting analysis indicate a very high sensitivity for buried, surface, or near surface prehistoric resources throughout the RBC site. Subsurface historic period archaeological resources may also be present (GANDA 2013). The 2014 LRDP campus development may adversely affect previously unknown or unevaluated subsurface archaeological resources and possibly human remains by causing destruction, damage, loss of context, or complete or partial removal of site components. This would be a potentially significant impact. Implementing LRDP MM CR-1 would include site surveys and other measures to avoid impacting archaeological resources, reducing this impact to less than significant.

LRDP MM CR-1: Prior to any project-related excavation or construction, the University shall adequately survey all relevant disturbance areas for archaeological resources and assess the potential for buried resources based on past land use, site records, and proximity to known resources and landforms. Depending on the resulting level of suspected archaeological sensitivity, archaeological testing shall be done and/or qualified archaeological monitors will be present during ground disturbing activities.

Prior to any ground disturbing activities that could disturb potentially existing archaeological resources, the University would prepare a Construction Monitoring and Unanticipated Cultural Resources Discovery Plan to be implemented if an unanticipated discovery is made. At a minimum the plan would detail the following elements:

- Worker and supervisor training in the identification of cultural remains that could be found in the proposed project area
- Worker and supervisor response procedures to be followed if there is an unanticipated discovery, including appropriate points of contact for professionals qualified to make decisions about the potential significance of any find
- Identities of persons authorized to stop or redirect work that could affect the discovery, and their on-call contact information
- Procedures for monitoring construction activities in archaeologically sensitive areas

- A minimum radius (typically a minimum of 50 feet) around any discovery in which work would be halted until the significance of the resource has been evaluated and mitigation implemented as appropriate
- Procedures for identifying and evaluating the historical significance of a discovery
- Procedures for consulting Native Americans when identifying and evaluating the significance of discoveries involving Native American cultural materials
- Procedures to be followed for treatment of discovered human remains per current state law, including appropriate notification and consultation with Native American groups or individuals

If any suspected human bone is found during construction, all work should stop and the Contra Costa County coroner would be notified immediately per State law and the Discovery Plan. If the remains are determined to be Native American, the Native American Heritage Commission shall be notified for determination of the most likely descendent and tribal affiliation for disposition. No additional work shall take place near the find until the identified actions have been implemented.

LRDP Impact CR-2: **Development under the 2014 LRDP would result in significant impacts on historic Buildings 150 and 175 through demolition or visual intrusion from new building construction. (*Potentially Significant; Significant and Unavoidable*)**

Two buildings (Buildings 150 and 175) were determined eligible for listing on the NRHP and CRHR under Criterion A/1 for their association with the California Cap Company and its innovation in explosives during the late 1800s through the middle of the 20th century. Significant unavoidable impacts would result directly from demolition of these structures under the 2014 LRDP. Implementing LRDP MM CR-2 would reduce the impact; however because historic resources will be demolished, the proposed project will impact historic resources. Therefore, even with implementation of LRDP MM CR-2, the impact to historic resources is determined to be significant and unavoidable.

LRDP MM CR-2: Because demolition of Buildings 150 and 175 cannot be avoided, historic documentation would be completed by professionals meeting the Secretary of the Interior's Professional Qualification Standards for architectural history. Recording each structure to the standard established for the National Park Service's Historic American Building Survey or Historic American Engineering Record would include high resolution digital photographs taken of historic buildings in their current condition. Up to 20 archival black and white prints would be prepared as part of the recordation package. Construction or as-built drawings (if available) would be reproduced on archival paper.

LRDP Impact CR-3: **Development under the 2014 LRDP could result in significant impacts on historic structures that have not been identified or that would become of historic age over the life of the plan. (*Potentially Significant; Significant and Unavoidable*)**

The 2014 LRDP addresses a 40-year planning horizon. The RBC site is developed with approximately 81 one- and two-story buildings, roadways, parking lots, and landscaped areas. Twenty-five of the existing buildings in the development area have been evaluated for their historic significance. Some of the other buildings may be historic structures, and others that are not of historic age could become of age during the LRDP planning period. Significant unavoidable impacts could result directly from demolition or alteration of these structures under the LRDP or indirectly through the visual intrusion from the future construction anticipated under the plan. Implementing LRDP MM CR-3a would reduce the impact; however if avoidance of direct or indirect impacts is not possible, the proposed project may still impact historic resources. Therefore, even with implementation of LRDP MM CR-3a, conservatively, the impacts to historic resources are determined to be significant and unavoidable.

LRDP MM CR-3a: Prior to any project construction or demolition activities, the University shall ensure that all buildings and structures in the construction footprint have been adequately inventoried. If any of the inventoried structures are found to be historically significant and are to be retained, the University shall develop reuse or maintenance plans to identify the historic features of the building and prepare design guidelines based on the Secretary of Interior's Standards and Guidelines for the Treatment of Historic Properties and to ensure that the buildings retain their historic, character–defining features.

LRDP MM CR-3b: If avoidance of direct or indirect impacts on (as yet unidentified) historic buildings is not possible, the University shall determine site specific mitigation measures. Historic documentation would be completed by professionals meeting the Secretary of the Interior's Professional Qualification Standards for architectural history. Structures would be recorded to the standard established for the National Park Service's Historic American Building Survey or Historic American Engineering Record. This would include high resolution digital photography of historic buildings in their current condition. Up to 20 archival black and white prints would be prepared as part of the recordation package. Construction or as-built drawings (if available) would be reproduced on archival paper.

Cumulative Impacts and Mitigation Measures

LRDP Cumulative Impact CR-1: **Development under the 2014 LRDP together with regional cumulative development would result in a cumulatively minor cultural resources impact. (*Less than Significant*)**

This section evaluates whether implementation of the 2014 LRDP, in combination with other past, present, and reasonably foreseeable future LBNL, UC Berkeley, and non-UC projects, would result in significant cumulative cultural resources impacts in the project's region of influence. The region of influence, or cumulative setting, includes the Southern Shoreline Planning Area of the City of Richmond.

Past developments in the region have resulted in the loss or destruction of the spatial integrity of prehistoric and historic archaeological resources through ground-disturbing activities. Historic buildings and structures have been lost or impacted due to demolition, substantial alteration, neglect, or incompatible construction. Current and future projects and plans have the potential to cause substantial adverse changes to historical resources by altering, disturbing, or destroying archaeological resources during construction or by demolishing or altering buildings or structures or their setting. Construction of the Bio-Rad Laboratories Upgrade Project includes land where there are recorded archaeological sites. The extent to which historical resources are present in the region and would be impacted by cumulative projects and plans is unknown. The City of Richmond 2030 General Plan includes provisions for taking into account cultural resources and addressing adverse effects on historical resources, and future development in the region would be completed in the context of federal, state, and local laws and planning processes.

None of the known resources in the LRDP development area would be affected by other cumulative projects. Future actions in the LRDP development area would be subject to site-specific CEQA review, during which impacts on historical resources would be identified and mitigated. Therefore, cumulative impacts on cultural resources from the proposed LRDP and other projects and plans in the region of influence would be less than significant.

Mitigation Measure: No mitigation measure is required.

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