

2.9

Cultural Resources

This chapter analyzes the effect of the 2009 CTP on important historic and prehistoric cultural resources. This section provides information on the cultural resources setting of Contra Costa County, assesses potential impacts on cultural resources, and provides program-level mitigation measures.

Existing Setting

Cultural resources include prehistoric and historic archaeological resources, historic buildings and structures, and sites of importance to Native Americans in Contra Costa County. Numerous prehistoric archaeological sites have been identified in a variety of environments around the Bay Area, including at or near former or existing wetlands boundaries, along seasonal and perennial watercourses and other sources of fresh water such as springs, at the base of foothills, at or near vegetation ecotones, and buried by alluvial deposits. All of these environments are found within Contra Costa County.

Current research indicates that Paleo and Lower Archaic Indians were present in the Bay Area more than 9,000 years before present (BP). Evidence of their presence suggests that they were nomadic. Many of the sites from this early period are submerged or buried by changing Bay water levels and watercourse and siltation levels. Some sites of this era, however, have been discovered on the surface. Both surface and buried sites of this antiquity contribute to a better understanding of Contra Costa's earliest inhabitants and are important, nonrenewable resources.

Much more archaeological evidence is available for later periods, beginning around 4,500 years ago. Most current interpretations of the archaeological record of Central California use the concept of archaeological patterns. Fredrickson (1973) defines a pattern as an essentially non-temporal, integrative cultural unit—the general way of life shared by people within a given geographic region. Specifically, three such patterns that overlap somewhat in adjoining

areas are recognized for central California: the Windmill, Berkeley, and the Augustine patterns.

The Windmill Pattern, which may represent the advent of early Penutian speaking populations, extends from approximately 4,500 to 3,000 BP. This pattern was focused primarily on the lower Central Valley and Delta regions, and reflects the influence of a lacustrine or marsh adaptation. This economic stance may have preadapted them for the environment of the lower Sacramento-San Joaquin Valley and Delta and may have entered the region with this adaptation more or less fully developed.

The Berkeley Pattern extends roughly from 3,000 to 1,500 BP and became more widespread, or at least more archaeologically visible, than the antecedent complex. The Berkeley Pattern has a greater emphasis on the exploitation of the acorn as a staple. The Berkeley Pattern initially may represent the spread of proto-Miwok and Costanoans, collectively known as Utians, from their hypothesized lower Sacramento Valley/Delta homeland.

The last complex in this sequence is the Augustine Pattern, which extended from circa 1,500 BP to European contact. This pattern initially appears to be largely an outgrowth of the Berkeley Pattern but may have become a blend of Berkeley traits with those carried into the state by the migration of Wintuan, including the Patwin, populations from the north (Moratto, 1984).

By approximately 1,500 years BP, peoples with three different language groups inhabited portions of Contra Costa: the Costanoan (Ohlone), the Bay Miwok, and the Northern Valley Yokuts (considered to be the final Native American group to arrive in the Bay Area). These three cultures all occupied the Bay Area when the Spanish arrived in the 18th century. Evidence of their political, social, spiritual and economic activities is known through both archaeological investigations and ethnographic evidence.

The Costanoan speakers inhabited the western hills, plains, and the Bay shore from the Carquinez Straits south to Salinas. Many of the village sites were associated with a permanent source of fresh water and were frequently located at the mouth of streams along the Bay shore. Numerous villages were also established inland along permanent streams and on terraces at the base of hills. Special use and seasonal use sites were established throughout their territories, often in association with rock outcrops or abundant food sources.

Bay Miwok speakers controlled the western slopes of the Diablo Range, the inland valleys, and the northern coastal plains. Their largest villages were located in the San Ramon Valley. The Northern Valley Yokut speakers controlled the eastern slopes of the Diablo Range to the San Joaquin River. Their primary villages were located along the San Joaquin River, with only scattered use of the eastern plains and smaller secondary villages in the inland valleys.

Spanish exploration into the Bay area began in the 18th century, and the first mission in the region was established in San Francisco by 1776. The "Missionization" of the local Indian tribes and the establishment of ranchos and towns drastically altered the indigenous people's traditional lifeways, displaced many tribes, and introduced diseases that greatly reduced their population. The mid-19th century Gold Rush period began to transform the culture,

demographics, and landscape to an American California. Contra Costa has a diverse range of historic districts, structures, archaeological sites, and landmarks representing the diverse population that occupied California during the historic period.

ARCHAEOLOGICAL RESOURCES

A systematic archaeological survey has not been conducted for Contra Costa for this EIR. There are, however, over 800 prehistoric and historic sites within the county that have been recorded and filed with the Northwest Information Center of the California Historical Resources Information System at Sonoma State University, Rohnert Park, California. Some of these sites are listed, or under consideration for listing, in the National Register of Historic Places. Identification of these archaeological sites is largely the result of surveys conducted in association with development proposals. Large areas of Contra Costa that have remained in agricultural use have never been surveyed and systematic inspection of them may identify additional important prehistoric and/or historic archaeological sites. Furthermore, archaeological testing and mitigation programs may yield information important to understanding our human history.

An archaeological sensitivity map was prepared for the 1996 Contra Costa General Plan (Figure 4.6-3 in the General Plan). The sensitivity map, however, did not evaluate urban areas or publicly-owned lands; so, it addresses less than 50 percent of Contra Costa and is heavily biased toward the eastern portions of Contra Costa. For these reasons, and because sensitivity maps cannot adequately assess cultural variability or predict the precise location of cultural resources, they are not used in this analysis.

HISTORICAL RESOURCES

Contra Costa contains many historical sites, structures and landmarks that serve as unique reminders of its social, economic and political history, and provide a sense of identity and direction to the community. There are many local historical societies and organizations within Contra Costa that have been organized to preserve sites, structures and natural features which exemplify aspects of the history of a particular area or Contra Costa as a whole. Historical resources are found in both older urban or industrial areas as well as in the rural, agricultural landscapes of Contra Costa.

Almost 3,000 historical structures, sites, or objects are recorded and filed with the Northwest Information Center. Thirty-seven of these are listed individually on the National Register of Historic Places and the California Register of Historic Places. As many as 27 are California Historic Landmarks. In addition, Contra Costa conducted a historic buildings inventory in 1976 in coordination with local historical societies. This inventory was revised and updated as part of the General Plan revision and is on file with the Community Development Department.

REGULATORY SETTING

Federal regulations

Section 106 of the National Historic Preservation Act

Projects that are on federal land or are funded, permitted, or approved by a federal agency are subject to the requirements of Section 106 of the National Historic Preservation Act (NHPA). Section 106 requires federal agencies, or those they fund or permit, to consider the effects of their actions on the properties that may be eligible for listing or are listed in the National Register of Historic Places (NRHP). To determine whether an undertaking could affect NRHP-eligible properties, cultural resources (including archaeological, historical, architectural properties and traditional cultural properties) must be inventoried and evaluated for listing in the NRHP. Although compliance with Section 106 is the responsibility of the lead federal agency, other parties can undertake the work necessary to comply. The Section 106 review process normally involves a four-step procedure described in detail in the Section 106 Regulations (36 CFR Part 800):

- Identify and evaluate historic properties in consultation with the State Historic Preservation Officer (SHPO) and interested parties;
- Assess the effects of the undertaking on properties that are eligible for inclusion in the NRHP;
- Consult with the SHPO, other agencies, and interested parties to develop an agreement that addresses the treatment of historic properties and notify the Advisory Council on Historic Preservation; and
- Proceed with the project according to the conditions of the agreement.

National Environmental Policy Act (NEPA)

Specific projects that are subject to NEPA must also comply with NEPA requirements for the consideration of cultural resources. Compliance with NEPA requirements concerning cultural resources may be addressed through compliance with Section 106 of the NHPA. Reports, agreements documents, and correspondence documenting compliance with Section 106 of the NHPA are provided to the lead NEPA agency for a specific proposed action that is subject to NEPA.

State regulations

State Historic Preservation Office

California Public Resources Code 5024 requires consultation with the State Historic Preservation Office (SHPO) when a project may impact historical resources located on State-owned land.

California Register of Historic Resources

The SHPO also maintains the California Register of Historic Resources (California Register). Historic properties listed, or formally designated for eligibility to be listed, on the National Register are automatically listed on the California Register (PRC Section 5024.1). State Landmarks and Points of Interest are also automatically listed. The California Register can also include properties designated under local preservation ordinances or identified through local historic resource surveys.

For a historic resource to be eligible for listing on the California Register, it must be significant at the local, state, or national level under one or more of the following four criteria:

- It 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;
- It is associated with the lives of persons important to local, California, or national history;
- It 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
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (California Public Resources Code).

CEQA Guidelines

Section 15064.5 of CEQA guidelines define three ways that a property can qualify as a significant historical resource for the purposes of CEQA review:

- If the resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR);
- If the resource is included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code, or is identified as significant in a historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code unless a preponderance of evidence demonstrates that it is not historically or culturally significant; or
- If the lead agency determines the resource to be significant as supported by substantial evidence (California Code of Regulations, Title 14, Division 6, Chapter 3, section 15064.5).

In addition to determining the significance and eligibility of any identified historical resource under CEQA and the California Register, historic properties must be evaluated under the criteria for the National Register should federal funding or permitting become involved in any undertaking subject to this document.

CEQA on Mitigation of Cultural Resources Impacts

CEQA Guidelines Section 15126.4 states that “public agencies should, whenever feasible, seek to avoid damaging effects on any historical resources of an archeological nature.” The Guidelines further state that preservation-in-place is the preferred approach to mitigate impacts on archaeological resources. However, according to Section 15126.4, if data recovery through excavation is “the only feasible mitigation,” then a “data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resources, shall be prepared and adopted prior to any excavation being undertaken.” Data recovery is not required for a resource of an archaeological nature if “the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource.” The section further states that its provisions apply to those archaeological resources that also qualify as historic resources.

Native American Heritage Act

Also relevant to the evaluation and mitigation of impacts to cultural resources is the Native American Heritage Act (NAHA) of 1976 which established the Native American Heritage Commission (NAHC) and protects Native American religious values on state property (see California Public Resources Code 5097.9).

SB 18 Tribal Consultation Guidelines

Senate Bill (SB) 18 (Burton, D-San Francisco) helps tribes and jurisdictions define tribal cultural resources and sacred areas more clearly and incorporates protection of these places earlier into the General Plan and Specific Plan processes. The SB 18 process mirrors the federal 106 Review process used by archeologists as part of the environmental review conducted under NEPA (36 CFR Part 800.16) While not a component of CEQA review per se, the Lead agency is required to request consultation with responsible and trustee agencies, such as NAHC, during initial study and EIR process (PRC 21080.3, 21080.4).

Disposition of Human Remains (Health and Safety Code, Section 7050.5)

When an initial study identifies the existence, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the NAHC as provided in Public Resources Code 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials. Furthermore, Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

Native American Graves Protection and Repatriation Act

California Health and Safety Code Sections 8010-8011 establishes a state repatriation policy intent that is consistent with and facilitates implementation of the federal Native American Graves Protection and Repatriation Act. The Act strives to ensure that all California Indian human remains and cultural items are treated with dignity and respect. It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. It also states the intent for the state to provide mechanisms for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims and getting responses to those claims.

Local Regulation

In addition to national and State historic preservation legislation, some Contra Costa cities have adopted optional historic preservation general plan elements or enacted local ordinances that recognize and preserve historic sites. The City of El Cerrito General Plan¹ has a historic preservation element and the City Antioch General Plan contains cultural policies in its Resource Management element. The Cities of El Cerrito and Danville have historic preservation ordinances. Also, the City of Danville participates in the Certified Local Government Program (CLG) through the OHP. The CLG program is a partnership among local governments, the OHP, and the National Park Service (NPS) which is responsible for administering the National Historic Preservation Program.

Criteria of Significance

The criteria used to determine if a cultural resource would be significantly impacted by a project are those described in the CEQA Guidelines.

Implementation of the 2009 CTP would have a potentially significant adverse impact if Plan projects would:

- **Criterion 1:** Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5;
- **Criterion 2:** Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- **Criterion 3:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- **Criterion 4:** Disturb any human remains, including those interred outside of formal cemeteries.

¹ The Governors Office of Planning and Research, The California Planners' Book of Lists 2008.
<http://www.opr.ca.gov/planning/publications/2008bol.pdf>

Method of Analysis

The cultural resources analysis identified the potential impacts of the 2009 CTP on archaeological, historical, and other cultural resources within Contra Costa County. The 2009 CTP EIR used a methodology similar to that in the CTP 2004 Update EIR. This methodology recognizes that important cultural resources may be encountered during ground-disturbing construction work on projects that involve physical construction. It is also recognized that projects associated with the operation and maintenance of the transportation system, such as signalization, equipment replacement, and pavement maintenance, would not directly affect cultural resources. Since the specific locations of some cultural resources are not mapped, and since the extent of ground disturbance associated with various transportation projects is unknown at this time, it is not possible to assess the specific impacts on cultural resources based on the location of these projects. Accordingly, no project-specific reviews or field studies were undertaken for this program EIR.

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

The California Historical Resources Information System (CHRIS) is a statewide system for managing information on the full range of historical resources identified in California. CHRIS is a cooperative partnership between the citizens of California, historic preservation professionals, twelve Information Centers, and various agencies. This system bears the following responsibilities: integrate newly recorded sites and information on known resources into the California Historical Resources Inventory; furnish information on known resources and surveys to governments, institutions, and individuals who have a justifiable need to know; and supply a list of consultants who are qualified to do work within their area.

The initial step in addressing cultural resources in the project review process involves contacting the appropriate Information Center to conduct a record search. A record search has identified previously recorded historical resources and previous archaeological studies within the project area. Depending on the nature and location of the project, the project proponent or lead agency may be required to contact appropriate Native American representatives to aid in the identification of traditional cultural properties.

Summary of Impacts

While project-specific studies will be necessary to determine the actual potential for significant cultural resource impacts resulting from the implementation of the 2009 CTP, some general impacts can be assumed based on the type and location of the improvements. Implementation of the transportation projects in the proposed 2009 CTP could result in both short-term and long-term impacts related to cultural resources due to disturbance of known and unknown resources, artifacts, burial grounds, etc. during project construction. Contra Costa County has the potential to yield undiscovered resources and since the County has not been systematically surveyed for cultural resources, it may not be possible to determine with any confidence what the direct impacts would be in specific project areas.

In general, projects that include ground-disturbing activities such as grading, road widening, and excavation have the potential to impact historic and prehistoric archaeological resources and may impact historic architectural resources if buildings would be demolished, moved, or altered. Projects that include the introduction of new elements such as new street lighting, new buildings, or other visual alterations are projects that have the potential to impact historic architectural resources. These types of projects could also impact archaeological sites if ground-disturbance would occur. Programs that are limited to new or altered services such as carpools, transit services, bus service, and the use of existing parking lots, but do not include ground-disturbing activities and do not include the introduction of significant visual changes are projects that are unlikely to impact cultural resources.

Table 2.9-1 identifies potential impacts on archaeological and historical resources that may potentially occur as a result of implementation of specific projects under the 2009 CTP. The analysis of potential impacts on archeological resources, as presented in Table 2.9-1 is based on whether or not activities that include ground disturbance would occur with implementation of a project. Those projects including components with ground disturbing activities are considered to have the potential to impact archeological resources. Impacts on archeological sites are generally confined to areas that would be directly subjected to ground-disturbing activities. Since project-specific archeological investigations have not yet been conducted, this analysis focuses on the potential or likelihood that these types of resources could be affected.

The analysis of potential impacts on historical resources including buildings and structures is presented in Table 2.9-1. Potential impacts on the setting of historic resources that would not be directly displaced or demolished by a project are not included in this analysis because project-specific data is not available for this level of analysis. Because setting impacts on historic buildings and structures may potentially result in areas surrounding the footprint of a project, it will be necessary to conduct project-specific analysis to determine if this type of impact would occur.

Table 2.9-1: Analysis of Potential Impacts on Cultural Resources from Major 2009 CTP Projects

<i>Project Category</i>	<i>Project Name</i>	<i>Project Code</i>	<i>Project Limits</i>	<i>Description</i>	<i>Potential Impacts on Archeological Resources</i>	<i>Potential Impacts on Historical Resources</i>
Arterial and Roadway	Marsh Creek Road Upgrade	0948	Marsh Creek Road between Pine Lane and Russelmann Park Road	Development activity will trigger the need to improve this segment of Marsh Creek Road in accordance with the Marsh Creek Road Specific Plan-- 2 full-width lanes with bike lanes, shoulders, and walking path.	■	
	Grade separation of Marina Bay Parkway with Burlington Northern Santa Fe Railway and Richmond Pacific Railroad tracks in the City of Richmond	1397	Regatta Boulevard to Meeker Avenue	Replace the existing at-grade crossing with an over- or undercrossing of the Union Pacific and Burlington Northern rail lines for Marina Bay Parkway to improve access to the Marina Bay neighborhood and lessen safety concerns.	■	■
Capitol Corridor Improvements Including Rail Stations at Hercules and Martinez	Amtrak Capitol Corridor: Expand Service (beyond committed)	0732b		Further expand service on the Capitol Corridor consistent with Capitol Corridor Joint Powers Board Business Plan.	■	■
East County Corridor Improvements: Vasco Road, Byron Hwy, Non Freeway SR 4	Vasco Road Safety Improvements, Phase I	0371	Between Camino Diablo and County Line	Widen and construct a median barrier two miles north of Contra Costa/Alameda County line to a point three miles north of the County line with necessary striping, signing, left turn pockets and barrier-end treatments. Also construct a southbound passing lane with necessary widening of Brushy Creek bridge.	■	

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<i>Project Category</i>	<i>Project Name</i>	<i>Project Code</i>	<i>Project Limits</i>	<i>Description</i>	<i>Potential Impacts on Archeological Resources</i>	<i>Potential Impacts on Historical Resources</i>
	Vasco Road Safety Improvements, Phase 2	0372	Two-mile section from one mile south of Contra Costa line	Vasco Road Safety Improvements: realign roadway to improve sight distance and add shoulders	■	
	State Route 4 / Byron Highway Intersection Improvements, Phase 2	1007	Intersection of State Route 4 and Byron Highway	Widen the pavement to provide two lanes in each direction on Byron Highway at the intersection.	■	
	Vasco Road Barrier	1178			■	
East County Rail Extension (eBART)	East County Rail Extension (eBART), Phase 1	0200a	East from Pittsburg-Bay Point BART station to Hillcrest	Construction of rail extension eastward from the Pittsburg-Bay Point BART station with stations in Antioch. Proposed alignment would occupy the median of State Route 4.	■	■
	East County Rail Extension (eBART), Phase 2	0200b	Hillcrest Avenue to Byron	Extend BART using DMU technology from Hillcrest Ave to Byron.	■	
I-680 Carpool Lane Gap Closure/ Transit Corridor Improvements	I-680 SB HOV Gap Closure Between N. Main and Livorna	0966	Southbound-between N. Main and Livorna in Walnut Creek	Widen I-680 and/or restrip to add one HOV lane through the I-680/SR24 I/C between N. Main and Livorna in the southbound direction.	■	■

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	I-680 NB HOV Gap Closure between N. Main and SR242	0967	Northbound - between N. Main and SR242	Provide an HOV lane in the northbound direction between N. Main and SR242, which will significantly shorten a gap in the HOV network which currently exists between Livorna and SR242.	■	■
I-80 Carpool Lane Extension and Interchange Improvements	I-80/San Pablo Dam Road Interchange: Reconstruct	0246	I-80 at San Pablo Dam Road	Upgrade and improve interchange. Includes provisions for bicyclists on I-80 bikeway and pedestrians on San Pablo Dam Road	■	■
	I-80/Central Avenue Interchange Modification	0969	At the I-80/Central Avenue Interchange	Construction of interchange modifications at the I-80/Central Avenue interchange consisting of the addition of a loop-on-ramp for westbound Central Avenue traffic to westbound I-80 traffic and associated realignments of the westbound I-80 off-ramp and the adjacent San Joaquin Street.	■	■
Interchange Improvements on I-680 and State Route 242	Add New On- and Off-ramps at Clayton Road/SR 242 Interchange	0071	At Clayton Road Interchange	Construct new northbound on-ramp and associated accelerating/weaving lanes, and new southbound off-ramp at SR 242/Clayton Road interchange.	■	■
	Clayton Road/SR 242 Interchange: New SB Off-Ramp	0871	Clayton Road/SR 242 Interchange: SB Off-Ramp	Construct a new SB Off-Ramp at the Clayton Road/SR 242 interchange	■	■

Table 2.9-1: Analysis of Potential Impacts on Cultural Resources from Major 2009 CTP Projects

<i>Project Category</i>	<i>Project Name</i>	<i>Project Code</i>	<i>Project Limits</i>	<i>Description</i>	<i>Potential Impacts on Archeological Resources</i>	<i>Potential Impacts on Historical Resources</i>
I-80 Corridor Mobility Improvement Project	I-80 Corridor Mobility Improvement Project	1295	Carquinez Bridge in Contra Costa to Bay Bridge in Alameda Co.	Install new and upgrade existing corridor management elements along I-80 and parallel arterials and connecting roadways to allow sharing of real time traveler info. Elements includes CCTV, CMS, vehicle detection system, adaptive ramp metering, HOV bypass lanes at ramps, advisory variable speed signs, integration of traffic signals, etc.	■	■
Richmond Parkway	Upgrade Richmond Parkway	1107	From I-80 to I-580	Upgrade Richmond Parkway to principal arterial standards	■	■
State Route 4 Bypass	State Route 4 Bypass: Segment 3, Phase 1	0046c	Balfour Rd to Marsh Creek Rd & Marsh Creek Rd to SR4	Construct the two northbound lanes of the SR 4 Bypass from Balfour Road to Marsh Creek Road to be used on an interim basis for two-way traffic. Widen Marsh Creek Road east of the SR 4 Bypass to SR 4 to accommodate conventional highway standards and install signals at major intersections. Construct two lanes from Marsh Creek Road to Vasco Road. Final phase would involve construction of the southbound lanes to create a four-lane freeway.	■	
	State Route 4 Bypass: Segment 1, Phase 2 (SR 160 IC) WB SR4 Bypass to NB SR160	0046f	At interchange with SR 160	Construct a new two-lane roadway and structure over the Union Pacific Railroad tracks to connect westbound State Route 4 Bypass to northbound State Route 160.	■	
	State Route Bypass: Segment 2, Phase 2 - 4-Lanes Laurel Rd to Sand Creek Road	0046h	At Lone Tree Way	Construct 4 lanes from Laurel Road to Sand Creek Road. Project includes second bridge over Lone Tree Way.	■	

Table 2.9-1: Analysis of Potential Impacts on Cultural Resources from Major 2009 CTP Projects

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	State Route 4 Bypass: Segment 2 - Sand Creek Road IC	0046i	At Sand Creek Road	Construct interchange on State Route 4 Bypass at Sand Creek Road	■	
	State Route 4 Bypass: Segment 3 - Balfour Road IC, Phase I	0046j	At Balfour Road	Construct a bridge over Balfour Rd. with a loop on-ramp for traffic going from eastbound on Balfour Road to westbound on the Bypass and with diamond ramps in all other quadrants.	■	
State Route 4 East Widening	State Route 4: Widen, Loveridge to Somersville	0044c	West of Loveridge to west of Somersville	Widen from 4 to 8 lanes (6 mixed-flow lanes and 2 HOV lanes), with median to accommodate future extension of BART; reconstruct Loveridge Road interchange and realign local roads, including construction of new interchange at Contra Loma.	■	■

Impacts and Mitigation Measures

IMPACT

2.9-1 Construction of new transportation projects supported by the 2009 CTP has the potential to adversely affect archaeological or paleontological resources or buried human remains through damage or destruction of those resources. (*Significant, but Mitigable*)

The construction of transportation projects in the proposed 2009 CTP could result in archaeological and paleontological resource impacts if the construction activities include the disturbance of the native terrain. Archaeological remains and human remains could be inadvertently unearthed during ground-disturbing activities associated with road construction, road widening, extension projects, or other projects that include ground-disturbing activities. Archaeological resources can be impacted directly by ground-disturbing activities which can damage or destroy the integrity of the data or disrupt the cultural and religious integrity contained in the resource. Demolition or substantial damage to significant archaeological resources or human burials is a significant impact.

There are already regulations in place to protect archeological resources and human remains. As stated in the regulatory setting, when an Initial Study identifies the existence, or the probable likelihood, of Native American human remains within a project area, project sponsors should comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Pub. Res. Code Sec. 5097). If any human remains are discovered or recognized in any location on the project site, there should be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The Contra Costa Coroner/Sheriff has been informed and has determined that no investigation of the cause of death is required; and
- If the remains are of Native American origin:
 - The descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
 - The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

The degree and extent of impacts will depend upon project-specific analysis to determine the precise area of impact and the value – i.e., the eligibility for local, State, or national recognition-of any archaeological or paleontological resource identified within a proposed alignment or project area. However, given the magnitude and location of several

transportation improvements in the proposed 2009 CTP, and given the number of projects involving construction activities, it is possible that significant impacts on archaeological or paleontological resources could occur.

MITIGATION MEASURES

Mitigation Measure 2.9-1

Where construction of new transportation projects has the potential to adversely affect archaeological or paleontological resources or buried human remains through damage or destruction of those resources, sponsors shall consider measures to minimize or eliminate significant paleontological and archeological resource impacts as part of the design of the project and its environmental review under CEQA and NEPA. Potential mitigation measures could be drawn from or be consistent with review or investigation by the Native American Heritage Commission where appropriate. Typical mitigation measures include:

- Preparation of a research design and testing plan in advance of implementation of the construction of the project, in order to efficiently facilitate the avoidance of cultural sites all together;
- Preservation in place. This is the preferred manner of mitigating impacts to archeological sites because it maintains the relationship between artifacts and the archeological context, and it may also avoid conflict with religious or cultural values of groups associated with the site. This may be achieved through incorporation within parks, green-space, or other open space by re-designing projects using open space or undeveloped lands. This may also be achieved by following procedures for capping the site underneath a paved area; and
- When avoiding and preserving in place are infeasible, a data recovery plan may be prepared according to CEQA Section 15126.4. A data recovery plan consists of: the documentation and removal of the archeological deposit from a project site in a manner consistent with professional (and regulatory) standards; the subsequent inventorying, cataloguing, analysis, identification, dating, and interpretation of the artifacts; and the production of a report of findings.

SIGNIFICANCE AFTER MITIGATION

Implementation of this mitigation measure, and adherence to State and federal regulations that protect cultural resources, is expected to reduce potentially significant archeological and paleontological resource impacts to levels that are less than significant.

IMPACT**2.9-2 Construction of new transportation projects supported by the 2009 CTP has the potential to adversely affect historic architectural resources through demolition or significant changes to the historical setting. (Significant, but Mitigable)**

Transportation projects supported by the proposed Project could result in impacts on significant historic architectural resources including buildings and structures. Historic architectural resources may be impacted both directly by demolition or relocation of buildings or indirectly through significant changes in the historical setting of buildings. Changes in the setting of historic buildings and structures can result from the introduction of new visible features, significant landscape changes, or other alterations that change the historic integrity of the setting of a significant architectural resource. Demolition of historically significant buildings is considered to be a significant impact.

The degree and extent of impact will depend upon project-specific analysis that includes a determination of the value – i.e., the eligibility for local, State, or national recognition – of any historic resource identified within a proposed alignment or project area. Given the magnitude and location of several transportation improvements in the proposed 2009 CTP, and given the number of projects involving construction activities, it is possible that significant historic resource impacts could occur.

MITIGATION MEASURES**Mitigation Measure 2.9-2**

Where construction of new transportation projects supported by the 2009 CTP has the potential to adversely affect historic architectural resources through demolition or significant changes to the historical setting, sponsors shall consider measures to minimize or eliminate significant historic resource impacts as part of the design of the project and its environmental review under CEQA and NEPA. Potential mitigation measures could be drawn from or be consistent with State, federal, or local historic preservation criteria, the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings and Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. Typical mitigation measures include:

- Assessment by a qualified professional of structures greater than 40 years in age within the area of potential effect to determine their eligibility for recognition under State, federal, or local historic preservation criteria; and
- The treatment of identified historic resources in accordance with either the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for

Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings.

SIGNIFICANCE AFTER MITIGATION

Implementation of this mitigation measure, and adherence to State and federal regulations that protect historic resources, is expected to reduce potentially significant historic resource impacts to levels that are less than significant.