

4.2 CULTURAL RESOURCES

This section identifies cultural resources within the project area, evaluates the significance of the cultural resources, assesses the impacts from the project on the significant cultural resources, and recommends mitigation measures to reduce or eliminate those project impacts that have the potential to damage significant resources. This discussion is based on the *Cultural Resources Archeology Survey Report* and addendum prepared by Condor County Consulting (2009) and the *Research Design and Data Recovery Proposal* prepared by Solano Archeological Services (2009).

No scoping comments in relation to cultural resources were received during the 30-day scoping period.

An extensive record search was conducted by Condor County Consulting for prehistoric and historic sites located in the project area. Based on the records search, it was determined that a large prehistoric site that contains cultural resources, including human burials, is located within the project area. Subsequent consultation occurred with the Yocha Dehe Wintun Nation Native American tribe regarding the development and proposed implementation of the *Research Design and Data Recovery Proposal* for the project. Additional testing of soils suspected of containing burials and artifacts similar to the known resources at Suisun Valley Road and Rockville Road was conducted in other portions of the project area. The results of these investigations are documented in this section.

4.2.1 METHODOLOGY

Records Search

An extensive records search was conducted by Condor County Consulting for prehistoric and historic site records of the California Historical Resources Information System (CHRIS), Northwest Information Center (NWIC) at California State University, Sonoma. The records review at the NWIC included searches of archaeological site and historic property files, the National and California Registers of Historic Places, the Historic Property Data File for Solano County, California Historic Landmarks, and historic General Land Office Maps.

Field Survey

The entire project area was subject to an archaeological field survey by certified archaeologists of Condor Country Consulting. The team of archeologists surveyed the entire project area using linear transects 15 feet apart, and subsurface sampling for cultural materials or evidence of previous human occupation. All accessible areas within

250 feet of the road centerline were subject to survey. However, much of the fronting property is currently private and fenced; inaccessible private parcels were not included as part of the archaeological survey.

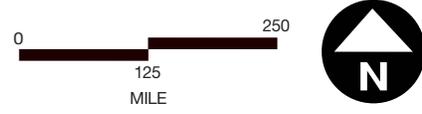
Buried Site Testing Program

Some portions of the project area that are suspected to have a higher potential to contain buried cultural resources were included in a Buried Site Testing (BST) program to determine presence/absence of cultural resource indicators. As part of the BST, 12 exploratory backhoe test trenches were excavated along Rockville Road within the flat areas between Oakwood Drive and the first road cut to the east (i.e., the nose of the ridge located approximately at 2288 Rockville Road) (see **Figure 5**). Using a standard 24-inch bucket with a smooth blade, soil was removed in lifts of approximately 6 inches in order to expose underlying soils. The surface of all trenches were a minimum of 12 inches below the paved grade, thus all trenches had a final depth of at least 60 inches below the paved surface of the project area. The trenches were placed at intervals of approximately 75 feet and as close to the road as possible to avoid physical barriers such as guardrails. Samples of the removed soils from each 6-inch lift were continuously screened for cultural artifacts using a ¼-inch wire mesh. No cultural resource indicators were found during these investigations.

Native American Consultation

Evidence of cultural artifacts suggests that burials could be encountered during construction of the project. As such, consultation with the related native American tribe was warranted. The Native American Heritage Commission (NAHC) was contacted November 19, 2009 to determine if the project area occurred on lands that are listed in the *Sacred Lands Inventory* on file with the NAHC. On December 7, 2009, Debbie Pilas-Treadway, Environmental Specialist III for the NAHC, replied in a faxed letter that the “record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area.” On December 9, 2009, letters soliciting additional information were sent to the following Native American individuals/groups listed by the NAHC in their response to the records search:

- Kesner Flores (Individual),
- Elaine Patterson (Chairperson, Cortina Band of Indians),
- Dave Jones (Wintun Environmental Protection Agency),
- Marshall McKay (Chairperson, Yocha Dehe Wintun Nation),
- Leland Kinter (Native Cultural Renewal Committee, Yocha Dehe Wintun Nation),
and
- Cynthia Clarke (Native Cultural Renewal Committee, Yocha Dehe Wintun Nation).



On November 27, 2009, and December 14, 2009, subsequent telephone calls were made to Jeff Flores, Cultural Monitor for the Yocha Dehe Wintun Nation; and Phoebe Bender, Cultural Resource Information Specialist for the Yocha Dehe Wintun Nation; to relay information about the project.

A meeting between representatives of the Yocha Dehe Wintun Nation, the Solano Transportation Authority, and project engineers from Mark Thomas & Company occurred on December 21, 2009. During this meeting, the results of the *Cultural Resources Archeology Survey Report* and the *Research Design and Data Recovery Proposal* were shared with representatives of the Yocha Dehe Wintun Nation. Native American monitoring was recommended during all earth-moving construction activities for the proposed water line installation, as well as during any excavation of discovered burials. Additionally, the excavation of discovered burials and the recommendations set forth in the *Research Design and Data Recovery Proposal* for the project were discussed.

Subsequent telephone calls between Condor Country Consulting and Mr. Flores were made in regards to the BST locations that were recommended in the *Cultural Resources Archeology Survey Report*. No other areas were recommended for testing. Mr. Flores agreed to serve as a monitor of the BST activities, and reported the results back to the Yocha Dehe Wintun Nation Tribal Council.

4.2.2 EXISTING CONDITIONS

Cultural resources are traces of human occupation and activity that include prehistoric and historic archaeological sites, districts, and objects; standing historic structures, buildings, districts, and objects; and locations of important historic events or sites of traditional and/or cultural importance to various groups.

Regional Prehistoric Conditions

In combination with rising sea levels, major tectonic shifts over the past 6,800 years have contributed to the shaping of San Francisco Bay and Delta region geomorphology. These changes are important in understanding the human prehistory of the region. For example, the formation of marshes during the late Holocene period is likely to have coincided with what may have been the first substantial human settlement of the area. Shorter-term climatic and ecological fluctuations also may have been significant not only to the history of San Francisco Bay hydrology, but also to human use of the region. Increased rainfall during wet epochs might have induced rapid erosion along rivers and creeks, with increased siltation at creek mouths on the San Francisco Bay and Delta, and subsequent changes in the availability of shellfish and other food sources. Drought years also might have changed siltation patterns by decreasing circulation in the San Francisco Bay and Delta, and would have affected the supply of perennial freshwater streams.

These climatic fluctuations undoubtedly had implications for the preservation of archaeological sites present on the bayside plains and shore at this time. Older sites that survived erosion may lie deeply buried under alluvial deposits or inundated under the waters of the San Francisco Bay and Delta. The relevance to these prehistoric changes on the region to the occupation and use of the project area is complex. Based on known archeological resources, the prehistoric use of the project area reflects the changing environment as a result of changes in resources available from the region, and indirectly, in response to changing cultural and ecological conditions in the adjacent areas.

Ethnographic History

The project area is situated in the historic ethnographic territory of the Patwin. The Patwin, which means “people” in their own language, are also known as the Copeh or Southern Wintun. Evidence suggests the ancestors of the Patwin settled in the vicinity of the project area during the Middle Horizon of California prehistory (4,500 to 2,500 years ago). At the time of initial contact between European explorers and Native Americans (in the late 1700s), they existed mainly in what are now known as Solano, Yolo, and Colusa counties, and shared territorial boundaries with many different Native American groups.

The Patwin territory took an approximate geographic expanse of 3,600 square miles. They were known to have existed on the east side of the Pacific Coastal Ranges, along the foothills east of Clear Lake. Suisun Bay acted as their southern boundary. From Suisun Bay to the confluence of Feather River and the lower Sacramento River, the Patwin eastern boundary existed near the west banks of the Sacramento River. From this point to several miles north of the modern day City of Princeton, the Patwin existed on the banks of both sides of the Sacramento River, but west of the Sutter Buttes. As their own cultural group, the Patwin were divided into the Hill Patwin and the River Patwin. The Hill Patwin settled in areas along the Coastal Range foothills to the west. The River Patwin settled along the Sacramento River and various valley creek drainages (and Suisun Bay). Owing much to the fishing grounds, the highest populated areas were in villages around the Sacramento River and local stream courses.

The main political unit for the Patwin was the tribelet, which consisted of a primary village and several satellite villages settled around drainages. The Patwin typically lived in semi-subterranean, earth-covered structures that were ovular in shape. Near riparian zones, tule (a native freshwater marsh plant) was also utilized to create various dwellings. Being autonomous, the tribelet held a specific territory and was led by a Chief who directed most of the economic and ceremonial activities. The status of Chief was typically inherited from father to son. The project area is within 1 mile of the location of the village of Ule/ululato or “Chief Solano’s Village” (P-48-000087/ CA-SOL-243).¹

¹ Site P-48-000087 (CA-SOL-243) is an identified sensitive cultural resource documented by the NAHC (see **Table 4.2-1**)

Historic Period

The historic period of Solano County can be divided into the following three major periods:

- Spanish Period (in California) – 1775 through 1822
- Mexican Period – 1822 through 1848
- American Period – 1848 to present

Euroamerican contact with the Patwin first occurred during a series of Spanish expeditions into the San Francisco bay area between 1769 and 1776. The Spanish-colonial presence was firmly established in Alta California in 1775 when Captain Juan Manuel Ayala's expedition studied the San Francisco Bay and ventured up the Sacramento and San Joaquin Rivers in search of a suitable mission site. The first mission in the region, Mission Dolores, was established the following year in San Francisco.

The Fairfield and Suisun area (also encompassing Cordelia, Rockville, and Green Valley Areas), was first put on the map in 1810 when Gabriel Moraga was sent with his Spanish Forces to colonize the local Patwin peoples called the Suisunes Indians, near what is now known as the City of Suisun. Many Suisunes fled to outlying areas to escape pursuing Spanish forces. Others, however, travelled to the Spanish missions to become baptized.

The Mexican Period was marked by secularization as the Spanish-colonial mission system collapsed and their lands fell out of Mission control. Many Patwin, Costanoans (Ohlone), Miwok, and Yokut formed multiethnic communities around the Bay Area in an attempt to maintain some aspects of their traditional lifestyle. These communities gradually got smaller over time.

By 1845 most the land holdings in the Bay Area were in the form of large Ranchos. Deterioration of the relations between the United States and Mexico resulted in the Mexican-American War of 1847, which resulted in Mexico relinquishing California to the United States under the Treaty of Guadalupe Hidalgo of 1848.

The discovery of gold at Sutter's Mill in 1848 brought an influx of people into the northern half of California as emigrants sought gold or jobs producing goods or services for gold miners. Land use changes resulted as livestock grazed some native grasses to extinction, woodlands were cut for lumber and railroads, and mines and agriculture developed on nearly all arable lands. The region immediately surrounding the project area has been dominated by agriculture and river transportation from the gold rush since the 1920s. Following the great depression, the area gradually reverted to grazing land.

Cultural Resources in the Project Area

Archeological Sites

Six previous archeological studies have been conducted in the immediate project vicinity and were reviewed as part of this analysis. The CHRIS records search revealed that there are 16 previously recorded archeological resources located within 1-mile of the project area (see **Table 4.2-1**). Portions of sites P-48-188 (CA-SOL-364), P-48-559, and P-48-818 are mapped within the project area.

Table 4.2-1 Known Archeological Resources within 1-mile of the project Area

Primary #	Trinomial	Site Type
--	--	Prehistoric bedrock mortar (recorded but no number assigned)
	CA-SOL-14	Bedrock mortars
P-48-000087	CA-SOL-243	Prehistoric lithic scatter with burials
	CA-SOL-354	Prehistoric bedrock mortar with prehistoric artifacts
P-48-000188	CA-SOL-364	Prehistoric shell midden with burials/historic artifacts
P-48-000244		Mapped but no site record on file
P-48-000245		Mapped but no site record on file
P-48-000436		Historic artifacts
P-48-000559	CA-SOL-425H	Historic wall/fence
P-48-000722	CA-SOL-441	Prehistoric lithic scatter
P-48-000739		Historic single family house, farm , and roadside attraction
P-48-000786	CA-SOL-458H	Historic neitzel farm and privies/dumps/trash scatters
P-48-000788		Historic water conveyance system
P-48-000789		Bridge abutment and pier/bridge #2
P-48-000818		Prehistoric lithic scatter
P-48-000855	CA-SOL-364	Disturbed re-deposit of backfill from CA-SOL-364

Source: Condor Country Consulting, 2009

Site P-48-188 (CA-SOL-364)

Site P-48-188 (CA-SOL-364) is a large prehistoric site that contains shell midden, artifacts, features, and numerous human remains. This site has been impacted many times over the past several decades from the construction of roads and developments in the project area. Utility trenching in Suisun Valley Road in 1985 uncovered eight burials that varied in depth between 10 and 110 centimeters below existing road surface. A large number of burials were later encountered and recovered in 2008 by Solano Archaeological Services as mitigation for the development of a market and gas station on the southwest corner of the Rockville Road and Suisun Valley Road intersection. The exact horizontal

boundaries of this unique archaeological deposit have never been defined (although presumably concentrated in the southwestern corner), and it is quite likely that the deposit extends northward underneath Rockville Road. No surface indicators of site P-48-188 (CA-SOL-364) were found on the shoulders of Rockville Road as this area is now covered in hardscape and modern landscaping.

Site P-48-559, (CA-SOL-425H)

Site P-48-559, (CA-SOL-425H) is a 1,056-foot long segment of an historic rock wall alignment located on the north side of Rockville Road. This site was recorded in 2002, and is a dry stacked basalt fieldstone wall varying in height from 32 to 65 inches. The remnants of site P-48-559 was relocated and is outside of the project area. The portion of this wall nearest Rockville Road appears to have been deconstructed and reconstructed, as the rocks lack lichens and have a fresh appearance.

Site P-48-818

Site P-48-818 is a large area reported to contain a lithic scatter of basalt and obsidian along the Solano Canal banks that was recorded in 2008. It is mapped on NWIC maps as extending to Rockville Road; however, this appears to be a very sparse lithic scatter with poorly defined boundaries. The lithic scatter may also be an indicator of another deeply buried resource, as the site is located on an alluvial plain. No surface indicators of site P-48-818 were found during the field survey within 250 feet of Rockville Road despite a specific attempt to relocate any lithics at this location.

Despite there being no surface indicators of a unique archaeological resources within the project area, it is possible that additional resources exist in subsurface areas. The soils (excluding road cuts) immediately east of the intersection of Rockville Road and Oakwood Drive are of an alluvial fan deposit of the recent Holocene age that may contain buried older human encampments. As such, subsequent sub-surface investigations were conducted as part of the project's BST Program to determine the presence/absence of cultural resource indicators within this area. On January 27, 2010, 12 exploratory backhoe test trenches were excavated along Rockville Road within the flat areas between Oakwood Drive and the first road cut to the east (nose of the ridge located approximately at 2288 Rockville Road). No cultural resource indicators were found during these investigations.

Historic-Period Resources

Review of the historical literature and maps gave no indication of the possibility of encountering historic-period resources within the project area. Along Rockville Road there are several discontinuous stone fences of various lengths. Most of the structures are unmortared linear formations composed of unmodified basalt fieldstone, but none warranted recordation as a potentially historic site or feature that would be impacted by the proposed project. Some of the fences are composed of weathered and less weathered

fieldstones-suggesting that they may have been recently modified. These fences are presumably the ones constructed during the past 30 years by owner of the parcel at 1999 Rockville Road, and are not considered “historic,” they were not recorded.

4.2.3 REGULATORY SETTING AND PROJECT CONSISTENCY

National Historic Preservation Act

Section 106 of the NHPA requires federal agencies to take into consideration the potential effects of proposed undertakings on cultural resources listed on or determined eligible for inclusion in the NRHP, and to allow the Advisory Council on Historic Preservation the opportunity to comment on the proposed undertaking. The regulations implementing Section 106 are promulgated by the Secretary of the Interior, as codified in Title 36 Code of Federal Regulations (CFR) Part 800. Section 106 requirements also apply to properties not formally determined eligible, but which are considered to meet eligibility requirements.

Archaeological resources are typically considered eligible for inclusion in the NRHP because of the information they have or may be likely to convey, although they may qualify if they are associated with an important historical event or person (see below).

Determining the NRHP eligibility of a site or district is guided by the specific legal context of the site’s significance as set out in 36 CFR Part 60.4. The NHPA authorizes the Secretary of the Interior to expand a National Register of districts, sites, buildings, structures and objects of significance in American history, architecture, archaeology, engineering and culture. A property may be listed in the NRHP if it meets criteria for evaluation as defined in 36 CFR 60.4. Section 110(d) (6) (A) of the NHPA allows properties of traditional religious and cultural importance to a tribe to be determined eligible for inclusion in the NRHP.

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

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

California Environmental Quality Act

The California Environmental Quality Act (CEQA) recognizes four categories of potential “historical resources.” The first includes resources that are “listed in, or determined to be eligible for listing in, the California Register of Historical Resources.” (Pub. Resources Code, § 21084.1; CEQA Guidelines, § 15064.5, subd. (a)(1).) The criteria by which the State Historical Resources Commission determines whether to include resources in the CRHR are set forth in Public Resources Code Section 5024.1. Any property within California that has formally been determined to be “eligible for, or listed in, the National Register of Historic Places” must be included in the CRHR. (Pub. Resources Code, § 5024.1, subd. (d)(1).)

Even absent a formal eligibility determination by the Commission, however, a lead agency “generally” shall consider a resource to be “historically significant’ if the resource meets the criteria for listing on the CRHR including the following (CEQA Guidelines, § 15064.5, subd. (a)(3); see also Id., subd. (b)(2)(C).):

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

The second category of “historical resources” is resources “included in a local register of historical resources.” These resources “are presumed to be historically or culturally significant unless the preponderance of the evidence demonstrates otherwise. Thus, although any resource included in, or eligible for inclusion in, the State Register must be treated as a historical resource, a resource included in a local register, but not in the State Register, is also presumed to be a historical resource.

The third category of historical resources is those “deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1.” These, too, “are presumed to be historically or culturally significant unless the preponderance of the evidence demonstrates otherwise. Public Resources Code Section 5024.1, subdivision (g) guidelines are listed below.

- A resource identified as significant in a historical survey may be listed in the California Register if the survey meets all of the following:
 - The survey has been or will be included in the State Historic Resources Inventory.
 - The survey and the survey documentation were prepared in accordance with procedures and requirements of the State Office of Historic Preservation.

- The resource is evaluated and determined by the State Office of Historic Preservation to have a significance rating of Category 1 to 5 on the Department of Parks and Recreation Historic Resources Inventory Form.
- If the survey is five years or more old at the time of its nomination for inclusion in the California Register, the survey is updated to identify historic resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminished the significance of the resource.

The fourth category of “historical resource” is created by the principle that, even where a resource does not qualify as “historical” under any of the preceding three tests, a local agency may nevertheless exercise its discretion to treat the resource as “historical.” The *State CEQA Guidelines* provide lead agencies with the criteria listed below to apply when exercising discretion whether to treat as “historical” resources that do not come under the first three categories.

- 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. (CEQA Guidelines, § 15064.5, subd. (a)(3))
- The *State CEQA Guidelines* define a “substantial adverse change in the significance of an historical resource” (i.e., a significant effect on such a resource) to mean “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.” (CEQA Guidelines, § 15064.5, subd. (b)(1)) CEQA equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment (Pub. Resources Code, § 21084.1)
- The Legislature has also defined “unique archaeological resource.” A “unique archaeological resource” is “an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability” that the resource:
 - contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
 - has a special and particular quality such as being the oldest of its type or the best available example of its type; or
 - is directly associated with a scientifically recognized important prehistoric or historic event or person.” (Pub. Resources Code, § 21083.2, subd. (g).)

When an archaeological resource is listed in or is eligible to be listed in the CRHR, PRC Section 21084.1 requires that any substantial adverse effect to that resource be considered a significant environmental effect.

State Bill 18

State Bill 18 requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions for the purpose of protecting tribal cultural resources. State Bill 18 stipulates that, beginning on March 1, 2005, cities and counties must send any proposals for revisions or amendments to general plans and specific plans to those California Native American Tribes that are on the NAHC's contact list and have traditional lands located within the city or county's jurisdiction. Cities and counties must also conduct consultations with these tribes prior to adopting or amending their general plans or specific plans.

The project does not involve any amendment to the general plan or a specific plan. As such no consultation pursuant to Senate Bill 18 is required. However, as documented in this section, the project has included consultation with the Yocha Dehe Wintun Nation due to potential project impacts to known cultural sites.

Other California Laws and Regulations

The disposition of Native American burials is governed by Section 7050.5 of the California Health and Safety Code and PRC Sections 5097.94 and 5097.98 and fall within the jurisdiction of the NAHC.

4.2.4 IMPACTS AND MITIGATION MEASURES

Significance Criteria

Appendix G of the *State CEQA Guidelines* identifies environmental issues to be considered when determining whether a project could have significant effects on the environment. As identified in Appendix G, the project would have significant impacts to cultural resources if it would:

- a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the *State CEQA Guidelines*;
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the *State CEQA Guidelines*;
- c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- d) Disturb any human remains, including those interred outside of formal cemeteries.

A project's impacts involve the level of direct and indirect physical changes to the resource caused by the project. Examples of direct physical changes are vegetation removal, vehicular travel over the surface, earth-moving activities, excavation, or alteration of the

setting of a resource. Indirect impacts may result from increased erosion due to site clearance and preparation, inadvertent damage, or outright vandalism to exposed resources due to improved visibility or access.

Substantial adverse change in the significance of a resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate setting such that the significance of the resource would be materially impaired. As the project would involve ground disturbance within site P-48-188 (CA-SOL-364), the project would have a significant impact on this cultural resource. The recommended mitigation measures are designed to meet the requirements of the CEQA Guidelines, §15126.4(b).

No Impact

Historical Resources

As previously discussed, there are no known historic period resources in the project area, and the possibility of encountering unknown historic-period resources within the project area is highly unlikely. Therefore, the project would not cause a substantial adverse change in the significance a historical resource.

Cultural Resources on Site P-48-559 (CA-SOL-425H)

Site P-48-559 is a 1,056-foot long segment of an historic rock wall alignment located on the north side of Rockville Road, outside of the project area. Construction of the project would not disturb this wall. Therefore, the project would not impact site P-48-559.

Significant Impacts

Impact CULT-1: Ground disturbing activities would impact known cultural resources (P-48-188 (CA-SOL-364)). (Significant)

Site P-48-188 (CA-SOL-364) extends underneath the project area. Given the previous discovery of human remains at shallow depths during utility trenching, it is highly probable that additional burials (and associated “unique archaeological deposits”) exist underneath the pavement of Rockville Road. The preliminary construction plans for the water line trench dimensions include excavation at depths between 5 to 7 feet near the project area, and a trench width of approximately 2.5 feet. These earthmoving construction activities would have the potential to impact known subsurface archaeological deposits at this site.

The project applicant shall implement the following recommendations of the *Research Design and Data Recovery Proposal* (October 2009) developed by Solano Archeological Services for the recovery of important cultural resources in the area of site P-48-188 (CA-SOL-364). Implementation of these recommendations would ensure compliance with the requirements of Section 15064.5 of the State CEQA Guidelines (CEQA Guidelines, §

15064.5, subd. (e)), which dictate the actions that shall be taken in the event that human remains are discovered outside of a dedicated cemetery. Compliance with the provisions of the guidelines would reduce the significant impact to known archeological material and prehistoric human remains in the area of site P-48-188 (CA-SOL-364) to a less-than-significant level.

Mitigation Measure CULT-1a: Construction Monitoring

During project earth-moving activities within known historic resources, a total of three cultural resources monitors shall be present to direct the speed of the trench digging and grading, recover significant artifact materials, investigate and document encountered features, and reduce potentially destructive impacts to human remains. These monitors shall consist of two archaeologists (one archeologist examining the trench and another examining removed backdirt) and a single Native American monitor who will generally oversee the trench excavation and be on-hand to expedite notification procedures for the potential discovery of human remains (see **Mitigation Measure CULT-1e**).

Mitigation Measure CULT-1b: Manual Excavation

In order to minimize impact to historic resources, the archeologist recovery team appointed by the designated qualified archeologist shall conduct a hand excavation of a professionally justifiable sample of soil matrix within the proposed water line corridor. The soil shall be excavated in 10 centimeter increments, placed at the discretion of the archaeologists, and dry screened utilizing ¼- and ⅛-inch mesh. All discovered artifacts shall be sent to the designated qualified archeologist laboratory for processing and analysis (see **Mitigation Measure CULT-1d**). If an intact burial is discovered during excavation, the control unit will be closed and the burial removal process will begin (see **Mitigation Measure CULT-1e**).

Mitigation Measure CULT-1c: Systematic Mechanical Excavation

Within the area identified by the qualified archaeologist, a small backhoe with a straight-edged 2 to 3-foot bucket shall systematically clear prehistoric midden soils associated with CA-SOL-364 that are apparent in the trench corridor. A backhoe operator shall be recommended by the designated qualified archeologist. Systematic clearing will be limited to the areas near CA-SOL-364 that were identified as sensitive by the qualified archaeologist. The mechanical clearing shall take place after the 8 cubic meters of control units have been excavated (see **Mitigation Measure CULT-1b**).

Mitigation Measure CULT-1d: Discovery of Artifacts

If features such as hearths, fire-cracked rock deposits, refuse pits, etc. are encountered during project construction, the portions of those features that would

be directly impacted by construction shall be excavated by one of the archaeologists according to standard archaeological procedure. This will ensure that any scientific data that could contribute towards an understanding of the stated research questions will be recovered and documented.

The designated qualified archeologist and/or Native American monitor may move the excavation machinery a safe distance from the find so that construction may proceed relatively unaffected by archaeological recovery efforts.

Mitigation Measure CULT-1e: Discovery of Human Remains

Any human remains discovered during construction monitoring shall be treated in accordance with California law and within an accord agreed to by the Native American monitor, the most likely descendant (MLD), and the archaeological recovery team. The following procedure listed below shall be followed as part the data recovery of human remains.

- a) The Native American monitor shall be notified upon the discovery of human remains, and any ceremony the monitor deems necessary shall be carried out.
- b) Before excavation of the human remains begins, a tarp shall be erected over each burial area to keep direct sunlight off the remains to prevent bones from drying, cracking, and/or splintering.
- c) Burial removal is considered private by the Native Americans, as well as potentially distracting to passing motorists. As such, the project applicant and general contractor shall provide the materials and personnel needed to visually shield recovered resources from the general public. Steel plates shall be used to cover exposed burials, midden, or excavation units until the trench has been cleared and backfilled to appropriate safety standards. Solid (non-see through) fencing shall be provided around areas being hand-excavated or where burials are being removed. Concrete dividers (K rails) and road safety personnel shall also be provided to keep the archaeological crew at a safe distance from roadway traffic.
- d) The archaeological recovery team shall make an on site determination on whether to use metal or wooden tools for excavation. The choice shall be dictated by a methodology which minimizes potential damage to the bones during excavation.
- e) During excavation, the burial areas may be frequently wet down with a fine spray of water to keep the soil from hardening. Bone fragments that come off each burial from contact with heavy equipment or during manual excavation shall be placed in a paper bag and kept with the burial. The excavation process shall include complete exposure of each element and any associated grave goods as best possible given the condition of each individual burial.

- f) If portions of a human remains discovery extend beyond the walls of a designated excavation unit for the project, then archaeologists shall excavate enough of the adjacent area to ensure complete recovery of the skeleton and any associated grave goods.
- g) After excavation is completed, the archaeological recovery team shall make a detailed scale drawing of each burial and a record photograph shall be taken.
- h) To insure against damage during burial removal and transportation, the archaeological recovery team shall conduct a brief in-field osteological analysis. Where possible, identification of skeletal elements present, age, sex, and any pathological or traumatic conditions visible, as well as records of any bone measurements possible, shall be recorded, as well as burial position and orientation.
- i) Once each individual burial has been fully recorded, the remains shall be removed element by element and much of the remaining matrix shall be removed to minimize potential damage to the remains during transportation. Skeletal material shall be wrapped in paper and stored in cardboard boxes to allow slow and even drying of the elements. Pending agreement with the MLD, the remains shall be transported to an appropriate secure location where they will be stored in a secure, climate-controlled atmosphere until their laboratory analysis is completed or pending final disposition.

Mitigation Measure CULT-1f: Site Documentation and Reporting

All documentation aspects of the data recovery project shall be conducted in accordance with guidance outlined in the State of California Office of Historic Preservation's Instructions for Recording Historical Resources (OHP 1995) and the Federal Secretary of the Interior's Standards and Guidelines for the Identification of Cultural Resources (48 CFR 44720-23). Written field documentation shall include unit and level excavation records, field supervisor's notes, and accompanying digital and print photography.

Post-field documentation shall consist of the production of a draft detailed data recovery report to be submitted to the client and the MLD approximately 12 months following the completion of the construction monitoring phase of the archaeological investigations. The archeological investigations shall also include specialized studies analyzing faunal remains, lithic artifacts, shell ornaments, bone implements, etc. Some of these analyses are highly specialized and shall be conducted by recognized experts in their respective fields, as selected by the designated qualified archeologist. These sub-contractors shall perform their detailed analyses and provide separate reports that will be incorporated into the body of the data recovery report and/or attached as technical appendices.

Once the completed draft report has been reviewed by client and the MLD and their input has been incorporated or otherwise taken into consideration, the designated qualified archeologist will provide final copies to the client, the MLD, and the California Historical Resources Information System.

Significance after Mitigation: Less than Significant.

Impact CULT-2: Ground-disturbing activities could impact unknown subsurface archeological resources. (Potentially Significant)

Subsurface construction has the potential to impact unknown subsurface archaeological deposits at the disturbed archaeological midden outside of the recorded sites P-48-188 (CA-SOL-364) and P-48-818, as well as other areas along the project alignment. Significant prehistoric cultural materials may include human bone, artifacts, various features and samples, distinct ground impressions, and distinctive changes in soil stratigraphy. Significant historic cultural materials may include finds from the late 19th and early 20th centuries including structural remains, trash pits, isolated artifacts, and human remains. This is a potentially significant impact.

Mitigation Measure CULT-2a: Require Protection Measures for Cultural Resources within the Excavation Contract.

To ensure that exposed cultural resources are protected throughout the excavation process, the project proponent shall develop project specifications regarding project procedures and requirements during and after the exposure of cultural resources in the General Conditions section of any excavation contract, consistent with the Archaeological and Cultural Monitoring Plan (see **Mitigation Measure CULT-3c**) and including the legal and/or regulatory implications of knowingly destroying cultural resources or removing prehistoric artifacts, human remains, historic artifacts including bottles and other cultural materials from the project area.

Mitigation Measure CULT-2b: Project Archaeologist Conducts Pre-Construction Meeting.

The designated qualified archaeologist shall conduct a pre-construction meeting for construction personnel to discuss the sensitivity of archaeological resources potentially encountered during construction.

Mitigation Measure CULT-2c: Develop and Implement an Archaeological and Cultural Monitoring Plan to Guide Construction Monitoring.

The contractor shall develop and implement an Archaeological and Cultural Monitoring Plan (ACMP) that details the rationale and procedures to be followed

during monitoring and unexpected discoveries. The ACMP should include a Discovery Plan for Unanticipated Cultural Resources and a Native American Burial Plan to guide the evaluation, management and mitigation of any previously unknown significant subsurface cultural materials and skeletal remains inadvertently exposed by project's construction activities. Within the ACMP, the Discovery Plan should also include the protocols for developing a find-specific Treatment Plan in the event of a significant discovery during construction in order to guide the removal, analysis, report requirements and future curation of the discovery. The implementation of any cultural resources conditions and/or protection measures mandated by any regulatory/permitting agencies should be incorporated into the document as appropriate. The ACMP must be reviewed and approved by the County prior to the start of construction.

Significance after Mitigation: Less than Significant.

Impact CULT-3: Ground-disturbing activities could impact unknown human remains. (Potentially Significant)

Subsurface construction has the potential to impact unknown subsurface archaeological deposits at the disturbed archaeological midden outside of the recorded sites P-48-188 (CA-SOL-364) and P-48-818, as well as other areas along the project alignment. Because of the sensitivity of the area for archaeological resources, it is possible that unidentified archaeological resources, including human remains, could be uncovered during earthmoving activities in the project area. This is a potentially significant impact.

Mitigation CULT-3: Compliance with California law regarding the treatment of Native American human remains as contained in California Health and Safety Code §7050.5 and §7052 and California Public Resources Code §5097.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The California Health and Safety Code requires that if human remains are found in any location other than a dedicated cemetery, work is to be halted in the immediate area, and the County coroner is to be notified to determine the nature of the remains. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code §7050.5[b]). If the coroner determines that the remains are those of a Native American interment, then the NAHC shall be consulted to identify the most likely descendants and the appropriate disposition of the remains.

In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the steps listed below should be taken.

- There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the coroner of the County in which the remains are discovered is contacted to determine that no investigation of the cause of death is required; and
- If the coroner determines the remains to be Native American:
 - the coroner shall contact the NAHC within 24 hours
 - the NAHC shall identify the person or persons it believes to be the MLD from the deceased Native American
 - the MLD may make recommendations 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
- Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance:
 - the NAHC is unable to identify a MLD or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission;
 - the descendant identified fails to make a recommendation; or
 - the landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

Significance after Mitigation: Less than Significant.

Cumulative Impacts

Cumulative development includes past, present, and reasonably foreseeable development that could affect the same cultural resources as the proposed project in such a way that a combined physical impact could occur. The area for the cumulative impact analysis for cultural resources includes the project area and Solano County. This analysis includes those impacts from the development that has occurred and/or is anticipated by the cumulative projects identified in **Chapter 4.0** of this EIR.

General Plan EIR Evaluation of Historical Built-Environment Resources

The Solano County General Plan EIR evaluated the effect of anticipated development on historical built-environment resources and concluded that the magnitude of ground disturbance caused by future development projects would result in a significant and

unavoidable loss of historical built-environment resources. The effect of build-out of the General Plan on these resources cannot be mitigated to a less-than-significant level.

The project would not affect the historical built-environment and would not therefore contribute to this cumulative impact.

General Plan EIR Evaluation of Prehistoric and Historical Archaeological Deposits

The General Plan EIR also evaluated the effect of anticipated development on prehistoric and historical archaeological deposits and found that the impacts of build out would be significant, but that these impacts could be reduced to a less-than-significant level through the implementation of specific policies.

The General Plan EIR directed that policies be included in the General Plan to ensure that future development projects be required to perform a records search, prepare a cultural resources study, and to implement mitigation as needed including consultation with native American tribes and monitoring of construction activities.

The General Plan EIR did not identify a cumulative impact related to prehistoric and historical archaeological deposits.

Although the project's earthmoving construction activities have the potential to impact known and unknown subsurface archaeological deposits in the project area, these impacts are not considered cumulatively considerable. The project would implement the **Mitigation Measures CULT-1a** through **CULT-3** to ensure compliance with the policies of the General Plan and with the requirements of Section 15064.5 of the *State CEQA Guidelines* (CEQA Guidelines, § 15064.5, subd. (e)).

References

Condor Country Consulting , Inc. (2009). *Cultural Resources Archeological Survey Report for Gordon Water Line.*

Condor Country Consulting, Inc. (2010). *Cultural Resources Archeological Survey Report Addendum for Gordon Water Line.*

Solano Archeological Services (2009). *Research Design and Recovery Proposal for the Gordon Water Line Project.*