

3.10 CULTURAL AND PALEONTOLOGICAL RESOURCES

Cultural resources include prehistoric archaeological sites, historic archaeological sites, traditional cultural properties, and historic structures. Paleontological resources refer to resources in the fossil record, such as prehistoric remains and other evidence of past life. This section discusses the applicable federal and state laws and regulations that protect cultural and paleontological resources, including Section 106 of the National Historic Preservation Act and California Public Resources Code Sections 5024.1 and 21084.1, and assesses the potential effects of the No Build and Build Alternatives on these resources.

3.10.1 REGULATORY REQUIREMENTS

Federal

The National Historic Preservation Act

The National Historic Preservation Act (NHPA) (16 U.S.C. 470 et seq.) established a national program to preserve the country's historical and cultural resources. Section 106 of the NHPA requires federal agencies to consider the effects of their actions on historic properties and provide the President's Advisory Council on Historic Preservation (ACHP) opportunity to comment on any proposed action before implementation. Guidelines for implementing the Section 106 process are provided in 36 CFR Part 800. Per 36 CFR 800.4, significant cultural resources are those that are eligible for listing in the National Register of Historic Places (NRHP). The NRHP eligibility criteria (36 CFR 60.4) state that the quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and that meet one or more of the following criteria:

- a) The resource is associated with events that have made a significant contribution to the broad patterns of our history.
- b) The resource is associated with the lives of persons significant in our past.

- c) The resource embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.
- d) The resource has yielded, or may be likely to yield, information important to prehistory or history.

Impacts to NRHP-eligible resources are considered adverse when “an undertaking may alter directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association” (36 CFR 800.5[1]). Examples of adverse effects include physical destruction or damage to all or part of the property; alteration that is not consistent with the Secretary of the Interior’s standards for the treatment of historic properties; removal of the property from its historic location; change in the type of use or of the physical characteristics of the setting; introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant features; and neglect resulting in deterioration (36 CFR 800.5[2]).

Historic properties include prehistoric archaeological sites. Archaeological sites are usually adversely affected only by physical destruction or damage, whereas all of the examples above can apply to historic buildings and structures.

Federal Antiquities Act of 1906(16 USC 431 et seq)

This act established national monuments and reservation of lands including historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal lands. 16 USC 433 prohibits appropriation, excavation, injury or destruction of any historic or prehistoric ruin or monument, or any object of antiquity on federal land.

State

California Register of Historic Resources

The California Register program encourages public recognition and protection of cultural and historic resources. Under CEQA, significant cultural resources are called *historical resources* whether they are of historic or prehistoric age.

Generally, a resource should be considered by a lead agency to be historically significant if the resource has integrity and meets one of the following criteria for CRHR listing (CEQA Guidelines 15064.5 [a][3]).

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

CRHR is similar to the NRHP in that any resource determined eligible for the NRHP is also automatically eligible for the CRHR. However, the treatment of historical resources under CEQA and in the CRHR is more inclusive in that resources listed in local historical registers may be included.

Projects that would impact CRHR-listed and –eligible resources and resources listed in local historical registers may result in a significant effect on the environment if the project would cause a substantial adverse change in the significance of a historical resource (P.R.C. 21084.1). Substantial adverse change in the significance of a historical resource refers to “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that [its] significance...would be materially impaired (CEQA Guidelines 15064.5[b][1]). Material impairment means demolition of the resource, or alteration of the physical characteristics that make the resource eligible for listing such that it would no longer be eligible for the CRHR or a local historical register (CEQA Guidelines 15064.5[b][2]).

California Environmental Quality Act

California Environmental Quality Act (P.R.C. 21000 et seq.): Requires public agencies and private interests to identify the potential adverse impacts and/or environmental consequences of their proposed project(s) to any object or site that is historically or archaeologically significant or significant in the cultural or scientific annals of California (P.R.C. 5020.1). Under CEQA, archaeological resources are presumed non-unique unless they meet the definition of “Unique archaeological resources” (P.R.C. 21083.2[g]). Under CEQA, an impact on a non-unique archaeological resource is not considered a significant environmental impact. An EIR need not discuss non-unique archaeological resources.

CEQA Guidelines

CEQA Guidelines (14 C.C.R. 15064.5[a][3]): Provides that a lead agency may find that “any object, building, structure, site, area, place, record, or manuscript” is

historically significant or significant in the “cultural annals of California.” The section also provides that a resource may be considered historically significant if it has yielded or may be likely to yield information important in prehistory. Paleontological resources fall within this broad category and are included in the CEQA checklist under Cultural Resources.

3.10.2 METHODS OF EVALUATION

Study Area Defined

The study area was defined to include all permanent and temporary impact areas associated with the elements of the Build Alternative including all proposed stations, realignments, sidings, track/signal upgrades, and the new second mainline. An area of potential effect (APE) was not established, given the programmatic and contingent nature of the proposed improvements in this environmental document. However, in FRA’s consultation with the California State Historic Preservation Officer (SHPO), permanent and temporary impact footprints were considered to be an appropriate area to assess potential direct and indirect impacts on cultural resources. The permanent and temporary impact footprints are defined as follows:

- Permanent: areas where affected resources would not be restored back to their original conditions.
- Temporary: areas that would be disturbed during construction and then returned to their original conditions post construction.

Proposed permanent and temporary impact areas differ for each type of improvement, as listed below.

- Siding Extensions/New Sidings:
 - Permanent: Existing railroad right-of-way (typically 50 feet)
 - Temporary: 50 feet on either side of existing right-of-way
- Curve Realignments:
 - Permanent: 100 foot wide corridor
 - Temporary: 200 feet on either side of 100 foot corridor for a total width of 500 feet
- Second Mainline
 - Permanent: Existing railroad right-of-way
 - Temporary: 100 feet on either side of existing UP right-of-way

- Stations
 - Soledad Station: 1.9 Acres – permanent impact area is based on conceptual station plans from the *Soledad Downtown Specific Plan* (2012).
 - King City Station: 3.4 Acres – permanent impact area is based on conceptual station plans from the *King City First Street Corridor Master Plan* (2013).

The cultural analysis also evaluates the potential sensitivity of portions of the existing alignment where only signaling, track maintenance, and other corridor-wide improvements would take place. Existing alignment sections #1 through #6 are within Monterey County and existing alignment sections #7 through #10 are within San Luis Obispo County.

As further outlined in **Chapter 3.0, Affected Environment, Environmental Consequences, and Mitigation Strategies**, direct and indirect effects are assessed with regard to cultural resources. Direct effects would occur if archaeological or historic resources, such as building or structures, are altered or destroyed as a result of potential improvements. Indirect effects would occur if visual, noise, or vibration effects from potential improvements diminished the integrity of the cultural resource.

As discussed, FRA and SLOCOG consulted with the SHPO in determining these parameters on June 27, 2013 and followed with a letter on September 9, 2013. Following consultation with FRA, SHPO found that the above parameters were “reasonable” for the purposes of this programmatic analysis.¹

Cultural Resource Categories

Various types of cultural resources exist within the study area and occur within all land use designations of Monterey County and San Luis Obispo County. Each type of cultural resource differs in sensitivity and importance. The different cultural resources categories are defined below.

Archaeological Resources

Archaeology is the study of prehistoric human activities and cultures.

- **Prehistoric Archaeological Sites:** In California, prehistoric archaeological sites are places where one can find evidence of human activities prior to 1789 AD, which is generally accepted as the date of European arrival and exploration

¹ Valenstein, David. Chief, Environment & Systems Planning Division. Federal Railroad Administration. September 9, 2013 – letter communication.

leading to permanent settlement. Prehistoric sites typically contain human burial or subsistence remains and artifacts or tools made by people. Objects that may be found on a prehistoric archaeological site include tools, beads, ornaments, ceremonial items, rock art, and inedible remains of food sources.

- **Historic Archaeological Sites:** Historic archaeological sites are places where evidence exists of human activities between 1789 AD and 50 years ago. Many historic archaeological sites are places where houses formerly existed and contain ceramic, metal, glass refuse resulting from the transport, preparation and structural remnants, such as windowpane glass, lumber, and nails. Historical archaeological sites can also be nonresidential, resulting from ranching, farming, industrial, and other activities.
- **Traditional Cultural Properties:** Traditional cultural properties are specific locations that are largely associated with the history of the community. These places are typically associated with the cultural practices or beliefs of a living community, such as locations where ceremonial activities were performed.

Historic Resources

Historic resources are associated with the recent past.

- **Historic Structures:** Historic structures are facilities that served residential, commercial, industrial, agricultural, transportation, and other purposes during historic periods (more than 50 years ago). Historic structures generally consist of houses, outbuildings, stores, offices, factories, barns, dams, bridges, roads, and other facilities.

Paleontological Resources

Paleontology is the study of plant and animal fossils.

- **Paleontological Resources:** Paleontological resources are fossilized remains of plants and animals. Generally, paleontological resources are those that are more than 10,000 years old and are typically found below ground surface in sedimentary rock units.

Record Search and Analysis

Archaeological and Historical Resources

Qualified archaeologists submitted prehistoric and historic properties record search requests to the California Historical Resources Information System (CHRIS) in July 2013. The Northwest Information Center (NWIC) conducted a records search for the portion of the study area located within Monterey County. Likewise, the Central

California Information Center (CCIC) conducted a records search for the portion of the study area located within San Luis Obispo County. The NWIC and CCIC conducted records searches of all previously recorded sites and studies within a quarter mile of the study area. The search included current listings for the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), Historical Resources Inventory (HRI), and historical maps. The records search identified the number of archaeological and historical sites within the study area along with their general location. The number of archaeological sites within the study area in the vicinity of each proposed element of the Build Alternative was tabulated and used as an indicator of potential sensitivity; however given the programmatic nature of the environmental document, a finding of effect under Section 106 was not determined at this time. As further discussed in **Subsection 4.4.5, Subsequent Analysis**, if one or more elements of the Build Alternative are proposed to be carried out at a later time, an APE would be established and finding of effect made during subsequent environmental review. Likewise, determination of NRHP or CRHR eligibility of individual sites was not conducted for this evaluation. Sites evaluated here are thus considered “potentially eligible” resources. However, this analysis does disclose previous determinations of eligibility.

As required under CEQA Guidelines § 15064.5, a list of potentially historic structures deemed locally eligible was assembled using maps and property lists from cities within the study area. Locally eligible resources do not require any further consideration under Section 106. However, those resources are assessed in this analysis for the purposes of adequate CEQA review. Resources identified in this reconnaissance include railroad bridges and other buildings and structures in the study area. The number of potential eligible historic properties within the study area for each proposed improvement was tabulated and used as an indicator of potential sensitivity.

FRA and SLOCOG, with the Native American Heritage Commission (NAHC), initiated a Sacred Lands File Search in July 2013. The record search indicated the potential presence of Native American traditional cultural places in the project vicinity and also identified 25 Tribal representatives with a potential interest in the involved lands. FRA subsequently contacted the identified Native American Tribal governments through letter correspondence and subsequent follow-up telephone calls.²

² Valenstein, David. Chief, Environment & Systems Planning Division. Federal Railroad Administration. September 2013 – letter communications.

Paleontological Resources

Significant paleontological resources are fossils or assemblages of fossils that are unique, rare, unusual, or uncommon. According to Caltrans Standard Environmental Reference (SER), scientifically significant paleontological resources are identified sites or geologic deposits containing individual fossils or assemblages of fossils that are unique or unusual, diagnostically, or stratigraphically important, and add to the existing body of knowledge in specific areas, stratigraphically, taxonomically, or regionally. These resources can generally be anticipated based on the stratigraphic layer of the earth's surface, as some layers are more prone to contain paleontological resources. As a result, this program-level analysis determines paleontological sensitivity based on the underlying geological unit. Likewise, paleontological sensitivity is predicated on the research potential of fossils suspected to occur in that unit. Caltrans uses the scale below to rate paleontological sensitivity. Since many of Caltrans' transportation projects include improvements to corridors spanning many miles, this Program EIS/EIR uses the Caltrans scale as an appropriate means to assess the paleontological sensitivity of the Coast Corridor.

- High Potential - Rock units which, based on previous studies, contain or are likely to contain significant vertebrate, significant invertebrate, or significant plant fossils. These units include, but are not limited to, sedimentary formations that contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. These units may also include some volcanic and low-grade metamorphic rock units. Fossiliferous deposits with very limited geographic extent or an uncommon origin (e.g., tar pits and caves) are given special consideration and ranked as highly sensitive. High sensitivity includes the potential for containing: 1) abundant vertebrate fossils; 2) a few significant fossils (large or small vertebrate, invertebrate, or plant fossils) that may provide new and significant taxonomic, phylogenetic, ecologic, and/or stratigraphic data; 3) areas that may contain datable organic remains older than recent, including *Neotoma* (sp.) middens; or 4) areas that may contain unique new vertebrate deposits, traces, and/or trackways.
- Low Potential - This category includes sedimentary rock units that: 1) are potentially fossiliferous, but have not yielded significant fossils in the past; 2) have not yet yielded fossils, but possess a potential for containing fossil remains; or 3) contain common and/or widespread invertebrate fossils if the taxonomy, phylogeny, and ecology of the species contained in the rock are well

understood. Sedimentary rocks expected to contain vertebrate fossils are not placed in this category because vertebrates are generally rare and found in more localized stratum.

- No Potential - Rock units of intrusive igneous origin, most extrusive igneous rocks, and moderately to highly metamorphosed rocks are classified as having no potential for containing significant paleontological resources.

The underlying geologic units along the existing Coast Corridor were evaluated based on the criteria above and a paleontological sensitivity rating was applied. The paleontological sensitivities are rated according to **Table 3.10-1** below.

Table 3.10-1 Geologic Unit and Paleontological Sensitivity

Geologic Unit	Geologic Age	Paleontological Sensitivity
Quaternary Alluvium and Marine Deposits (Q)	Pliocene to Holocene	Low
Franciscan Complex (KJf)	Jurassic to Cretaceous	High
Plio-Pleistocene and Pliocene (QPc)	Miocene to Pleistocene	Low
Miocene Marine Rocks (M)	Oligocene to Pliocene	Low
Upper Cretaceous Marine Rocks (Ku)	Late Cretaceous	High
Ultramafic Rocks (um)	Middle to Late Jurassic	High
Mesozoic Volcanic Rocks (Mzv)	Jurassic to Cretaceous	High
Tertiary Volcanic Flow Rocks (Tv)	Tertiary	Low

Source: University of California Museum of Paleontology, 2013

3.10.3 AFFECTED ENVIRONMENT

Study Area Context and Resources

Archaeological Resources

According to the Monterey County General Plan EIR, signs of first human life in Monterey County date back to 10,000 to 12,000 years ago. First inhabitants were nomadic hunters that followed game herds for subsistence. A cultural shift occurred around 8,000 to 7,500 B.C. when humans began forming settlements and spreading out to maximize resources. Between 2,500 and 1,600 years ago, another shift in settlement patterns occurred as a result of migration of different people from the north – emanating from a larger migration from the east. Villages became larger during this time period as a result of new foraging techniques. Over time,

villages organized collection, processing, and distribution of resources and developed systems to collect and transport resources to population centers. Sea level rise and climate change spurred the population to move further inland for shelter and resources. Around 1500 A.D., the climate shifted into a colder period known as the “Little Ice Age”, changing collection behavior to more specialized and migratory. The indigenous people maintained this type of subsistence behavior until the Spanish explorers arrived.

Monterey Bay became the focus of several Spanish expeditions, thus influencing the culture and history of the region. Monterey County played a role in the Mexican-American War and later the California Gold Rush, influencing economic growth and development in the area. Grain production quickly became Monterey County’s main economic activity and spurred the development of transportation to export grain products. In 1872, the Southern Pacific Railroad extended its railroad line south to encompass the agricultural areas in the Salinas Valley and allowed farmers to increase acreages available for cultivation. In turn, the lower Salinas Valley transformed into agricultural land, which shaped the economic structure that largely remains in place today.

The Ohlone Native American Tribe encompassed much the inland valleys, relying on hunting and gathering. The Ohlone had permanent villages and seasonal camps, but their culture was dramatically changed by Spanish influence. The Monterey County General Plan EIR categorized areas of archaeological sensitivity. Areas that surround river courses and other large drainages are considered sensitive, since human occupation commonly occurred along water sources. Several burial sites have been uncovered on the terraces of the Salinas River, showing the importance of streams and rivers in human occupation.

Prehistoric archaeological sites within the Coast Corridor study area, within Monterey County, include mostly lithic scatters. “Lithic scatter” describes the surface scatter of cultural artifacts and leftover debris after shaping raw stone into usable tools. Lithic scatters are commonly found on most archaeological sites. According to the Monterey County General Plan EIR, areas between Salinas and San Lucas within the study area have generally low sensitivity for archaeological resource occurrence in Monterey County as shown on **Figure 3.10-1**. Areas south of San Lucas, adjacent to the Salinas River and US 101 have varying degrees of moderate to high sensitivity.

Early settlements in San Luis Obispo County included both large villages and smaller camps. Artifacts found from early settlements include shell beads and exotic trade items, alluding to increased cultural expansion and complexity. Between 1,000 and 1,800 A.D., recovered evidence supports possibilities of larger populations settling

near the coast to facilitate ocean access. Marine fishing and trading were the main economic pursuits. Typical villages included such features as sweathouses, sacred council areas, dance areas, and cemeteries. Land animals were hunted with bow and arrow as a main food source. Acorns were another valuable food source. Because acorns were easily stored, they are believed to have reduced the need for hunting and fishing, and thus played a role in increasing sedentism and social complexity.

The Chumash, a Native American Tribe, occupied coastal and inland areas when the Mission Period began in 1769. The Chumash society was organized around lineages and distinct social stratification. Chumash technology highlights the exploitation of marine resources, as found from toolkits with fishhooks, angled bone hooks, nets, traps, harpoons, and other items.

The Salinan Tribe inhabited the northern portion of the county and followed a hunting and gathering lifestyle as well, based on fishing. Eventually European contact with the Chumash and the Salinan people resulted in religious conversion and population increase. Spanish colonization also strongly influenced agricultural development in San Luis Obispo County.

Prehistoric archaeological sites within the San Luis Obispo County portion of the Coast Corridor study area include mostly lithic scatters, stone artifacts, and burial sites. A temporary village and the remains of Estrada Adobe have also been recorded within the study area.

Historic archaeological sites within the San Luis Obispo County portion of the Coast Corridor study area include the Mission San Miguel Arcangel. The Mission includes building remains, original wall paintings and decorations completed by Native Americans, and porcelain artifacts. The Mission is also listed as a California Historical Landmark. Additionally, the Rios-Caledonia Adobe is located near the Mission San Miguel Arcangel. This building reflects California's Mexican-era architecture and is listed as a NRHP and is a California Historical Landmark.

Historical Resources

More than 200 Federal, State, and County listed historic sites or eligible historic resources exist within Monterey County. Major regional county historic resources include Mission Nuestra Señora de la Soledad and the Old Mission School near Soledad, Richardson Adobe near Soledad, the Site of the Battle of Natividad near Salinas, the Boronda Adobe in Boronda, the Glass House in Pajaro, and Mission San Antonio de Padua near Jolon.

Historic structures existing within the Coast Corridor's Monterey County study area include the Southern Pacific Railroad near King City, Bradley Road Bridge over the Salinas River, previously determined eligible for the NRHP.³ Several structures associated with the Holly Sugar Beet railroad freight site and portions of US 101 were previously recorded and determined to not be eligible for NHRP listing. Several culverts were also previously recorded, but have not been evaluated as potential historic resources. The El Camino Real trail is also a historic resource that roughly traces parallel to US 101 and is located within portions of the study area. This trail is a historic roadway that connected a series of established Spanish and Mexican outposts. As a result, a series of missions were built in the footpath of this roadway.⁴ In Monterey County, the study area has about 5 potentially eligible historic residential, commercial, and industrial properties, as shown in **Table 3.10-2**.

Existing historic structures within the San Luis Obispo County portion of the study area include several historic-era railroad bridges as well Union Pacific and Southern Pacific Railroad Bridges. A bridge/culvert on Cuesta Forest Road and the Highway 41 overpass of the South Pacific Railroad were recorded, but not evaluated for eligibility. Additionally, several locally eligible historic cottage residences and carpenter gothic residences are also present within the study area. Similar to Monterey County, the El Camino Real trail is also a historic resource that roughly traces parallel to US 101 and the study area in San Luis Obispo County. **Table 3.10-2** shows potentially eligible historic residential, commercial, and industrial properties, as indicated by local standards, found within the Study Area.

Paleontological Resources

Paleontological resources in Monterey County are primarily from marine life forms that deposited from rising and falling sea levels. As a result, terrestrial fossils are less likely. Monterey County fossils are mainly microorganisms such as foraminifers or diatoms, assemblages of mollusks, and barnacles from the Cretaceous age (138 to 96 million years old) to the Pleistocene age (1.6 million to 11,000 years old). Out of 700 known fossil locations within Monterey County, 12 have been identified to have scientific value, with rare and unique characteristics.

The most prevalent underlying geologic unit within the Coast Corridor study area and within Monterey County is Quaternary Alluvium and marine deposits, which is considered to have low paleontological resources sensitivity. Although the exact

³ The Bradley bridge is also a section 4(f) resource and is discussed in **Chapter 4.0, Section 4(f)/6(f) Evaluation**.

⁴ California Highways, 2014

location of these sites is not disclosed to avoid potential degradation, the general locations in Monterey County are shown in the 2006 General Plan Update. The General Plan showed a negligible amount of such resources along the study area.

Similarly to Monterey County, paleontological resources in San Luis Obispo County are primarily made up of invertebrate fossils in marine rocks. Coastal Franciscan formation, a geologic unit within the southern portions of the study area, includes trace fossils (preserved tracks or other signs of animal activity), mollusks, and marine reptiles. These are typically found where bedrock is exposed from erosion on the surface, such as along cliffs along the coast. Scattered vertebrate remains have been identified within the county in deposits from the Pleistocene era. The study area has low sensitivity for containing paleontological resources with the exception of a few areas with high paleontological sensitivity in the southernmost portions of the study area. These areas are discussed in more detail below.

3.10.4 ENVIRONMENTAL CONSEQUENCES

No Build Alternative

The No Build Alternative represents the continuation of existing operations and physical components, and assumes the perpetuation of existing freight and passenger service. The only proposed physical improvement would be the implementation of positive train control (PTC) along the corridor, which would possibly include new and/or modified signaling and communications equipment. Installation of such equipment would most likely occur within the railroad right-of-way, which generally does not include any historic resources and is an unlikely location for unrecorded archaeological resources given the disturbed nature of such areas. To the extent PTC installation requires federal approval, further consultation under Section 106 may be necessary.

Build Alternative

Direct Impacts

Construction of one or more of the proposed physical improvements comprising the Build Alternative could potentially affect archaeological, historic, and paleontological resources. The severity of the impact to these resources depends on the condition of the resource and its location with respect to the proposed physical improvement. For the purposes of this programmatic evaluation,

Table 3.10-2 below summarizes the number of known archaeological sites, number of recorded historic structures, and paleontological sensitivity for the various areas comprising the study area.

As previously noted in **Subsection 3.10.2, Methods of Evaluation**, this evaluation does not make any new determinations of eligibility of any potential archaeological or historic resource. Where such determinations were previously made, this analysis discloses available information. As one or more components of the Build Alternative move forward to further design and implementation, component-specific evaluation for cultural resources effects will be required and conducted. Additional evaluation would include further identification and analysis of resources present, their condition and eligibility, and the potential direct and indirect effects of proposed improvements to adversely affect the resources' eligibility status.

Table 3.10-2 Summary of Potential Impacts to Cultural and Paleontological Resources

Build Alternative Components	Archaeological Sites	Historic Architectural Resources	Paleontological Sensitivity
Salinas Powered Switch	0	0	Low
<i>Upgrades to Existing Alignment Section #1</i>	0	0	Low
Spence Siding Extension	0	0	Low
<i>Upgrades to Existing Alignment Section #2</i>	0	1	Low
Gonzales Powered Switch	0	0	Low
Soledad Powered Switch	0	0	Low
Soledad New Passenger Station	0	9	Low
Harlem/Metz Curve Realignments	0	6	Low
Chalone Creek New Siding	0	0	Low
<i>Upgrades to Existing Alignment Section #3</i>	0	2	Low

Build Alternative Components	Archaeological Sites	Historic Architectural Resources	Paleontological Sensitivity
Coburn Curve Realignment	0	0	Low
King City Siding Extension	0	6	Low
King City New Passenger Station	0	1	Low
King City Powered Switch	0	0	Low
Upgrades to Existing Alignment Section #4	0	0	Low
MP 165 Curve Realignment	0	3	Low
San Lucas New Siding	0	0	Low
Upgrades to Existing Alignment Section #5	0	2	Low
MP 172 Track Realignment	0	2	Low
San Ardo Powered Switch	0	0	Low
Getty/Bradley Curve Realignments	3	1	Low
Bradley Siding Extension	0	0	Low
Bradley Powered Switch	0	0	Low
Upgrades to Existing Alignment Section #6	4	6	Low
Upgrades to Existing Alignment Section #7	1	1	Low
McKay/ Wellsona Curve Realignments	0	2	Low
McKay East Powered Switches	0	0	Low
Wellsona New Siding	1	0	Low
Upgrades to Existing Alignment Section #8	1	4	Low

Build Alternative Components	Archaeological Sites	Historic Architectural Resources	Paleontological Sensitivity
Wellsona/ Paso Robles Curve Realignment	0	3	Low
Templeton Siding	1	0	Low
Templeton/ Henry Curve Realignment	4	0	Low
Upgrades to Existing Alignment Section #9	8	3	Low
Henry/Santa Margarita Curve Realignment	2	3	Low
Santa Margarita Powered Switch	0	0	Low
Cuesta Second Main Track	0	3	High
Upgrades to Existing Alignment Section #10	2	1	High

Source: ICF, 2013 (Appendix D).

^a The table does not show any traditional cultural properties because none have been identified to date by the NAHC.

^b Archaeological sites include those for which eligibility has not yet been determined as well as one resource for which eligibility was previously determined.

^c Historic architectural resources listed here include those for which eligibility has not yet been determined as well as nine resources for which eligibility was previously determined.

The vast majority of the sites in **Table 3.10-2** were recorded but the resources were never evaluated for eligibility. Notable sites that were evaluated are discussed below in **Subsection 3.10.4**.

Archaeological Resources

In Monterey County, as indicated in **Table 3.10-2**, four archaeological sites were recorded, within existing alignment section #6, but the eligibility status has not been evaluated or determined. Cultural resources at these four archaeological sites entail mostly highly disturbed prehistoric lithic scatter along the Salinas River floodplain. Lithic scatters in these areas include pieces of eroded cryptocrystalline debitage,⁵

⁵ Cryptocrystalline is a type of silicate that likely contains lithic material and cultural debitage (debris from quarrying and tool making).

core tools, chert flakes, and one fragment of burned bone. Proposed improvements under the Build Alternative in this area include upgrades to the existing tracks. Improvements to the existing alignment would occur within the railroad right-of-way and would thus be limited to already disturbed areas. Therefore, the Build Alternative would be unlikely to affect recorded archaeological sites within section #6 of the existing alignment in Monterey County.

Three archaeological sites were recorded within the Getty/Bradley curve realignment areas, but the eligibility status has not been evaluated or determined. These recorded sites are also prehistoric lithic scatters and chert flakes along the Salinas River. Proposed curve realignments would have a larger potential impact because the footprint of the required work would require conversion of land outside the existing railroad right-of-way. Therefore, construction of this curve realignment would have a high potential to disturb and/or uncover known/unknown archaeological sites.

In San Luis Obispo County, archaeological sites were recorded in various locations within the existing alignment and in proposed improvement areas. There are a total of 12 archaeological sites located within existing alignments section #7, section #8, section #9, and section #10 in San Luis Obispo County. The cultural resources found at these sites include mostly lithic scatters and chipped stone debris, similar to archaeological sites recorded in Monterey County. An isolated burial site was recorded as well as a temporary village (recorded three times between 1971 and 1999). Both of these sites were recorded, but eligibility for the NRHP and CRHR was not determined. In section #10 of the existing alignment, two concrete foundations were recorded and evaluated in 2006, but not deemed eligible for the NRHP and CRHR. Most notably, the Mission San Miguel Arcangel is within the study area in the northern portions of San Luis Obispo County and is considered a California Historical Landmark, but eligibility for the NRHP and CRHR was not determined. The Rios-Caledonia Adobe is located near the Mission San Miguel Arcangel and is listed as a NRHP and is also a California Historical Landmark. No physical improvements outside of the railroad right-of-way would occur in these areas as it only entails system-wide improvements related to track tie and ballast upgrades. As a result, these archaeological resources would not likely be affected. However, any proposed improvement has potential to uncover unknown cultural resources. Therefore, if any of the proposed improvements are carried forward, appropriate measures consistent with Section 106 may be required to avoid, minimize, or mitigate potential adverse effects to such resources.

An archaeological site was recorded within the impact area of both the new Wellsona siding and Templeton siding. The Wellsona siding site was recorded as a lithic scatter and the Templeton siding was recorded as bedrock mortar.⁶ These sites were recorded but eligibility was not determined. Both of these proposed siding improvements would occur within the existing railroad right-of-way and would be limited to already disturbed areas. Therefore, the Build Alternative would not likely affect recorded archaeological sites within these sidings' permanent and temporary impact areas. However, any proposed improvement has potential to uncover unknown cultural resources, as discussed above.

Two archaeological sites were recorded, but not evaluated within the Henry/Santa Margarita curve realignment permanent/temporary impact area. Both of these sites include lithic scatter. Four sites were recorded within the proposed Templeton/Henry curve realignment permanent/temporary impact area. Only one of the four sites is in the permanent impact area for the Templeton/Henry curve realignment and includes the remains of the Estrada Adobe in Atascadero, which is monitored by the Atascadero Land Preservation Society (ALPS).⁷ In 1845, Governor Pio Pico gave Pedro Estrada 40,000 acres through a land grant, which is now modern day Atascadero. The Estrada Adobe was Pedro Estrada's home and has local significance.⁸ The other sites, within the temporary impact area, entail lithic scatters. Proposed curve realignments would require conversion of land outside the existing railroad right-of-way and thus have elevated potential to disturb known or uncover unknown archaeological sites. If one or both of these curve realignments are carried forward for construction, contingent on project design, subsequent analysis would include a formal evaluation of impacts.

Historical Resources

There are several historic structures from the more recent built environment that exist within the existing Coast Corridor alignment and within the established temporary and permanent impact areas for the proposed physical improvements. These historical sites include buildings, bridges, and other structures of local significance. Most notably is the Bradley Bridge over the Salinas River, which is the only historical resource within the entire Coast Corridor study area that was previously determined eligible for the NRHP. That said, the Bradley Bridge is located within existing alignment section #6; therefore, physical improvements on the bridge would consist of the overall track upgrades proposed for the entirety of the

⁶ Bedrock mortars are rock outcrops that were used for food grinding.

⁷ [Allen](#), 2013

⁸ Atascadero Chamber of Commerce, 2014

Salinas to San Luis Obispo rail corridor. Such improvements would be highly unlikely to alter the bridge's eligibility insofar as the improvements would further the bridge's use (to serve an existing railroad). If track upgrades are selected for this portion of the corridor, an appropriate level of review will be needed to formally determine the potential for such improvements to affect the bridge's previously established eligibility.

There are nine potentially historic structures of local importance built between 1920 and 1940 located within the permanent/temporary impact area of the proposed Soledad Passenger Station and one structure within the permanent/temporary impact area of the proposed King City Passenger Station. Both Soledad and King City have developed conceptual plans for proposed station sites in their respective downtown (see the *Soledad Downtown Specific Plan (2012)* and *King City First Street Corridor Master Plan (2013)*).

The structure near the proposed King City Station is located on Pearl Street and does not appear to be within the station's footprint or within the city's historic corridor.⁹ All of the structures near the Soledad Station have commercial purposes on Front Street, and are located across the street from the proposed station and would not likely be affected or acquired by the new station. Cesar Chavez Park is located on Front Street, between Main Street and Soledad Street, potentially within the proposed station's footprint. If the King City or Soledad stations are carried forward, subsequent project-level analysis of the proposed station footprint may be required to determine if the station features would affect any of the relevant historic properties. At that time, appropriate avoidance, minimization, and mitigation measures may be required to address potential adverse effects to such resources, as shown in **Subsection, 3.10.6, Subsequent Analysis**.

In Monterey County, there are 12 potentially historic structures of local importance from the more recent built environment that exist within the existing Coast Corridor alignment and within the established temporary and permanent impact areas for the proposed Harlem/Metz, MP 165, MP 172, and Getty/Bradley curve realignments. Curve realignments require work outside the railroad right-of-way and therefore have more potential to disturb existing structures than other proposed improvements limited to the railroad right-of-way. If any of the curve realignments are carried forward, detailed design work would be necessary to identify final footprint areas. Such work would help determine if the footprints overlapped with one or more historic properties. As appropriate, subsequent

⁹ City of King, 2011, p. 7

project level analysis of the proposed Harlem/Metz, MP 165, MP 172, and Getty/Bradley curve realignments may be required to determine if one or more of them would affect any of the relevant historic properties.

In San Luis Obispo County, several historic-era bridges and residences exist within the temporary and permanent impact areas of the existing Coast Corridor alignment sections #8, section #9, and section #10. Improvements to the existing alignment would occur within the railroad right-of-way and would be limited to already disturbed areas. Therefore, the Build Alternative would not affect recorded historical sites within the existing alignment in San Luis Obispo County.

In the temporary area for the second mainline, two historic resources have been recorded without eligibility determinations: the Union Pacific Railroad Bridge and a bridge/culvert on Cuesta Forest Road. The proposed second mainline would occur within the existing railroad right-of-way and would thus be limited to already disturbed areas. Therefore, the Build Alternative would not affect recorded historical sites within the impact areas.

In San Luis Obispo County, there are 8 potentially historic structures of local importance from the more recent built environment that exist within the existing Coast Corridor alignment and within the established temporary and permanent impact areas for the proposed Henry/Santa Margarita, Wellsona/Paso Robles, and McKay/Wellsona curve realignments. Curve realignments require work outside the railroad right-of-way and therefore have more potential to disturb existing structures than other proposed improvements within the railroad right-of-way. Subsequent project-level analysis of the proposed curve realignment footprint would be required to determine an impact to these historic buildings and parcels. If any of the curve realignments are carried forward, detailed design work would be necessary to identify final footprint areas. Such work would help determine if the footprints overlapped with one or more historic properties. As appropriate, subsequent review of the proposed Henry/Santa Margarita, Wellsona/Paso Robles, and McKay/Wellsona curve realignments may be required to determine if one or more of them would affect any of the relevant historic properties.

Paleontological Resources

In Monterey County and in San Luis Obispo County, most of the existing rail alignment and proposed improvements are underlain with quaternary alluvium and marine deposits from the Holocene epoch. This geologic unit is considered to have low sensitivity to encounter paleontological resources because it is young in

geologic age, primarily made up of loose sand and silt material. The only portions of the study area with high paleontological sensitivity are within the existing alignment #10 and the proposed second main track north of the Cuesta Grade.

Work required to upgrade existing portions of the Coast Corridor would generally not require grading or excavations that would impact potential paleontological resources because upgrades would be embedded into the existing tracks. However, proposed curve realignments, siding extensions/new sidings, and the second mainline would require grading but primarily at surficial levels. Typically, projects have an increased potential to affect paleontological resources when they involve substantial excavation work and/or tunneling. As none of the proposed physical improvements comprising the Build Alternative are anticipated to require significant excavation or any tunneling, the potential for impacts to paleontological resources would be low.

Indirect Impacts

The range of potential improvements associated with the elements of the Build Alternative could have potential indirect effects on cultural resources, particularly where proposed improvements are located in proximity to historic resources. Indirect effects include those that could indirectly alter the context in which an existing historic resource is situated, potentially to such an extent that the resource's eligibility for the NRHP is compromised. As a result, the potential introduction of new visual elements, noise, and vibration upon existing cultural resources would need to be further assessed in subsequent environmental review.

As discussed in **Section 3.6, Aesthetics and Visual Resources**, the majority of the study area would have low to medium visual impacts as a result of implementation of proposed improvements. Some of the proposed improvements would include the visual presence of construction equipment, light and glare impacts from any nighttime construction work, and newly disturbed natural land cover that will recover to its original undisturbed form. As elements of the Build Alternative are carried forward for further design, funding, and implementation, the potential for such resources to indirectly affect or contrast substantially with the existing railroad/transportation related use of the corridor is unlikely.

With regard to noise and vibration, to the extent any of these improvements are ultimately carried forward for further design leading to construction, heavy equipment and vehicles could result in temporary increases in noise and vibration levels. These temporary construction impacts would be more pronounced at nighttime when overall ambient noise levels are lower. Once any of the potential proposed improvements are operational, noise and vibration effects would occur

primarily approach and pass through urban areas. While these effects would likely be found negligible and further found not to diminish the integrity of location, setting, feeling, association, workmanship, design or materials for any historic property, further analysis would be needed to make such conclusions for any specific locations along the corridor.

3.10.5 AVOIDANCE, MINIMIZATION, AND MITIGATION STRATEGIES

General mitigation strategies are discussed below and provide guidance as to additional analysis, evaluation and development of appropriate site specific mitigation prior to implementing elements of the Build Alternative.

- **MIN-CUL-1. Recordation:** The lead agency(s) should ensure that cultural resources adversely affected by the Build Alternative are recorded and documented in a similar manner to a Historic American Building Survey (HABS) or Historic American Engineering Record (HAER) to be coordinated with the SHPO.
- **MIN-CUL-2. Design Guidelines:** The lead agency should ensure that design guidelines are developed for appropriate and compatible construction with regard to aesthetics. Design guidelines would meet HABS and HAER standards and would be reviewed by SHPO and other agencies.
- **MIN-CUL-3. Interpretive/Educational Materials:** The lead agency should prepare interpretive and/or educational materials regarding affected historic properties or resources. The focus of this mitigation would be the historic themes related to this resource.
- **A-CUL-4. Relocation:** Historic properties or resources what would be demolished because of the project should be relocated and rehabilitated. The lead agency should prepare a removal plan, including site plans for the new locations and placing them on new foundations.
- **MIN-CUL-5. Monitoring:** Project construction documents and new construction should be monitored to ensure they confirm to the design guidelines. A professional should monitor construction to identify conditions that would conflict with the mitigation measures.
- **MIN-CUL-6. Minor Repairs and Reconstruction:** The lead agency should ensure that inadvertent damage to historic properties or resources would be repaired in accordance Secretary of the Interior's Standards for Treatment of Historic Properties.

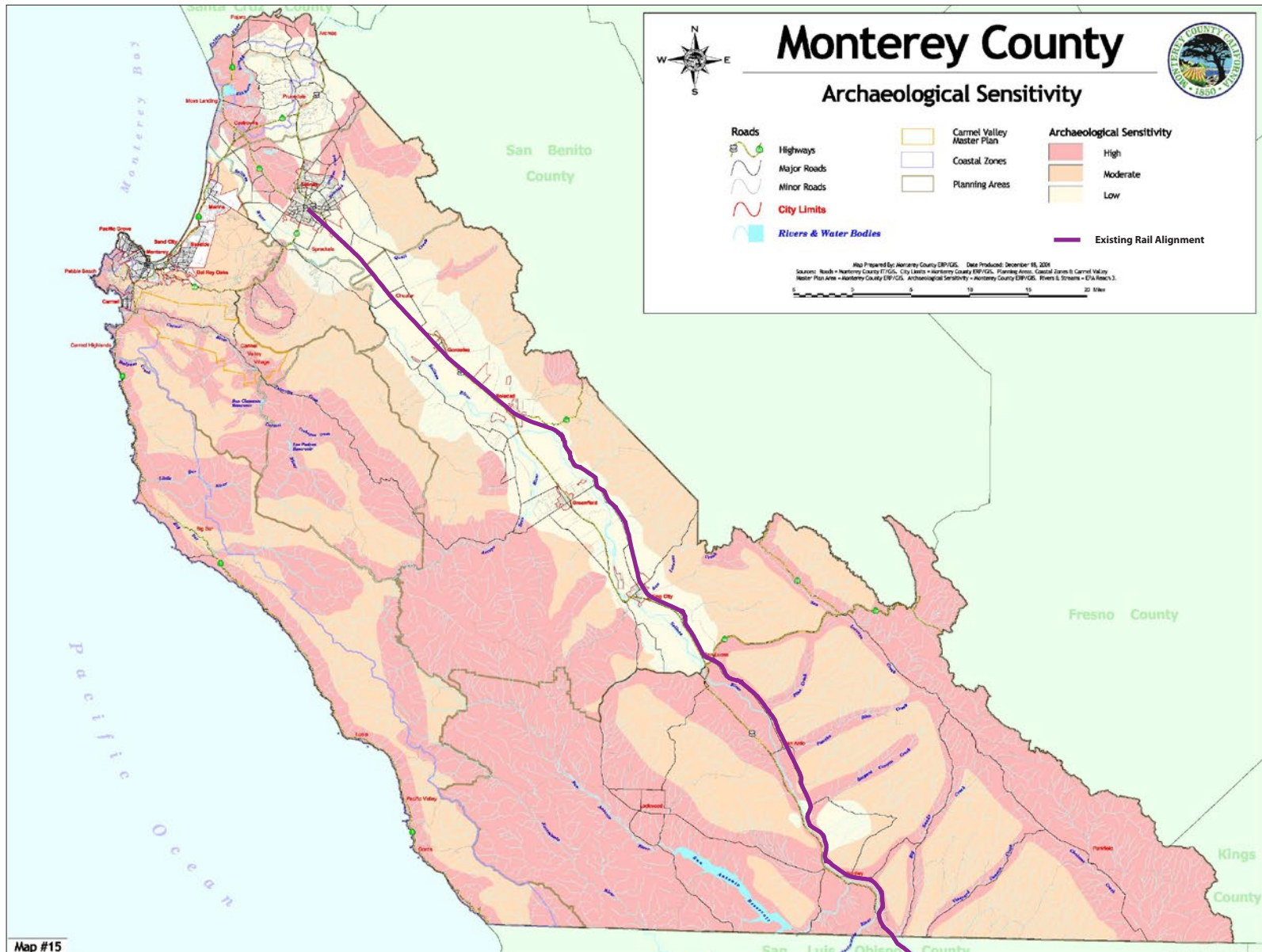
- **MIN-CUL-7. Salvage:** The lead agency should ensure that selected decorative or architectural elements of any adversely affected historic properties or resources should be reviewed for feasibility of salvage to mitigate loss or destruction. Where possible, these elements should be retained and reused in construction. Where not possible, selected salvaged elements should be made available for educational purposes.
- **MIN-CUL-8. Paleontological Resources:** Mitigation measures for paleontological resources should be identified prior to implementing specific elements of the Build Alternative such as education of workers, recovery of fossils found during reconnaissance, monitoring construction. Furthermore, mitigation strategies should include establishing protocols for recovering fossils during construction for identification, dating, interpreting, and preserving at appropriate facilities.

3.10.6 SUBSEQUENT ANALYSIS

Where resources exist in the immediate area of proposed project components, additional evaluation of the potential effects to cultural resources would be conducted prior to implementing specific components of the Build Alternative. Additional evaluation would include further identification and analysis of resources present, their condition and eligibility, and the potential direct and indirect effects of proposed improvements to adversely affect the resources' eligibility status. All identified archaeological and historical resources should be evaluated using NRHP and CRHR eligibility criteria.

Further evaluation of paleontological resources should include field reconnaissance to identify any exposed resources and determine sensitivity.

Further consultation with NAHC and Native American groups would be necessary with a more precise study area to determine potentially sensitive resources or territories within the study area.



Monterey County Archaeological Sensitivity

Figure

3.10-1