

APPENDIX C
Cultural Resources Assessment

Phase I Cultural Resources Assessment for the Modjeska Grade Road Improvements Project County of Orange, California

Prepared for:
Orange County Public Works, Programming
601 North Ross Street
Santa Ana, CA 92701-4048

Prepared by:
Kholood Abdo, MA, RPA

November 2023

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Kholood Abo, MA, RPA



5 Hutton Centre Drive, Suite 500
Santa Ana, CA 92707

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National Archaeological Database (NADB)
Type of Study: Literature Search, Intensive Pedestrian Survey
USGS 7.5' Quadrangle: El Toro
Level of Investigation: Section 106 NHPA; CEQA Phase I, 1.3 miles
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EXECUTIVE SUMMARY

Orange County Public Works (OC Public Works) proposes the Modjeska Grade Road Improvements Project from 100 feet south of the Markuson Road/Modjeska Canyon Road intersection to the East Santiago Canyon Road (also referred to as County Road S18)/Modjeska Grade Road intersection (Project) in Modjeska Canyon, Orange County, California. The Project consists of roadway, drainage and erosion control improvements. The purpose of the project is to on-site to enhance safety for residents and travelers along the 1.3-mile segment of the road and surrounding uses.

The Project is subject to compliance with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA) of 1966 as amended for a permit under Section 404 of the Clean Water Act. The PC Public works is the CEQA lead agency, and the US Army Corps of Engineers (USACE) is the lead agency for Section 106.

This Phase 1 Cultural Resources Assessment is produced compliant with CEQA and NHPA Section 106 Standards. In support of the Project, Michael Baker International conducted the following: South Central Coastal Information Center records search; Native American Heritage Commission (NAHC) Sacred Lands File search; historical society consultation; an archaeological field survey; and buried site sensitivity analysis. These efforts were completed to determine whether the Project could result in significant impacts to historical and archaeological resources as defined by CEQA Section 15064.5 or adverse effects to historic properties as defined by 36 Code of Federal Regulations (CFR) 800.16 (y).

Based on the results of the study, no historical resources or historic properties were identified within the Area of potential effects (APE). A finding of no historic properties affected with conditions under Section 106 and less than significant impact with mitigation incorporated under CEQA is appropriate for the Project.

1.0 INTRODUCTION

Modjeska Grade Road is an OC Public Works maintained County Highway. This road has a long history of extensive maintenance needs during the storm seasons. OC Public Works proposes the Modjeska Grade Road Improvements Project from 100 feet south of the Markuson Road/Modjeska Canyon Road intersection to the East Santiago Canyon Road (also referred to as County Road S18) Grade Road intersection in Modjeska Canyon, Orange County, California (Project). The Project would improve the drainage and erosion deficiencies within the Project limits to enhance safety for residents and travelers along 1.3 mile segments of the road and the surrounding properties.

1.1 PROJECT LOCATION

The Project is within the southwestern portion of unincorporated Orange County, California, approximately 2.2 miles north of State Route 241 (SR-241) (**Figure 1**) within Sections 29 and 32 of Township 5 South and Range 7 West, San Bernardino Baseline and Meridian of the 7.5-minute US Geological Survey (USGS) topographic quadrangles of El Toro, California (**Figure 2**).

1.2 PROJECT DESCRIPTION

The proposed Project includes roadway, drainage, and erosion control improvements on-site. Roadway improvements would generally include pavement rehabilitation, paved shoulder (northbound shoulder from Santiago Truck Trail to East Santiago Canyon Road), construction of retaining walls, and installing guardrails. The existing pavement would be rehabilitated by removing and replacing the existing structural section for the entire length of the Project. Similar to existing conditions, the travel lanes would typically be 10 feet wide, except for a segment from the Shadowland Circle and Modjeska Grade Road intersection to approximately 630 feet south, where the travel lanes will be 8 feet wide. Paved shoulders will typically be one-foot wide, minimum. Roadway re-pavement would include a five- to seven-foot-wide paved northbound shoulder from the Santiago Truck Trail to East Santiago Canyon Road. The Project would construct up to four retaining walls ranging in height from three to six feet tall, and install and upgrade guardrails at approximately seven locations within the Project limits. For the purposes of improving the existing drainage system, the proposed Project would reconstruct up to four residential driveways.

Drainage improvements along Modjeska Grade Road would reduce the existing flooding, channelize storm flows, and reduce the potential for erosion. The proposed Project would construct concrete-lined swales, v-ditches, and asphalt concrete dikes along the roadway edges. Additional improvements would include replacing or upsizing the existing drainpipes and installing catch basins and inlets within Project limits to adequately capture and convey on-site stormwater flows. Energy dissipation measures would be installed to the system outlets to minimize erosion, turbulence, and turbidity since the Project discharges indirectly to the Santiago Creek and Aliso Creek, which are not engineered or hardened and are susceptible to hydromodification. An existing unlined manmade drainage structure adjacent to Modjeska Canyon Road between Shadowland Circle and Santiago Creek will be modified to improve capacity and minimize erosion. The structure will be widened, and the westerly bank will be shifted west. The easterly bank and associated trees will be protected in place. Channel protection such as rip rap will be included where necessary to protect the structure bottom and banks.

The soil erosion of unpaved roadway shoulders and side slopes on-site would be reduced by paving roadway shoulders and installing erosion control measures such as hydroseed containing only locally prevalent native plant species, open weave textile, and turf reinforcement mat. Erosion along the roadway edges, which lead to sediment collection, inlet clogging, and slope stability issues at the tops of slopes, would be reduced by constructing concrete-lined swales and asphalt dikes that would convey channelized surface flows. The Project site includes both overhead and underground utilities, including overhead electric and telecommunication lines and power poles, as well as underground power, communication, and water lines.

Maximum depths of ground disturbance associated with Project construction are estimated to reach approximately 4 feet for the replacement of the existing pavement and drainage improvement work. Maximum depth for storm drain work may reach a depth of 8–10 feet at isolated locations within the APE.

1.3 AREA OF POTENTIAL EFFECTS

The area of potential effects (APE) includes the maximum extent of ground disturbance required by the Project encompassing the 1.3-mile-long segment of Modjeska Grade Road from 100 feet south of the Markuson Road/Modjeska Canyon Road intersection to the East Santiago Canyon Road/Modjeska Grade Road (**Appendix A**). The APE includes the roadway permanent easement, drainage maintenance easement, and temporary construction easements. The vertical APE for the Project—defined as the maximum depth of Project activities—measures approximately 4 feet for roadway work and up to approximately 10 feet for storm drain improvements.

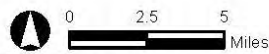


Legend

- ★ Project Location

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

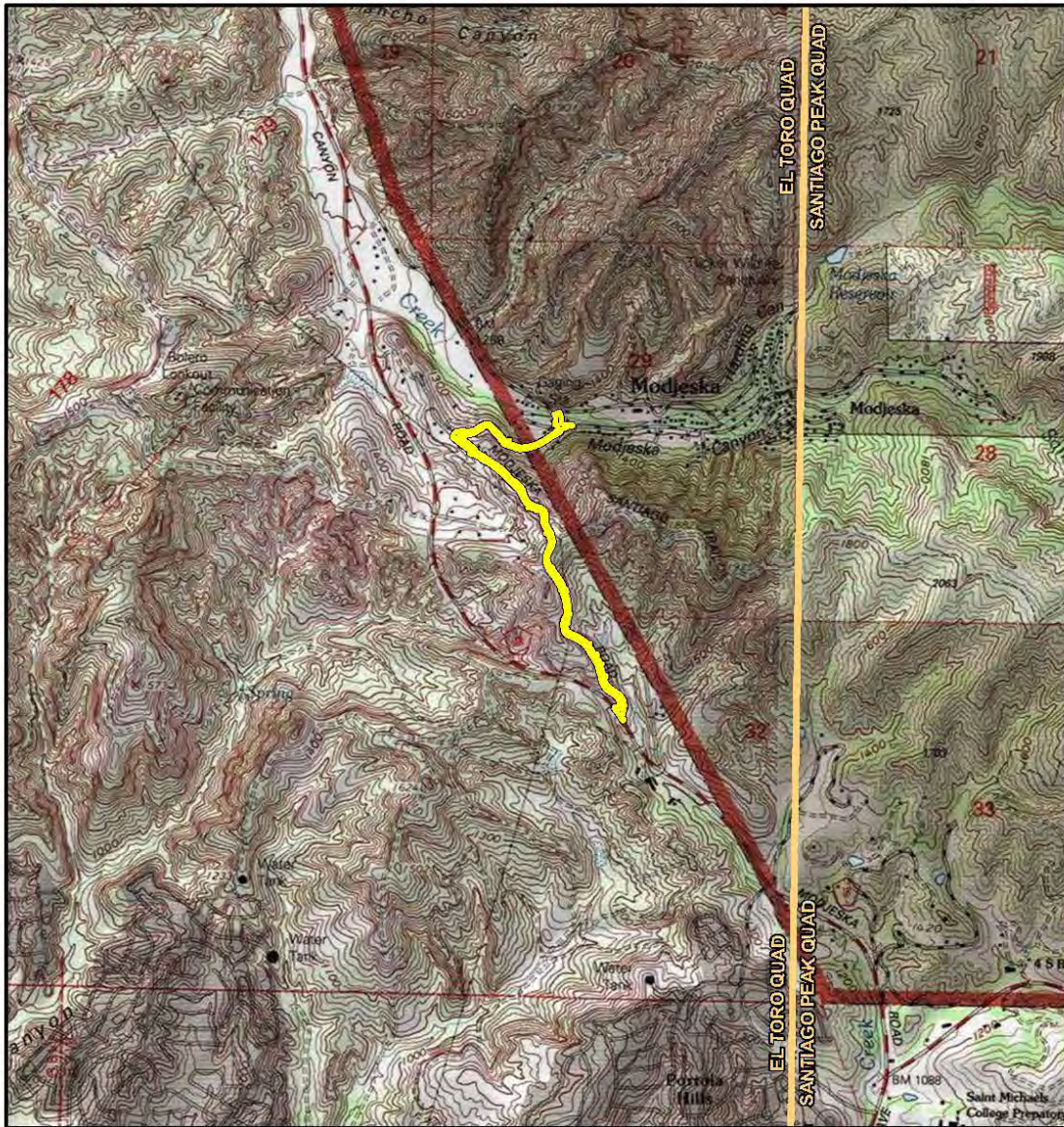
Michael Baker
INTERNATIONAL



Source: Esri, ArcGIS Online, National Geographic World Map: Silverado, California

Project Vicinity

Figure 1

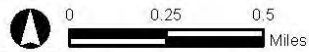


Legend

Area of Potential Effects

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

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Source: Esri, ArcGIS Online, El Toro USGS 7.5-Minute topographic quadrangle maps: Silverado, California

Project Location

Figure 2

2.0 REGULATORY FRAMEWORK

2.1 CLEAN WATER ACT

Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Activities in the waters of the United States regulated under this program include fill for development, water resource projects, infrastructure development, and mining projects. Section 404 requires a permit to be obtained before dredged or fill material may be discharged into the waters of the United States. Project implementation would require a Section 404 Nationwide Permit 14. Because the Project falls within the jurisdiction of a federal agency and requires a federally issued permit, the Project is considered a federal undertaking.

2.2 NATIONAL HISTORIC PRESERVATION ACT

The Project requires federal permitting, license, or approval; therefore, the Project meets the definition of an undertaking in 36 CFR Section 800.16(y). Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings (36 CFR Section 800.1). A historic property is defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register. Properties of traditional religious and cultural importance to Native Americans are considered under Section 106 (36 CFR Sections 800.3-800.10) and Section 101 (d)(6) of the NHPA.

2.3 CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA applies to all discretionary projects undertaken or subject to approval by the state's public agencies (California Code of Regulations [CCR] Title 14[3] Section 15002[i]). CEQA conditions state that it is the policy of the state of California to "take all action necessary to provide the people of this state with historic environmental qualities and preserve for future generations examples of the major periods of California history" (Public Resources Code [PRC] Section 21001[b], [c]). Under the provisions of CEQA, "a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (CCR Title 14[3] Section 15064.5[b]).

CEQA Guidelines Section 15064.5(a) defines a "historical resource" as a resource that meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register.
- Listed in a local register of historical resources (as defined in PRC Section 5020.1[k]).
- Identified as significant in a historical resource survey meeting PRC Section 5024.1(g) requirements.
- Determined to be a historical resource by a project's lead agency (CCR Title 14[3] Section 15064.5[a]).

A historical resource consists of "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. Generally, a resource shall be considered by the lead agency to be ‘historically significant’ if the resource meets the criteria for listing in the California Register of Historical Resources” (CCR Title 14[3] Section 15064.5[a][3]).

The CEQA planning process requires considering historical resources and unique archaeological resources (CCR Title 14[3] Section 15064.5; PRC Section 21083.2). If feasible, adverse effects to the significance of historical resources must be avoided or mitigated (CCR Title 14[3] Section 15064.5[b][4]). The significance of a historical resource is impaired when a project demolishes or materially alters adversely those physical characteristics of a historical resource that convey its historical significance and justify its eligibility for the California Register. If there is a substantial adverse change in the significance of a historical resource, the preparation of an environmental impact report may be required (CCR Title 14[3] Section 15065[a]).

If the cultural resource in question is an archaeological site, CEQA (CCR Title 14[3] Section 15064.5[c][1]) requires that the lead agency first determine if the site is a historical resource as defined in CCR Title 14(3) Section 15064.5(a). If the site qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource (OHP 2001). If the archaeological site does not qualify as a historical resource but does qualify as a unique archaeological site, then the archaeological site is treated in accordance with PRC Section 21083.2 (CCR Title 14[3] Section 15069.5[c][3]). In practice, most archaeological sites that meet the definition of a unique archaeological resource will also meet the definition of a historical resource. CEQA defines a “unique archaeological resource” as an archaeological artifact, object, or site about which it can be demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

- Contains information needed to answer important scientific research questions and 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.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC Section 21083.2[g]).

If an impact to a historical or archaeological resource is significant, CEQA requires feasible mitigation measures to minimize the impact (CCR Title 14[3] Section 15126.4[a][1]). Mitigation must lessen or eliminate the physical impact that the project will have on the resource. Generally, drawings, photographs, and/or displays do not mitigate the physical impact on the environment caused by the demolition or the destruction of a historical resource. However, CEQA (PRC Section 21002.1[b]) requires that all feasible mitigation be undertaken even if it does not mitigate impacts to a less than significant level (OHP 2001:9).

3.0 ENVIRONMENTAL SETTING AND BACKGROUND

3.1 NATURAL SETTING

California is divided into eleven geomorphic provinces, each naturally defined by unique geologic and geomorphic characteristics. The APE is in the mid-west section of the Peninsular Ranges geomorphic province. Northwest-trending mountain ranges and valleys following faults branching from the San Andreas Fault define the Peninsular Ranges province. The Colorado Desert to the east, the Transverse Ranges province to the north, and the submarine continental shelf to the west bound the Peninsular Ranges (Norris and Webb 1976).

The APE is located within the western slope of the Santa Ana Mountains, which marks the eastern border of the Los Angeles Basin (Yerkes et al. 1965). The area contains four major canyons: Black Star, Silverado, Williams, and Modjeska. The Silverado-Modjeska area consists of approximately 65 square miles of mountainous terrain on the eastern edge of Orange County (General Plan 2015).

Geologic units underlying the APE are the Santiago Formation (Tsa) marine and nonmarine sandstones and conglomerates dating to the middle Eocene epoch (47.8 to 46.2 million years ago; Prothero 2001); the Silverado Formation (Tsi), basal conglomerate with overlying sandstones, siltstones, and clay layers of marine and nonmarine origin, dating to the Paleocene epoch (60.9 to 58.1 million years ago; Prothero and Lopez 2001); very old alluvium (Qvoa) and young axial channel deposits (Qya; Morton and Miller 2006) silts, sands, and gravels dating from the Late Pleistocene to Holocene epochs (126,000 years ago to the present); the Williams Formation Pleasants Sandstone (Kwps) sandstones and particularly coarse-grained conglomeratic sandstone dating to the late Campanian age of the Late Cretaceous Epoch (77 to 71 million years ago; Saul 1982; Saul and Squires 2008); the Baker Canyon member of the Ladd Formation marine and nonmarine conglomerates dating to the late Turonian age of the Late Cretaceous (94 to 89 million years ago; Saul 1982; Squires and Saul 2008).

Soils overlaying the formational units of the APE comprise 13 distinct soil map units (NRCS 2022). Anaheim clay loam, Calleguas sandy loam, Capistrano sandy loam, and Soper loam series units are the most common soils of the Project site, each composing at least 10 percent of the observed surface up to 26 percent (USDA 2001a, 2001b, 2003a, 2003b).

The APE is located within the Lower Santa Ana River-Santiago watershed. Santiago Creek traverses the northern end of the APE. A tributary of the Santa Ana River, Santiago Creek is an intermittent creek that flows east/west; it drains most of the northern Santa Ana Mountains. The southern end of the APE is located 0.5 miles north of the headwaters of Aliso Creek (General Plan 2015).

The APE is within the Diegan Coastal Hills and Valleys ecoregion, which includes coastal terraces and some moderately steep to steep foothills along the western side of the Peninsular Ranges from the Santa Ana River southeast to the Mexican border. This region contains many canyons and a few broad valleys. Coastal scrub, chaparral, annual and perennial grasslands, sycamore and willow riparian and oak woodlands make up the vegetation communities in this region (Griffith et al. 2016).

3.2 CULTURAL SETTING

This section provides a brief summary of the prehistoric record and ethnohistoric and historic settings of the APE.

3.2.1 Prehistoric Period

Of the many prehistoric chronological sequences proposed for Southern California, the primary regional synthesis was advanced by Wallace (1955). Wallace defines four cultural horizons for the Southern California coastal province, each with characteristic local variations:

- I. Early Man (~9,000–8,500 Before Present [BP])
- II. Milling Stone (8,500–4,000 BP)
- III. Intermediate (4,000–1,500 BP)
- IV. Late Prehistoric (1,500~200 BP)

Most archaeologists today classify cultural change across time through broad time periods, climatic information, and cultural manifestations, not just the material culture that Wallace (1955) proposed. The combination of these additional parameters to designate cultural-historical timespans are discussed below.

Early Holocene (11,600–7,600 BP)

Traditional models of the prehistory of California hypothesize that its first inhabitants were the big game hunting Paleoindians who lived at the close of the last Ice Age (~11,000 years BP). As the environment warmed and dried, large Ice Age fauna died out, requiring adaption by groups to survive. The coastal tool manifestation of Paleoindian people is the San Dieguito Complex and within a lifeway known as the Paleocoastal Tradition (PCT). Along the coast, rising sea levels created bays and estuaries. Following initial settlement along the coast, groups adopted marine subsistence, including fish and shellfish. These shell middens contain flaked cobble tools, metates, manos, discoids, and flexed burials and allowed for a semi sedentary lifestyle (Byrd and Raab 2007). Eventually, shellfish became the primary source of food, while plant gathering, hunting and fishing were less important. It has been argued that the PCT reflected a coastal adaptation of a Western Pluvial Lakes Tradition as seen in the western Great Basin and the inland deserts of California (Davis, Brott, and Weide 1969). PCT sites are located along bays and estuaries. Subsistence patterns indicate the eating of mollusks, sea mammals, sea birds, and fish in addition to land plants and animals. The argument for a PCT has gained momentum. This is based on a vast amount of recent research that has been conducted along the California coast and the Channel Islands (Byrd and Raab 2007). A recent study dates habitation on San Miguel Island back to ~11,300 BP (Daisy Cave), while a site on San Clemente (Eel Point) shows that a PCT was entrenched at Eel Point in the early Holocene, with the hunting of seals, sea lions, and dolphins, as well as the gathering of shellfish.

Middle Holocene (7,600–3,650 BP)

The middle Holocene is a time of change and transition. As conditions continued to warm and dry, ancient inhabitants practiced a mixed food procurement strategy with emphasis of shellfish and hard seeds. Fishing and the hunting of smaller animals played a less important role in day-to-day activity. This shift in subsistence is what Wallace (1955) named the Milling Stone Horizon and this name has continued among

archaeologists working on the coastal province of Southern California. Large habitations are seen in the inland areas and coastal occupation had considerable variability. Trade networks are postulated by researchers that have dated Olivella grooved rectangle shell beads as far north as central Oregon dating to 4,900-3,500 BP (Byrd and Raab 2007). Characteristics of the middle Holocene sites include ground stone artifacts (manos and metates) used for processing plant material and shellfish, flexed burial beneath rock or milling stone cairns, flaked core or cobble tools, dart points, cogstones, discoidals, and crescentics.

Late Holocene (3,650–233 BP)

Characteristics of the late Holocene include the introduction of the bow and arrow, mortar and pestle, use of ceramics, and a change to more complex and elaborate mortuary behaviors. Technologies associated with marine resource exploitation proliferated and diversified. The climate fluctuated with periods of drought alternated with cooler and moister periods (Vellanoweth and Grenda 2002; Byrd and Raab 2007; Jones et al. 2004). This resulted in dynamic regional cultural patterns with considerable local variation. Byrd and Raab (2007) suggest that foragers in Southern California over-exploited high-ranked food, such as shellfish, fish, marine and land mammals, and plant remains. This led to resource depression, causing people to forage for more costly but abundant resources. Coastal regions practiced seasonal round settlement strategies but these shifted toward permanent settlement during this period. Throughout this period, economic and social diversity flourished and became increasingly complex and populations continued to grow.

3.2.2 Ethnographic Setting

The APE is located within territory ethnographically occupied by the Gabrielino-Kizh with the Juaneño Acjachemen located to the south.

Gabrielino/Kizh

The name “Gabrielino” was given by the Spanish to the Indians that lived within the boundaries of the Mission San Gabriel Arcángel. The Gabrieleño inhabited the entire Los Angeles basin, including most of Orange County. Villages had 50-100 people. Each community included one or more patrilineal extended families or lineal kinship groups (clans) (Kroeber 1976; Bean and Smith 1978; McCawley 1996). Each village was united under the leadership of a chief who inherited the position from his father. The chief was the leader of the religious and secular life of the community and served as chief administrator, fiscal officer, war leader, legal arbitrator, and religious leader (Harrington 1942; Bean and Smith 1978). The chief had an assistant and an advisory council that assisted in important decisions and rituals.

The Gabrieleño territory included all of the Los Angeles Basin, parts of the Santa Ana and Santa Monica Mountains, along the coast from Aliso Creek by Rancho Santa Margarita in the south to Topanga Canyon in the north, and the Southern Channel Islands of San Clemente, San Nicolas, and Santa Catalina Islands. The Gabrieleño spoke a dialect of the Cupan group of the Takic language family. This language was part of the larger Uto-Aztecan language stock which migrated west from the Great Basin. The Gabrieleño shared this language with their neighboring groups (Cahuilla, Juaneño, Luiseño, and Serrano) to the north, south, and east (Bean and Smith 1978).

The Gabrielino lived in autonomous villages. Each village had access to hunting, collecting, and fishing areas (Bean and Smith 1978). Villages were typically located in or near protected coves, canyons, or foothills and a source of water. Acorns and shellfish were the most important food for the Gabrielino, although the types and quantity of different foods varied by season and locale. Other important sources of food were grass and many other seed types, deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, quail, doves, ducks and other fowl, fish, and marine mammals. Typically, women gathered, and men hunted, although work tasks often overlapped. (Bean and Smith 1978).

Juaneño Acjachemen

The Acjachemen (Juaneño) spoke a language that is part of the Takic language family. Their traditional cultural territory is an area that stretches from coastal Long Beach to the north to Camp Pendleton to the south, and includes all of Orange County as well as parts of western Riverside County. In prehistory, the Juaneño had a patrilineal society and lived in groups with other relatives. These groups had established claims to places including the sites of their villages and resource areas. The drainages of San Juan Creek, Trabuco Creek, and San Mateo Creek all contained villages (O’Neil and Evans 1980). Marriages were usually arranged from outside villages, establishing a social network of related peoples in the region. There was a well-developed political system including a hereditary chief. Religion was an important aspect of their society. Religious ceremonies included rites of passage at puberty and mourning rituals (Kroeber 1976). The Chinigchinich religious practices were also significant to Juaneño culture and spirituality (Boscana 1978).

Houses were typically conical in shape and thatched with locally available plant materials. Work areas were often shaded by rectangular brush-covered roofs. Each village had a ceremonial structure in the center enclosed by a circular fence where religious activities were performed (Bean and Shipek 1978). Women are known to have been the primary gatherers of plant foods, but also gathered shellfish and trapped small game animals. Men hunted large game, most small game, fished, and assisted with plant food gathering, especially of acorns. Adults were actively involved in making tools including nets, arrows, bows, traps, food preparation items, pottery and ornaments. Tribal elders had important political and religious responsibilities and educated younger members (Bean and Shipek 1978).

3.2.3 Historic Setting

Regional History

The first Spanish expedition traveled through Orange County in 1769 led by Don Gaspar de Portolá. Two years later, Father Junípero Serra founded Mission San Gabriel in what is now Los Angeles County. Mission San Juan Capistrano was founded on November 1, 1776. These two missions laid claim to much of what is now Orange County, grazing cattle, horses, and sheep until the 1830s. In 1784, Manuel Nieto was granted a grazing permit and allowed to occupy the land between what is today northern Orange County and the southern region of Los Angeles County. Soon after, the Spanish government also permitted Juan Pablo Grijalva to occupy lands in the region. Nieto and Grijalva and their descendants operated cattle ranches on these lands after Mexico broke away from Spain in 1824 (Orange County Historical Society n.d.). In the aftermath of the Mexican American war, the United States took control over the region and made California a state in 1850. The Gold Rush of 1849 brought tens of thousands of new settlers to California. This gave the rancheros a new market for their cattle, which were sold as beef to feed the

miners. The local economy soared. But a series of droughts, floods, and diseases—along with the cost of defending the ownership of their lands in the American courts—eventually drove many of the rancheros to ruin. Some of the old ranchos were sold to American owners. With cotton production disrupted by the Civil War, sheep ranching began replacing cattle. Other ranchos were broken up and sold off in pieces to settlers and developers (Orange County Historical Society n.d.).

Silverado-Modjeska

Silverado Canyon was first known as Canon de la Madera (Timber Canyon). In 1860, William Wolfskill bought the Rancho Lomas de Santiago at the entrance to Silverado Canyon. He became a leading horticulturalist and developed California's first orange grove. One of the canyon's earliest landowners and residents was Francisco Soto, who built an adobe house there in the 1850s or 1860s. In 1876, Sam and Betty Shrewsbury moved to the canyon where they built a lime kiln, raised bees, and grew fruit trees. Sam Shrewsbury also served as a justice of the peace. The Shrewsburys moved to Silverado from Modjeska Canyon where they sold some of their property to Madame Helena Modjeska (Orange County Register 2007). In 1877, silver was discovered in the canyon; the town of Silverado was founded the next year. The richest of the silver mines was discovered by Jonathon D. Dunlap, a deputy U.S. marshal who pursued a criminal into the canyon (Hallan-Gibson 1986). His Blue Light Mine operated longer than any other Silverado mine. Silverado was largely abandoned when the silver boom ended ten years later (Orange County Register 2007). During the 1920s and 1930s, Silverado Canyon experienced an influx of people from Long Beach who sought seasonal escape from the coastal fog. In 1969, the canyon suffered flooding and mudslides. Homes and bridges washed away and six lives were lost when the Silverado fire station was hit by a mudslide.

Modjeska Canyon, once considered part of Santiago Canyon, is named for Madame Helena Modjeska (1840-1909), a Polish actress and lead of the American stage in the late nineteenth and early twentieth centuries. Modjeska had a home built in the canyon and moved into it in 1888 (now located 0.7 miles to the east of the APE). She called her home "Arden," from the forest in Shakespeare's play *As You Like It*, and used it as a retreat from her acting tours (Hallan-Gibson 1986).

About the time that Modjeska bought her property, the U.S. government conducted a survey of the surrounding forest. In 1893, a presidential proclamation established the Trabuco Reserve, the first step towards creating a national forest. In 1908, President Theodore Roosevelt named 122,163 acres in honor of former President Grover Cleveland. Today the 567,000-acre Cleveland National Forest extends from within 5 miles of the Mexican border north for 135 miles. Its western edge zigzags, running from 6 to 60 miles inland from the Pacific coast (Silverado Modjeska Recreation and Park District 2023).

By 1900, except for the mining district, only five homes remained in Silverado Canyon. In 1901, Joseph Holtz purchased a 112-acre ranch just past the remnants of the Carbondale mine. A year later, the Orange School District paid \$50 for one acre and built the canyon's first school. In 1904, Holtz constructed his home. Over the next 80 years, his family grew wheat, barley, alfalfa, English walnuts, avocados, and a variety of fruit. At one time, they had 160 bee colonies, ten acres of barley, three of wheat, three of corn, ten of alfalfa and one of fruit trees. They also had a dairy and creamery and raised turkeys and chickens (Silverado Modjeska Recreation and Park District 2023).

From 1920 until the mid-1950s, silver mining resumed at the Blue Light Mine at the end of Silverado Canyon. The Blue Light Mine (later known as the Silverado Mine Company) produced \$47,000 worth of zinc, lead, gold and silver from 1942 to 1946. Until recently, mill relics remained near the National Forest gate (Silverado Modjeska Recreation and Park District 2023).

In the 1920s and 30s, Los Angeles residents discovered hot sulphur springs in Silverado Canyon. Advertisements recommended the dry, moderate Mediterranean climate for relief of asthma, respiratory infections, and arthritis. Families with sick children built cabins in the area. In 1929, the log cabin housing the Silverado Post Office also became home to the first local public library. In 1931, a dam to supply drinking water to nearby towns created Irvine Lake near Silverado's entrance. Over the years, the number of houses slowly grew. In February 1969, 18 inches of rain fell in 72 hours and Silverado, Harding, Modjeska and Santiago Creeks flooded. Roads washed out and houses disappeared. Eleven people died when a mudslide fell on the Silverado volunteer fire station sheltering flood refugees. Afterwards, the USACE helped re-channel the creek and build bridges to better withstand flooding (Orange County Register 2007).

4.0 CULTURAL RESOURCES IDENTIFICATION EFFORTS

This section includes the methods and results of the South Central Coastal Information Center (SCCIC) records search, literature review, interested parties’ consultation, field survey, and sensitivity analysis.

4.1 SCCIC RECORDS SEARCH

At Michael Baker International's request, staff at the SCCIC at California State University, Fullerton, conducted a records search of the California Historical Resources Information System on May 23, 2022 (File No.: 23921.10006). The SCCIC, of the California Historical Resources Information System, California State University, Fullerton, an affiliate of the California Office of Historic Preservation (OHP), is the official state repository of cultural resource records and reports for Orange County. The records search included a review of recorded cultural resources and previous studies within the APE and a half-mile radius of the APE. The SCCIC records search results are included in **Appendix B**. As part of the records search, the following federal and State of California inventories were reviewed:

- National Register of Historic Places (NPS 2022)
- Archaeological Resources Directory for Orange County (OHP 2023a). The directory includes the OHP determinations of eligibility for archaeological resources in Orange County.
- Built Environment Resources Directory (BERD) for Orange County (OHP 2023b). The directory includes resources reviewed for eligibility for the National Register and the California Historical Landmarks programs through federal and State environmental compliance laws, and resources nominated under federal and state registration programs, including the National Register, California Register, California Historical Landmarks, and California Points of Historical Interest.
- California Historical Resources (OHP 2023c).

4.1.1 Previous Studies

The records search results indicated that 55 cultural resources studies have been conducted within a half-mile radius of the APE, and 15 of those studies (OR-00057, OR-00110, OR-00286, OR-00503, OR-00580, OR-00581, OR-00648, OR-00654, OR-00769, OR-01026, OR-01439, OR-01441, OR-03600, OR-03989, OR-04029) address portions of the APE (**Table 1**). However, no cultural resources were found within the APE as a result of the previous studies.

TABLE 1. PREVIOUS STUDIES WITHIN APE AND A HALF-MILE SEARCH RADIUS

Report Number	Author	Date	Title/Description
OR-00057	Desautels, Roger J.	1976	Archaeological Survey Report on Parcel 1 of R.s.t. 7452 Book 76 - Page 50 Parcel Maps- County of Orange
OR-00110	Desautels, Roger J.	1978	Archaeological Survey Report on a 100 Acre Parcel of Land Located in the Modjeska Canyon Area of the County of Orange
OR-00169	Desautels, Roger J.	1977	Archaeological Survey Report on a 4.9 Acre Parcel of Land Located in the Modjeska Canyon Area of the County of Orange, California

Modjeska Grade Road Improvements Project _____ Phase I Cultural Resources Assessment

Report Number	Author	Date	Title/Description
OR-00238	Howard, Jerry B.	1977	A Reevaluation of the Cultural Resources of the Glen Ranch
OR-00262	Desautels, Roger J.	1978	Archaeological Survey Report on a 4.3 Acre Parcel of Land on Modjeska Canyon Road in the Modjeska Canyon Area, County of Orange
OR-00286	Bean, Lowell	1979	Cultural Resources and the High Voltage Transmission Line From San Onofre to Santiago Substation and Black Star Canyon
OR-00302		1978	A Preliminary Archaeological Overview: the Santiago County Water District Sewage Master Plan
OR-00310	Desautels, Roger J.	1978	Archaeological Survey Report on Tract No. 10186 Located in the Modjeska Canyon Area of the County of Orange
OR-00383	Van Horn, David M.	1977	Archaeological Survey and Report on Fifty-seven Acres of Undeveloped Land in Modjeska Canyon, Orange County, Cal.
OR-00387	Unknown	1977	Archaeological Survey Report on a 120 Acre Parcel of Land Located Along Santiago Canyon Rd. 2 Miles North of Cook's Corner
OR-00393	Desautels, Roger J.	1979	Archaeological Survey Report on a 4 Acre Parcel of Land in the Modjeska Canyon Area of the County of Orange, California
OR-00395	Desautels, Roger J.	1979	Archaeological Survey Report on Tentative Parcel Map 1485, a 8.6 Acre Parcel Located in the Modjeska Canyon in the County of Orange, California
OR-00446	Lange Walter, Becky E. and Lee A. DiGregorio	1979	Archaeological Reconnaissance Report Silverado Canyon Day-use Facility Assessment
OR-00501	Desautels, Roger J.	1980	Archaeological Survey Report on Parcel C, Blk. A - Book 866 P. 01 - an 8.9 Acre Parcel of Land Located in the Modjeska Canyon Area of the County of Orange
OR-00503	Desautels, Roger J.	1980	Archaeological/Paleontological Survey Report on 5.7+ Acres Located in the Modjeska Canyon Area of the County of Orange
OR-00504	Desautels, Roger J.	1980	Archaeological/Paleontological Survey Report on a 9+ Acre Parcel of Land Located in the Modjeska Canyon Area of the County of Orange
OR-00505	Desautels, Roger J.	1980	Archaeological/Paleontological Survey Report on a 45+ Acre Parcel of Land Located in the Modjeska Canyon Area of the County of Orange
OR-00515	Schilz, Allan J. and Breece, William	1980	Archaeological Investigations and Management Recommendations for the Glenn Ranch
OR-00545	Munoz, Jeanne and Theodore G. Cooley	1977	Glenn Ranch: Archaeological Resources and Their Recommended Management
OR-00546	Cottrell, Marie G.	1978	Records Search for 19+ Acres of the Glen Ranch
OR-00571	Ahlering, Michael L.	1973	Report of Findings of a Scientific Resources Survey and Study: Conducted on a Portion of the Whiting Ranch, Orange County, California
OR-00580	Anonymous	1977	The Aliso Creek Watershed, Orange County, California a Proposal for Creating an Archaeological District for the National Register of Historic Places and a Suggested Research and Study Design

Modjeska Grade Road Improvements Project _____ Phase I Cultural Resources Assessment

Report Number	Author	Date	Title/Description
OR-00581	McCoy, Lesley C. and Kirkish, Alex N.	1982	Cultural Resources Data Recovery Program for the 230kv Transmission Line Rights-of-way From San Onofre Nuclear Generating Station to Black Star Canyon and Santiago Substation and to Encina and Mission Valley Substations
OR-00591	Cooley, Theodore G. and Cottrell, Marie G.	1980	Archaeological Assessment of the Whiting Ranch
OR-00631	Bissell, Ronald M.	1982	Cultural Resources Survey, Country Home Road Properties, Santiago Canyon Road, Orange County, California
OR-00648	Breece, Bill and Beth Padon	1982	Cultural Resource Survey: Archaeological Resources: Foothill Transportation Corridor, Phase II
OR-00654	Cottrell, Marie G.	1983	Archaeological Resources Assessment for a 3+ Acre Parcel Located Along Modjeska Grade Road in Orange County: TPM 82-153
OR-00656	Bissell, Ronald M. and Cameron, Constance	1983	Cultural Resources Survey, Country Home Road Properties (Shefflette/Carisoza/Buckley, Lyon, Watson and 4s Ranch Parcels, Santiago and Live Oak Canyon Roads, Orange County, California
OR-00766	Bissell, Ronald M.	1985	Archaeological Survey of the Peterson Property, Four Acres in Santiago Canyon, Orange County, California
OR-00769	Tadlock, Jean	1985	Archaeological Survey Tentative Tract 12365, County of Orange, California.
OR-00899	Anonymous	1987	Draft Environmental Impact Report No. 481 Foothill Ranch (formerly Whiting Ranch) Planned Community Area Plan, General Plan Amendment and Zone Change
OR-00943	Bissell, Ronald M.	1988	Cultural Resources Reconnaissance of Tentative 11184, Modjeska Canyon, Orange County, California
OR-01007	Bissell, Ronald M.	1989	Cultural Resources Literature Review for the Foothill/trabuco Specific Plan Property, Southeastern Orange County, California
OR-01026	Mason, Roger D.	1990	Cultural Resources Survey Report Santiago Canyon Road Alignment Study Orange County, California
OR-01042	Brown, Joan C.	1990	Cultural Resources Reconnaissance of a 53.2 Acre Portion of the Panter Ranch Santiago Canyon, Orange County, California
OR-01188	Mason, Roger D.	1990	Cultural Resources Records Search Santiago Canyon Road Alignment Study Addendum Orange County, California
OR-01354	Munoz, Jeanne	1980	History and Historical Resources of the Whiting Ranch
OR-01378	Becker, Kenneth M.	1994	Cultural Resources Reconnaissance of the Proposed Irvine Ranch Water District Zone 9 Reservoir and Transmission Main, Orange County, California.
OR-01439	McCoy, Lesley C. and Phillips, Roxana	1980	National Register Assessment Program of Cultural Resources of the 230 Kv Transmission Line Rights-of-way From San Onofre Nuclear Generating Station to Black Star Canyon and Santiago Substation and to Encina and Mission Valley Substation

Modjeska Grade Road Improvements Project _____ **Phase I Cultural Resources Assessment**

Report Number	Author	Date	Title/Description
OR-01441	Leonard, Nelson N. III	1976	Archaeological Report on the Silverado-Modjeska Planning Area Orange County California P.o. No. X 49525
OR-01536	Brown, Joan C.	1995	Archaeological Reconnaissance for the Whiting Zone 9 Reservoir and Transmission Main, Orange County, California
OR-01545	Brown, Joan C.	1997	Archaeological Monitoring of a Portion of the Whiting Zone 9 Reservoir and Transmission Main, Orange County
OR-01996	Brown, Joan C.	1999	Cultural Resources Literature and Records Review for the Foothill/trabuco Project (Revised)
OR-02056	Brown, Joan C. and David Ferraro	1999	Cultural Resource Reconnaissance for the Saddle Creek/saddle Crest Project
OR-02522	Wallock, Nicole	2001	Upper Aliso Creek Archaeological District
OR-02942	Kyle, Carolyn E.	2004	Cultural Resource Assessment for AT&T Wireless Facility 950-013-514b Located at 17461 Canyon Heights Drive City of Silverado Orange County, California
OR-03064	McLean, Deborah K.	2005	Cultural Resource Records Search Results for the Property at 17341 Santiago Canyon Road, Silverado, Orange County, California
OR-03600	Garcia, Kyle H. and Marcy Rockman	2007	Results of Archaeological Survey and Monitoring for Southern California Edison's Pole Replacements After Santiago Fire Along Santiago Canyon Road, Modjeska Canyon Road, and Hicks Canyon Road; Orange County, California; Jo:6259-0468
OR-03834	Tang, Bai and Michael Hogan	2009	Historical/Archaeological Resources Survey Report - Assessor's Parcel Numbers 866-051-01 and -02, Modjeska Canyon Area, Orange County, California
OR-03989	Deering, Mark and Mason, Roger D.	2011	Cultural Resources Documentation and Monitoring of Southern California Edison Access Roads During Maintenance by the Orange County Fire Authority, 2010 Orange County, California
OR-04029	Deering, Mark and Roger Mason	2010	Cultural Resources Monitoring of Southern California Edison Access Roads Maintained by Orange County Fire Authority, Orange County, California (JPA E6088-0031; I.O. 305869)
OR-04254	Bray, Madeleine	2012	Saddle Crest Homes, Phase I Cultural Resources Study
OR-04272	Maxon, Pat	2009	Cultural Resources Study for the Modjeska Canyon Road Storm Drainage Repair Projects Sites 6 and 8, Orange County, California
OR-04254	Bray, Madeleine	2012	Saddle Crest Homes, Phase I Cultural Resources Study
OR-04272	Maxon, Pat	2009	Cultural Resources Study for the Modjeska Canyon Road Storm Drainage Repair Projects Sites 6 and 8, Orange County, California

4.1.2 Previously Identified Resources

The records search results indicated that a total of 18 previously recorded cultural resources have been recorded within a half-mile radius of the APE (**Table 2**). No resources were identified within the APE.

TABLE 2. RESOURCES PREVIOUSLY RECORDED WITHIN A HALF-MILE RADIUS OF THE APE

Primary No.	Resource Type	Description	Evaluation Status
P-30-000438/CA-ORA-000438	Prehistoric Site	Artifact scatter consisting of manos, metate fragments, hammerstones, choppers, scrapers, cores and debitage	Not evaluated
P-30-000629/CA-ORA-000629	Prehistoric Site	Artifact scatter consisting of lithic debitage	Not evaluated
P-30-000704/CA-ORA-000704	Prehistoric Site	Artifact scatter consisting of a bifacial granite handstone, a quartzite scraper plane, a unifacial chopper with denticulate edge modification, an oxidized basalt lithic, a large angular flake chopper	Not evaluated
P-30-000959/CA-ORA-000959	Prehistoric Site	Artifact scatter near a cobble outcrop with two scrapers, one hammerstone and numerous quartzite flakes	Not evaluated
P-30-000960/CA-ORA-000960	Prehistoric Site	Lithic scatter with quartzite flakes	Not evaluated
P-30-001008/CA-ORA-001008	Prehistoric Site	A dense artifact scatter consisting of ground and chipped stone tools (chert, granite, quartzite, milky quartz, and other unidentified material types). There is one complete metate, one metate fragment, cores, scrapers, and debitage	Not evaluated
P-30-001250/CA-ORA-001250	Prehistoric Site	A sparse lithic scatter consisting of three choppers, a hammerstone, a scraper, a core, and fire affected rock; material types are quartzite and felsite	Not evaluated
P-30-001521/CA-ORA-001521H	Historic Site	Shoepe Clay Mine indicated by features of a mining step, an open pit, and roadways	Not evaluated
P-30-001522/CA-ORA-001522	Prehistoric Site	A dispersed lithic scatter with debitage, a mono, cores, a unifacial unshaped mono; chert, quartzite and metavolcanic material types	Not evaluated
P-30-001523/CA-ORA-001523H	Historic Site	Serrano Clay Mine indicated by a trench and associated roads, artifacts include a historic glass bottle base dating to 1932-1944, and an axle attached to a leaf spring	Not evaluated
P-30-001728	Prehistoric District	Upper Aliso Creek Archaeological District consisting of 33 prehistoric sites	Not evaluated
P-30-100306	Prehistoric Isolate	Isolated mano	Not evaluated
P-30-100307	Prehistoric Isolate	Isolated metate fragment	Not evaluated
P-30-100308	Historic Site	Historic building foundation	Not evaluated
P-30-100476	Prehistoric, isolate	Isolated igneous lithic flake	Not evaluated
P-30-100491	Prehistoric Isolate	Isolated granitic mono with one utilized surface	Not evaluated
P-30-100495	Prehistoric Isolate	One igneous flake tool and on chalcedony flake	Not evaluated

Primary No.	Resource Type	Description	Evaluation Status
P-30-176629	Historic Building	Watson Ranch. Seventh Day Adventist Church property	6Z: Found ineligible for NR, CR or Local designation through survey evaluation.

4.2 INTERESTED PARTIES CONSULTATION

4.2.1 Native American Coordination

The California NAHC maintains a confidential Sacred Lands File, which contains sites of traditional, cultural, or religious value to the Native American community. The NAHC was contacted on May 24, 2022, to request a search of the Sacred Lands File. The NAHC responded to the request in a letter dated June 27, 2022. The results of the Sacred Lands File search conducted by the NAHC indicated that no Native American cultural resources are known to be located within the APE. The response and contact list are included in **Appendix C**. No Native American outreach was completed by Michael Baker International. The County is conducting outreach and consultation.

4.2.2 Historical Society Consultation

On July 15, 2022, Michael Baker International sent a letter describing the Project, with maps depicting the APE, to the Orange County Historical Society based in Santa Ana, California. The letter requested any information about, or concerns regarding, historical resources that may be impacted by the Project **Appendix D**. No response to the consultation letter has been received to date.

4.3 HISTORICAL MAPS, AERIAL PHOTOGRAPHS, AND LITERATURE

Michael Baker International reviewed maps and environmental information about the APE and its vicinity. APE-specific analysis is located below. The literature reviewed here includes:

4.3.1 Historical Maps

- Township 5 South, Range 7 West, San Bernardino Meridian Plat maps (BLM 1875, 1881, 1895)
- Southern California Sheet No. 1, Calif.: 1:125,000 scale topographic quadrangle (USGS 1901)
- Corona, Calif.: 1:125,000 scale topographic quadrangle (USGS 1902)
- Santiago Peak, Calif.: 1:62,500 scale topographic quadrangle (USGS 1942)
- El Toro, Calif.: 1:24,000 scale topographic quadrangle (USGS 1949)
- El Toro, Calif.: 1:24,000 scale topographic quadrangle (USGS 1950)
- El Toro, Calif.: 1:24,000 scale topographic quadrangle (USGS 1958)
- El Toro, Calif.: 1:24,000 scale topographic quadrangle (USGS 1968)
- El Toro, Calif.: 1:24,000 scale topographic quadrangle (USGS 1978)
- Anaheim, Calif.: 1:24,000 topographic map (USGS 1972)

4.3.2 Historical Aerial Images

- "Flight C_1590, Frame 237," single-frame aerial photograph (UCSB 1931)
- "Flight AXK_1953, Frame 68-30," single-frame aerial photograph (UCSB 1953)

- Single-frame aerial photographs of area and vicinity (NETR 1967, 1988, 1993)

4.3.3 Literature

- “County Park Road Open Next Month” (*La Habra Star* 1922a)
- “Aliso Grade Soon Open for Travel” (*La Habra Star* 1922b)

Results

Historical topographic maps and aerial photographs were examined to provide historical information about the APE and help assess the historic occupation and development of the vicinity.

The APE is first depicted in area maps beginning in 1875 within the Candida de Santiago Creek undeveloped section 29, owned by the Shrewsburys. To the southwest is Rancho Canada de los Alisos and to the west is Rancho Lomas de Santiago. From 1875 through 1902, the APE and the land east of Santiago Creek within section 29 is undeveloped. The owner is identified as “Shrewsbury’s” (BLM 1875, 1881, 1895; USGS 1901, 1902). By the early 1930s, Modjeska Canyon Road is depicted as a dirt road with agricultural crops on the north side of Santiago Creek (UCSB 1931).

Modjeska Grade Road extends southward from its northern terminus at Modjeska Canyon Road, through the APE, to its southern terminus at what is now East Santiago Canyon Road (County Road S18). The section of East Santiago Canyon Road south of this junction was also historically part of Modjeska Grade Road, which extended southward as far as the community of El Toro (present-day Lake Forest). Contemporary newspapers from the early 1920s referred to the roadway as the “Modjeska Grade,” noting that from El Toro the roadway led to the residence and retreat of the notable Shakespearean actress Helena Modjeska. Although Helena had sold the house in 1906, and the new owners transformed it into a country club and inn, the property was still commonly referred to as the Modjeska home (*La Habra Star* 1922b: 4; *Inside The Outdoors* n.d.: 5-6). Visitors to the former Modjeska property found the roadway’s severe grade challenging at best, with some segments reaching grades of 35 percent. As automobile traffic on Modjeska Grade Road continued to increase, the Orange County Highway Department announced on June 26, 1922, that the road would finally be regraded to reduce the grade on some of the more severe climbs by as much as 8–9 percent (*La Habra Star* 1922a: 1).

Over the course of the next several decades, the segment of Modjeska Grade Road and the adjacent lands within the APE did not undergo any substantial changes. The 1947 aerial shows the segment of Modjeska Road within the APE as unpaved and the adjacent properties undeveloped, except for a few storage structures on APN 866-031-24 (UCSB 1947). The 1953 aerial still shows the roadway as unpaved and the adjacent parcels undeveloped (UCSB 1953). By 1967, aerial photographs show that East Santiago Canyon Road had been constructed to the west of Modjeska Grade Road and that Modjeska Grade Road eventually connected to East Santiago Canyon Road near APN 606-011-04 (NETR 1967). By 1988, aerial photographs show a few more residences constructed along Modjeska Grade Road, including on APNs 105-221-10, 866-021-23, 866-031-24, 866-031-06, 105-222-67 (NETR 1988). As of mid-2021, aerial photographs indicate that there have been no changes to the alignment of Modjeska Grade Road. Residential development remains clustered at the northern end of Modjeska Grade Road near Markuson Road, while the southern half of the APE remains undeveloped.

4.4 CULTURAL RESOURCES SURVEY

4.4.1 Survey Methods

On October 20, 2022, Michael Baker International Archaeologists Marcel Young, BA, and Alex Navarro, BA, completed a field survey of the APE. The purpose of the archaeological survey was to assess the ground conditions and the overall degree of previous ground disturbance, and to identify intact cultural materials and features, if present on the ground surface within the APE. Survey methods involved a combination of intensive pedestrian and reconnaissance coverage of the 1.3-mile segment of Modjeska Grade Road.

A daily summary form was completed at the end of the survey to convey the conditions of the survey area and summarize findings. This form included a description of vegetation cover (including contextual photographs), as well as estimates of ground surface visibility, rated as poor (0-25 percent), fair (26-50 percent), well (51-75 percent), or excellent (76-100 percent), soils, exposure/slope, topography, landscape conditions, and identified cultural resources, if any.

4.4.2 Survey Results

The entire alignment of the road was surveyed with the exception to portions of the APE along rough steep terrain and privately owned parcels with no consent of right of entry (**refer to survey coverage map Appendix E**). The archaeologists inspected the road shoulders, road cut slopes, and all accessible portions of the APE for the presence of cultural materials, features, or cultural deposits. Ground visibility was poor due to dense vegetation along road shoulders. The ground was also obscured by pavement and modern landscaping in residential portions along the road. Geological formations were visible in the slopes along the road grade. Disturbances noted during the survey included previous road construction and maintenance, utility power lines, landscaping and improvements associated with residences' paved roads, and entrances to private properties located along the road. Photographs 1-5 exhibit an overview of the APE.



Photograph 1. Overview of the southern end of Modjeska Grade Road.
View to northwest, October 2022



Photograph 2. Overview of the typical terrain alongside Modjeska Grade Road.
View to northwest, October 2022



Photograph 3. Outcrop geological formations and erosion along Modjeska Grade Road.
View to southwest, October 2022



Photograph 4. Overview of development along Modjeska Grade Road.
View to the south, October 2022



Photograph 5. Overview of the northern end of the APE at Santiago Creek.
View west, October 2022

4.5 ARCHAEOLOGICAL SENSITIVITY ANALYSIS

The SCCIC records search identified no previously recorded prehistoric or historical cultural resources within or immediately adjacent to the APE. No isolated cultural resources, features, or prehistoric or historical archaeological sites were identified during the archaeological field survey of the accessible portions of the APE. However, prehistoric sites and isolated artifacts have been previously recorded within the half-mile search radius, and the upper Aliso Creek prehistoric district is located approximately 0.5 miles southwest of the southern portion of the APE. Additionally, the APE is located within territory ethnographically occupied by the Gabrielino/Kizh Nation and Juaneño Acjachemen Nation. The NAHC returned negative results for the presence of known cultural resources within the APE.

The map review indicates that Modjeska Grade Road has been subject to grading and regrading construction in historical and modern times. According to archival research (La Habra Star 1922b: 4; Inside The Outdoors n.d.: 5-6) the road was first regraded in 1922 to reduce the grade on some of the more severe climbs by as much as 8 to 9 percent.

According to the geotechnical report for the APE (Diaz Yourman & Associates 2023), Modjeska Grade Road was formed via series of cuts and fills along the hill sides, where the fills range from 4 to 7 feet thick derived from the topsoil in the adjacent area. According to the geotechnical study for the APE, surface conditions along the slopes appeared to consist of 2 to 4 feet of surficial materials (e.g., soil/colluvium and alluvium) underlain by formational units.

In addition, an existing drainage system can be seen along the entire road alignment. The cut and fills used to form the road resulted in slopes that ascend from one shoulder on the roadway and descend from the opposite shoulder.

While topsoil in the APE comprises 2 to 4 feet of surficial Holocene-age colluvium and alluvium deposits, the entire road alignment has been graded down to the sandstones and conglomerates outcrops dating to the very old Eocene, Paleocene, and the Late Cretaceous epoch. It is anticipated that soil deposition within the APE is low due to the location on steep slopes, and within older sediment deposits that have no potential for yielding significant buried archaeological resources.

The APE has been subject to development, including roadway improvements and improvements associated with residences along the road and entrances to private parcels. The majority of the proposed Project improvements will take place within and underneath the existing roadway within the APE and areas of previously disturbed ground.

Given the lack of known prehistoric sites within the APE, the developed and disturbed nature of the road alignment and areas immediately adjacent to it, and the fact that much of the APE lies within very old formations, the sensitivity for potential undocumented prehistoric and historic period archaeological sites is considered low. Nonetheless, because of the limited access to some of the privately owned portions of the APE, there is potential to encounter unknown cultural resources during grubbing, clearing, and/or excavation in previously undisturbed areas of the APE.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The SCCIC records search, historical society outreach, NAHC Sacred Lands File search, map, photograph, and literature review, and archaeological field survey identified no historic properties or historical resources within the APE. Buried site sensitivity is low due to lack of known resources within the APE, existing ground disturbance associated with roadway development, and presence of very old formations. A finding of no historic properties affected with conditions under Section 106 and a finding of less than significant impact with mitigation is appropriate for the Project.

There is potential to encounter unknown cultural resources during grubbing, clearing, and/or excavation in previously undisturbed areas of the APE. Impacts to unknown cultural resources may be avoided or reduced to a less than significant level by implementing the following:

Cultural Awareness Training. A qualified archaeologist shall attend the pre-grading meeting with contractors to provide cultural resources sensitivity training for all construction personnel. The training shall describe the type of resources that may be identified, procedures to be followed during ground disturbance, and protocols that apply in the event that unanticipated resources are discovered. Only construction personnel who have received this training can conduct ground disturbing activities. The crew shall be cautioned not to collect artifacts, and directed to inform a construction supervisor and the on-site archaeological monitor in the event that cultural remains are discovered during the course of construction, including if a cultural resources monitor is not present. A qualified archaeologist is someone who either meets the Secretary of the Interior's Professional Qualification Standards for archaeology (48 Federal Register 44738) and is a Registered Professional Archaeologist or has a BA in archaeology or a closely related field and is a Registered Archaeologist.

Unanticipated Discovery. In the event that any cultural resources are encountered during earth-moving activities, it is recommended that all work within 50 feet be halted until a qualified archaeologist can evaluate the findings and make recommendations. Prehistoric materials can include flaked-stone tools (e.g., projectile points, knives, choppers) or obsidian, chert, or quartzite toolmaking debris; culturally darkened soil (i.e., midden soil often containing heat-affected rock, ash, and charcoal, shellfish remains, and cultural materials); and stone milling equipment (e.g., mortars, pestles, handstones). Historical materials might include wood, stone, or concrete footings, walls, and other structural remains; debris-filled wells or privies; and deposits of wood, metal, glass, ceramics, and other refuse. The archaeologist may evaluate the find in accordance with federal, State, and local guidelines, including those set forth in the California Public Resources Code Section 21083.2, to assess the significance of the find and identify avoidance or other measures as appropriate. If suspected prehistoric or historical archaeological deposits are discovered during construction, all work within the immediate area of the discovery shall be redirected and the find must be evaluated by a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983).

Human Remains. California Health and Safety Code Section 7050.5 states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably

suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC will identify a Native American most likely descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

6.0 PROFESSIONAL QUALIFICATIONS

This report was prepared by Michael Baker International Senior Archaeologist Kholood Abdo. Marcel Young and Alex Navarro conducted the field survey. Michael Baker International Cultural Resources Department Manager Margo Nayyar conducted quality assurance review.

Kholood Abdo, MA, RPA, has experience in prehistoric and historical archaeology and cultural resources management. She has written and contributed to scores of technical reports, including NEPA, NHPA, and CEQA compliance documents. She has supervised and managed all levels of archaeological fieldwork, including survey, testing/evaluation, and data recovery at sites throughout Southern and Central California and Arizona since 1999. Kholood oversees the processing, analysis, and curation of artifact collections from both prehistoric and historical sites. Her cultural material analysis experience includes flaked and ground stone lithics, glass, prehistoric and historic ceramic, and bead analysis. She writes, designs, and implements health and safety plans for specific projects. She regularly leads successful teams of archaeologists in laboratory and fieldwork.

Alex Navarro, BA, has worked as an archaeologist since 2011. She has participated in several phases of archaeological projects, including Phase I pedestrian surveys, Extended Phase I testing, Phase II testing, Phase III data recovery, construction monitoring, and laboratory analysis. She specializes in human and faunal osteological analysis, and has conducted archaeological surveys and excavations in Mexico and throughout California.

Marcel Young, BA, has worked in various capacities in cultural resource management since 2013. He is experienced in conducting Phase I pedestrian surveys, Extended Phase I testing, Phase II testing, Phase III data recovery, and construction monitoring. He commonly identifies and records prehistoric and historic-period archaeological sites throughout California. He contributes to cultural resources studies completed in compliance with Section 106 of the NHPA, NEPA, and CEQA.

Margo Nayyar, MA, is a senior architectural historian with 13 years of cultural management experience in California, Nevada, Arizona, Texas, Idaho, Alaska, New Mexico, and Mississippi. Her experience includes built environment surveys, evaluation of historic-era resources using guidelines outlined in the California and National Registers, and preparation of cultural resources technical studies pursuant to CEQA and NHPA Section 106, including identification studies, finding of effect documents, memorandum of agreements, programmatic agreements, and Historic American Buildings Survey/Historic American Engineering Record/Historic American Landscapes Survey mitigation documentation. She prepares cultural resources sections for CEQA environmental documents, including infill checklists, initial studies, and environmental impact reports, as well as NEPA environmental documents, including environmental impact statements and environmental assessments. She also specializes in municipal preservation planning, historic preservation ordinance updates, Native American consultation, and provision of Certified Local Government training to interested local governments. She develops Survey 123 and Esri Collector applications for large-scale historic resources surveys, and authors National Register nomination packets. Margo meets the Secretary of the Interior's Professional Qualification Standards for history and architectural history.

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Appendix A: APE Map Detail



 Area of Potential Effects

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

Michael Baker
INTERNATIONAL



0 500 1,000
Feet

Source: Esri, ArcGIS Online, 2021 Nearmap Imagery: Silverado, California

Area of Potential Effects

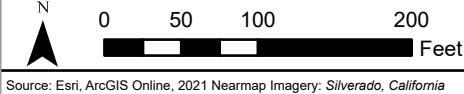
Figure 3



Area of Potential Effects
 Parcels

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

Area of Potential Effects

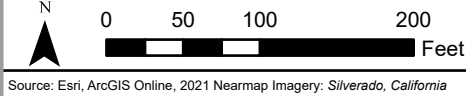






Area of Potential Effects
 Parcels

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

Area of Potential Effects



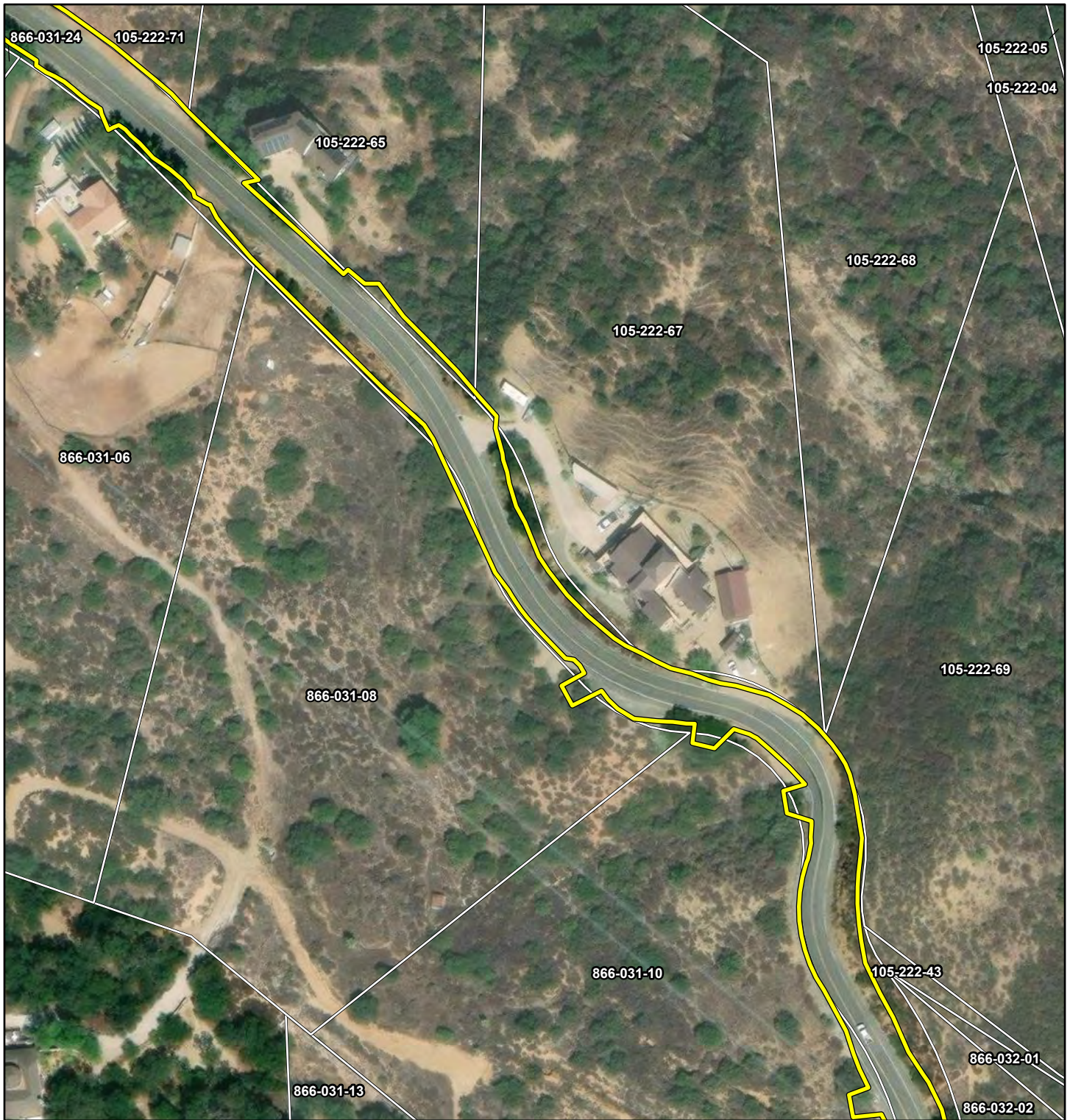


-  Area of Potential Effects
-  Parcels

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

Area of Potential Effects

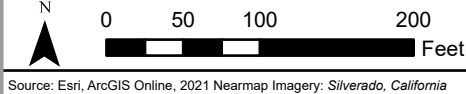






Area of Potential Effects
 Parcels

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

Area of Potential Effects

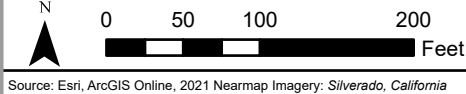




-  Area of Potential Effects
-  Parcels

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

Area of Potential Effects



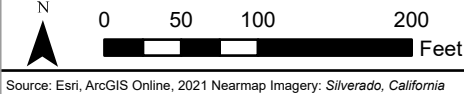


 Area of Potential Effects



 Parcels

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

Area of Potential Effects





-  Area of Potential Effects
-  Parcels

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

Area of Potential Effects



Appendix B: SCCIC Records Search Results

South Central Coastal Information Center

California State University, Fullerton
Department of Anthropology MH-426
800 North State College Boulevard
Fullerton, CA 92834-6846
657.278.5395 / FAX 657.278.5542

sccic@fullerton.edu

California Historical Resources Information System
Orange, Los Angeles, and Ventura Counties

8/4/2022

Records Search File No.: 23921.10006

Jacob Parsley
Michael Baker International
2729 Prospect Park Dr Suite 220
Rancho Cordova, CA 95670

Re: Record Search Results for Modjeska Grade Road-189853

The South Central Coastal Information Center received your records search request for the project area(s) referenced above, located on the El Toro and Santiago Peak, CA USGS 7.5' quadrangle(s). Due to the COVID-19 emergency, we have temporarily implemented new records search protocols. With the exception of some reports that have not yet been scanned, we are operationally digital for Los Angeles, Orange, and Ventura Counties. See attached document for your reference on what data is available in this format. The following reflects the results of the records search for the project area and a ½-mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: custom GIS maps shape files hand drawn maps

Resources within project area: 0	None
Resources within ½-mile radius: 18	SEE ATTACHED LIST
Reports within project area: 15	OR-00057, OR-00110, OR-00286, OR-00503, OR-00580, OR-00581, OR-00648, OR-00654, OR-00769, OR-01026, OR-01439, OR-01441, OR-03600, OR-03989, OR-04029
Reports within ½-mile radius: 38	SEE ATTACHED LIST

- Resource Database Printout (list):** enclosed not requested nothing listed
- Resource Database Printout (details):** enclosed not requested nothing listed
- Resource Digital Database (spreadsheet):** enclosed not requested nothing listed
- Report Database Printout (list):** enclosed not requested nothing listed
- Report Database Printout (details):** enclosed not requested nothing listed
- Report Digital Database (spreadsheet):** enclosed not requested nothing listed
- Resource Record Copies:** enclosed not requested nothing listed
- Report Copies:** enclosed not requested nothing listed

OHP Built Environment Resources Directory (BERD) 2019: available online; please go to https://ohp.parks.ca.gov/?page_id=30338

Archaeo Determinations of Eligibility 2012: enclosed not requested nothing listed

Los Angeles Historic-Cultural Monuments enclosed not requested nothing listed

Historical Maps: enclosed not requested nothing listed

Ethnographic Information: not available at SCCIC

Historical Literature: not available at SCCIC

GLO and/or Rancho Plat Maps: not available at SCCIC

Caltrans Bridge Survey: not available at SCCIC; please go to <http://www.dot.ca.gov/hq/structur/strmaint/historic.htm>

Shipwreck Inventory: not available at SCCIC; please go to http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp

Soil Survey Maps: (see below) not available at SCCIC; please go to <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the [California Historical Resources Information System](#),

Isabela Kott
Assistant Coordinator, GIS Program Specialist

Enclosures:

- (X) Emergency Protocols for LA, Orange, and Ventura County BULK Processing Standards – 2 pages
- (X) GIS Shapefiles – 71 shapes
- (X) Resource Database Printout (list) – 1 page
- (X) Resource Digital Database (spreadsheet) – 18 lines
- (X) Report Database Printout (list) – 7 pages
- (X) Report Digital Database (spreadsheet) – 53 lines
- (X) Resource Record Copies – (list) 115 pages
- (X) Report Copies – (project area only) 2502 pages
- (X) Archaeological Determinations of Eligibility (2012) – 1 page
- (X) National Register Status Codes – 1 page

Emergency Protocols for LA, Orange, and Ventura County BULK or SINGLE PROJECT Records Searches IF YOU HAVE A GIS PERSON ON STAFF ONLY!!

These instructions are for qualified consultants with a valid Access and Use Agreement.

WE ARE ONLY PROVIDING DATA THAT IS ALREADY DIGITAL AT THIS TIME. SAN BERNARDINO COUNTY IS NOT DIGITAL AND THESE INSTRUCTIONS DO NOT APPLY.

Some of you have a fully digital operation and have GIS staff on board who can process a fully digital deliverable from the Information Center. If you can accept shape file data and do not require a custom map made for you by the SCCIC, and you are willing to sort the data we provide to you then these instructions are for you. Read further to be sure. You may have only one project at this time or some of you have a lot of different search locations that can be processed all at once. This may save you a lot of time getting results back and if we process your jobs in bulk, and you may enjoy significant cost savings as well. If you need individual invoice or summaries for each search location, then bulk processing is not for you and you need to submit a data request form for each search location.

Bulk processing will work for you if you have a GIS person on staff who can sort bulk data for you and make you any necessary project maps. This type of job can have as many job locations as you want but the point is that we will do them in bulk – at the same time - not one at a time. We send all the bulk data back to you and you sort it. This will work if you need searches in LA, Orange, or Ventura AND if they all have the same search radius and if all the other search criteria is the same– no exceptions. This will not work for San Bernardino County because we are not fully digital for San Bernardino County. You must submit all your shape files for each location at the same time and this will count as one search. If you have some that need a different radius, or different search criteria, then you should submit that job separately with its own set of instructions.

INSTRUCTIONS FOR BULK PROCESSING:

Please send in your requests via email using the data request form along with the associated shape files and pdf maps of the project area(s) at 1-24k scale. PDFs must be able to be printed out on 8.5X 11 paper. We check your shape file data against the pdf maps. This is where we find discrepancies between your shape files and your maps. This is required.

Please use this data request form and make sure you fill it out properly.

<http://web.sonoma.edu/nwic/docs/CHRISDataRequestForm.pdf>

DELIVERABLES:

1. A copy of the Built Environment Resources Directory or BERD for Los Angeles, Orange, Ventura, or San Bernardino County can now be found at the OHP Website for you to do your own research. This replaces the old Historic Properties Directory or HPD. We will not be searching this for you at this time but you can search it while you are waiting for our results to save time.

You will only get shapefiles back, which means that you will have to make your own maps for each project location. WARNING! If you don't request the shape files, you won't be able to tell which reports are in the project area or the search radius. Please note that you are charged for

each map feature even if you opt out of receiving shape files. You cannot get secondary products such as bibliographies or pdfs of records in the project area or search radius if you don't pay for the primary products (shape files) as this is the scaffolding upon which the secondary products are derived. If you do not understand the digital fee structure, ask before we process your request and send you data. You can find the digital fee structure on the OHP website under the CHRIS tab. In order to keep costs down, you must be willing to make adjustments to the search radius or what you are expecting to receive as part of the search. Remember that some areas are loaded with data and others are sparse – our fees will reflect that.

2. You will get a bulk processed bibliographies for resources and reports as selected; you will not get individual bibliographies for each project location.
3. You will get pdfs of resources and reports if you request them, provided that they are in digital formats. We will not be scanning records or reports at this time.
4. You will get one invoice for the bulk data processing. We can't bill this as individual jobs on separate invoices for you. If there are multiple project names, we are willing to reference all the job names on the invoice if needed. If there a lot of job id's we may ask you to send them in an email so that we can copy and paste it into the invoice details. If you need to bill your clients for the data, you can refer to our fee schedule on the OHP website under the CHRIS tab and apply the fees accordingly.
5. We will be billing you at the staff rate of \$150 per hour and you will be charged for all resources and report locations according to the CHRIS Fee Structure. (\$12 per GIS shape file; 0.15 per pdf page, or 0.25 per excel line; quad fees will apply if your research includes more than 2 quads). Discounts offered early on in our Covid-19 response will no longer be offered on any records searched submitted after October 5th, 2020.
6. Your packet will be sent to you electronically via Dropbox. We use 7-zip to password protect the files so you will need both on your computers. We email you the password. If you can't use Dropbox for some reason, then you will need to provide us with your Fed ex account number and we will ship you a disc with the results. As a last resort, we will ship on a disc via the USPS. You may be billed for our shipping and handling costs.

I may not have been able to cover every possible contingency in this set of instructions and will update it if necessary. You can email me with questions at sccic@fullerton.edu

Thank you,

Stacy St. James
South Central Coastal Information Center

Los Angeles, Orange, Ventura, and San Bernardino Counties

**Appendix C:
Native American Heritage
Commission Sacred Lands
File Search**

NATIVE AMERICAN HERITAGE COMMISSION

June 27, 2022

Jacob Parsley
Michael Baker InternationalVia Email to: Jacob.Parsley@mbakerintl.com

Re: Modjeska Grade Road Project, Orange County

Dear Mr. Parsley:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green
Cultural Resources Analyst

Attachment

CHAIRPERSON
Laura Miranda
LuiseñoVICE CHAIRPERSON
Reginald Pagaling
ChumashPARLIAMENTARIAN
Russell Attebery
KarukSECRETARY
Sara Dutschke
MiwokCOMMISSIONER
William Mungary
Paiute/White Mountain
ApacheCOMMISSIONER
Isaac Bojorquez
Ohlone-CostanoanCOMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki,
NomlakiCOMMISSIONER
Wayne Nelson
LuiseñoCOMMISSIONER
Stanley Rodriguez
KumeyaayEXECUTIVE SECRETARY
Raymond C.
Hitchcock
Miwok/NisenanNAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

**Native American Heritage Commission
Native American Contact List
Orange County
6/27/2022**

**Gabrieleno Band of Mission
Indians - Kizh Nation**

Andrew Salas, Chairperson
P.O. Box 393
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

**Juaneno Band of Mission
Indians**

Sonia Johnston, Chairperson
P.O. Box 25628
Santa Ana, CA, 92799
sonia.johnston@sbcglobal.net

**Gabrieleno/Tongva San Gabriel
Band of Mission Indians**

Anthony Morales, Chairperson
P.O. Box 693
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTtribalcouncil@aol.com

**Juaneno Band of Mission
Indians Acjachemen Nation -
Belardes**

Joyce Perry, Tribal Manager
4955 Paseo Segovia
Irvine, CA, 92603
Phone: (949) 293 - 8522
kaamalam@gmail.com

Gabrielino /Tongva Nation

Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St.,
#231
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

**Juaneno Band of Mission
Indians Acjachemen Nation -
Belardes**

Matias Belardes, Chairperson
32161 Avenida Los Amigos
San Juan Capistrano, CA, 92675
Phone: (949) 293 - 8522
kaamalam@gmail.com

**Gabrielino Tongva Indians of
California Tribal Council**

Robert Dorame, Chairperson
P.O. Box 490
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

**Juaneno Band of Mission
Indians Acjachemen Nation 84A**

Heidi Lucero, Chairperson
31411-A La Matanza Street
San Juan Capistrano, CA, 92675
Phone: (562) 879 - 2884
hllucero105@gmail.com

**Gabrielino Tongva Indians of
California Tribal Council**

Christina Conley, Tribal
Consultant and Administrator
P.O. Box 941078
Simi Valley, CA, 93094
Phone: (626) 407 - 8761
christina.marsden@alumni.usc.edu

**La Jolla Band of Luiseno
Indians**

Norma Contreras, Chairperson
22000 Highway 76
Pauma Valley, CA, 92061
Phone: (760) 742 - 3771

Gabrielino-Tongva Tribe

Charles Alvarez,
23454 Vanowen Street
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Pala Band of Mission Indians

Shasta Gaughen, Tribal Historic
Preservation Officer
PMB 50, 35008 Pala Temecula
Rd.
Pala, CA, 92059
Phone: (760) 891 - 3515
Fax: (760) 742-3189
sgaughen@palatribe.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Modjeska Grade Road Project, Orange County.

**Native American Heritage Commission
Native American Contact List
Orange County
6/27/2022**

Pauma Band of Luiseno Indians

Temet Aguilar, Chairperson
P.O. Box 369 Luiseno
Pauma Valley, CA, 92061
Phone: (760) 742 - 1289
Fax: (760) 742-3422
bennaecalac@aol.com

Soboba Band of Luiseno Indians

Isaiah Vivanco, Chairperson
P. O. Box 487 Cahuilla
San Jacinto, CA, 92581 Luiseno
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

Pechanga Band of Indians

Mark Macarro, Chairperson
P.O. Box 1477 Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 6000
Fax: (951) 695-1778
epreston@pechanga-nsn.gov

Soboba Band of Luiseno Indians

Joseph Ontiveros, Cultural
Resource Department
P.O. BOX 487 Cahuilla
San Jacinto, CA, 92581 Luiseno
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Pechanga Band of Indians

Paul Macarro, Cultural Resources
Coordinator
P.O. Box 1477 Luiseno
Temecula, CA, 92593
Phone: (951) 770 - 6306
Fax: (951) 506-9491
pmacarro@pechanga-nsn.gov

Rincon Band of Luiseno Indians

Bo Mazzetti, Chairperson
One Government Center Lane Luiseno
Valley Center, CA, 92082
Phone: (760) 749 - 1051
Fax: (760) 749-5144
bomazzetti@aol.com

Rincon Band of Luiseno Indians

Cheryl Madrigal, Tribal Historic
Preservation Officer
One Government Center Lane Luiseno
Valley Center, CA, 92082
Phone: (760) 297 - 2635
crd@rincon-nsn.gov

Santa Rosa Band of Cahuilla Indians

Lovina Redner, Tribal Chair
P.O. Box 391820 Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosa-nsn.gov

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Appendix D: Historical Society Consultation

July 15, 2022

ORANGE COUNTY HISTORICAL SOCIETY

3101 W. Harvard Street

Santa Ana, California 92704

Via Email: Orangecountyhistory@gmail.com

RE: MODJESKA GRADE ROAD IMPROVEMENT PROJECT, ORANGE COUNTY, CALIFORNIA

To Whom it May Concern:

Michael Baker International is conducting a cultural resources investigation for the Modjeska Grade Road Improvement Project (project) in the southwestern portion of unincorporated Orange County, California. Specifically, the project site is located along a 1.3-mile segment of Modjeska Grade Road from 100 feet south of the Markuson Road/Modjeska Canyon Road intersection to the East Santiago Canyon Road (also referred to as County Road S18)/Modjeska Grade Road intersection as depicted in the accompanying figures (see Attachment 1).

The project proposes to improve the pavement, drainage, flooding, and erosion control deficiencies on-site. These improvements would result in safety enhancements for residents and travelers along Modjeska Grade Road, in addition to surrounding uses along the corridor. The project will require grading, but will not involve the import or export of dirt. This Project will comply with California Environmental Quality Act (CEQA).

Please notify us if your organization has any information or concerns about historical resources within the project site. This is not a research request; it is solely a request for public input related to any concerns that the Orange County Historical Society may have pertaining to historical resources. If you have any questions or comments, please contact me at your earliest convenience at Kholood.Abdo@mbakerintl.com or (909) 974-4975.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. Abdo', with a long horizontal line extending to the right.

Kholood Abdo, M.A, RPA
Senior Archaeologist

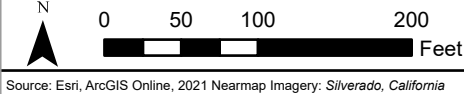
Appendix E: APE Survey Coverage Maps



	Area of Potential Effects
	Parcels
	Surveyed
	Recon Survey (Slope, Veg)

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

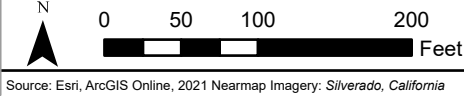
Survey Coverage






	Area of Potential Effects
	Parcels
	Surveyed
	Recon Survey (Slope, Veg)

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

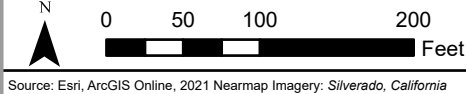


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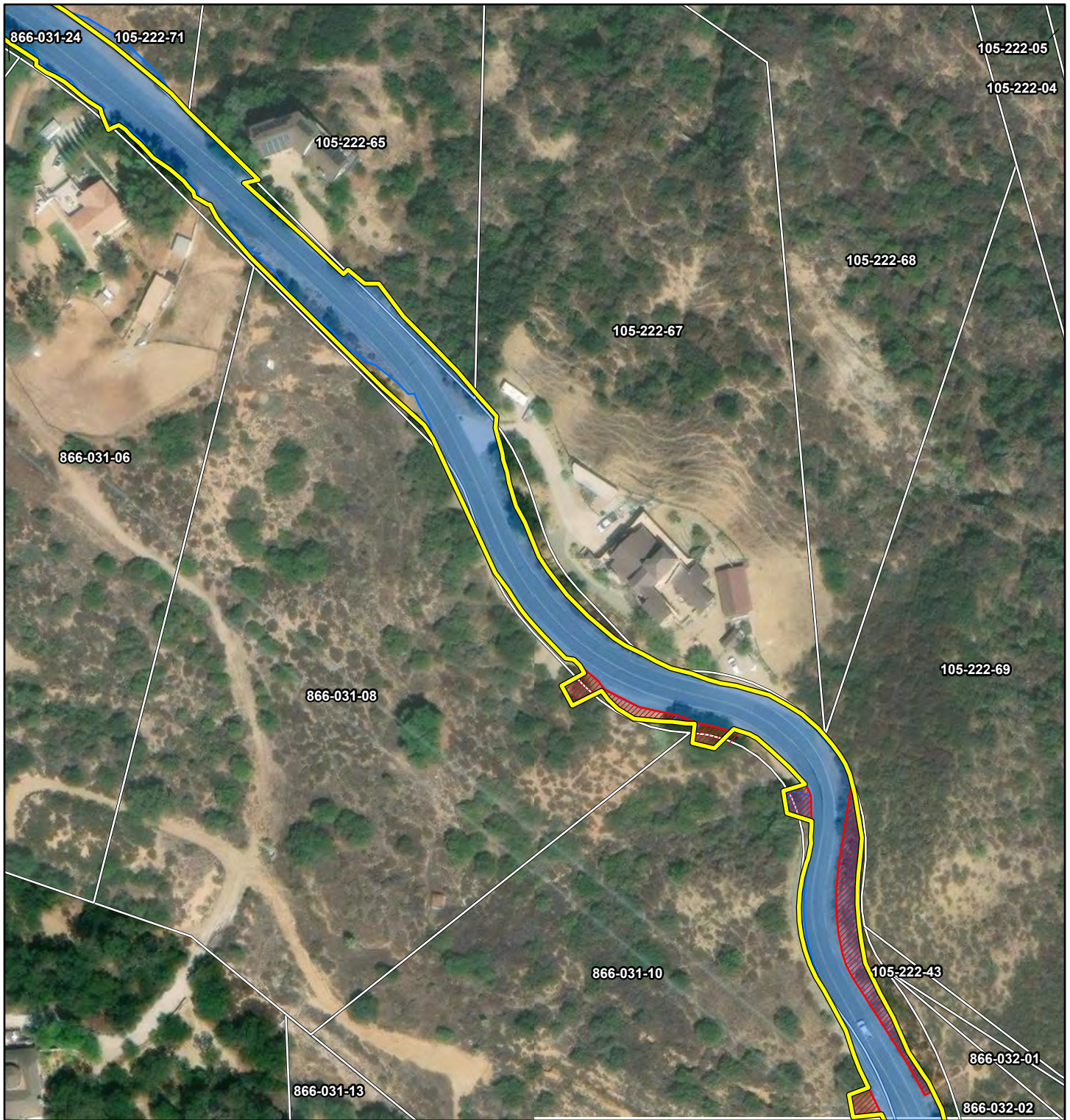


	Area of Potential Effects
	Parcels
	Surveyed
	Recon Survey (Slope, Veg)

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

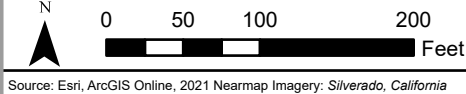


Survey Coverage



	Area of Potential Effects
	Parcels
	Surveyed
	Recon Survey (Slope, Veg)

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT



Survey Coverage

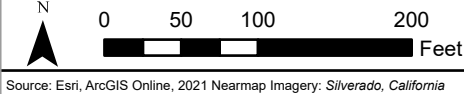


MODJESKA GRADE ROAD IMPROVEMENTS PROJECT



	Area of Potential Effects
	Parcels
	Surveyed
	Recon Survey (Slope, Veg)

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT

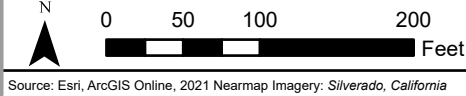


Survey Coverage



	Area of Potential Effects
	Parcels
	Surveyed
	Recon Survey (Slope, Veg)

MODJESKA GRADE ROAD IMPROVEMENTS PROJECT



Survey Coverage