Appendix D Cultural and Paleontological Resources Technical Memo

Appendices

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PALEONTOLOGY - ARCHAEOLOGY - HISTORY

CULTURAL AND PALEONTOLOGICAL RESOURCES TECHNICAL MEMO FOR THE NEWPORT CROSSINGS MIXED-USE, NEWPORT BEACH, ORANGE COUNTY, CALIFORNIA

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February 2018

Cogstone Project Number: 4214
Type of Study: Cultural and Paleontological resources assessment
Archaeological Sites: None within the planned project
Paleontological localities: None within the planned project, 18 near to the project
USGS 7.5' Quadrangle: Tustin
Area: 5.69 acres
Key Words: Negative Survey, Tongva, Gabrielino, Newport Beach; PFYC 3a, moderate but patchy sensitivity for the project sediments (old paralic deposits overlain by alluvial fans); PFYC 1, low sensitivity for artificial fill

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Federal Certifications 8(a), SDB, EDWOSB
State Certifications DBE, WBE, SBE, UDBE

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SUMMARY OF FINDINGS

The purpose of this study is to determine the potential effects to cultural and paleontological resources resulting from the construction of the proposed Newport Crossing Mixed-Use Project in the City of Newport Beach, Orange County, California. The proposed project consists of the construction of 350 residential apartment dwelling units; 2,000 square feet of casual dining high-turnover restaurant space with an associated outdoor dining area planned to be 1,200 square feet; and 5,500 square feet of commercial space anticipated to contain a variety of retail uses to serve both the residential uses as well as the surrounding commercial uses. This project is located on the approximately 5.69 acre property currently occupied by the 58,277 square foot MacArthur Square shopping center.

The Project Study Area (PSA) is mapped entirely as late to middle Pleistocene (~11,700 to 781,000 years old), old paralic sediments overlain by alluvial fan deposits. Although not mapped, artificial fill is expected due to the previous development of the PSA. A record search revealed that no fossil localities are known from the sediments of the project area, however 18 are known from the near to the project.

Although there were no records of fossils from within the proposed boundaries of the PSA, many of the vertebrate fossils from the City of Newport Beach were recovered from late to middle Pleistocene alluvial deposits. Three localities near to the project as well as fifteen localities in the terraces to the east of Newport Bay. Mammoth, camel, and sea turtle are known from the nearest localities. Throughout Orange County, extinct Pleistocene animals are well known from alluvial sediments. Columbian mammoths, American mastodons, ground sloths, short-faced bears, American lions, sabre-toothed cats, dire wolves, horses, tapirs, ancient bison, long horned bison, camels, llamas, and dwarf pronghorns have been recovered.

Cultural record searches indicate a total of 69 cultural resources investigations have been completed previously within a one mile radius of the PSA. Of these, three studies were conducted within the PSA. The records search determined that there are no cultural resources within the PSA. Outside the Project boundaries but within the one-mile radius are 12 resources: 11 prehistoric archaeological sites and one historic site.

An intensive archaeological and paleontological pedestrian survey was conducted on February 2, 2018. Ground visibility throughout was poor (less than five percent) because the entire PSA is developed. No archaeological or paleontological resources were encountered during the survey.

Based on other recorded localities, Pleistocene fossils typically begin appearing about 8 to 10 feet deep in California valleys. Although the depths of the localities near to the PSA are 15-30 feet deep, most of the fossils were recovered from highway or housing excavations. Artificial

fill is expected to be present at the surface and is assigned a very low sensitivity (PFYC 1). The late to middle Pleistocene paralic deposits overlain by alluvial fans are assigned a moderate but patchy sensitivity (PFYC 3a) throughout.

Planned cut depths are approximately five feet deep in fill for the majority of the project for the removal of the artificial fill. Utilities are expected to be up to eight feet deep. As fossils in our valleys usually begin appearing below the maximum depths of excavation, no paleontological monitoring is currently recommended for the project. If unanticipated fossils are unearthed during construction, work should be halted in that area until a qualified paleontologist can assess the significance of the find. Work may resume immediately a minimum of 50 feet away from the find.

The PSA is considered to have moderate sensitivity for cultural resources and it is recommended that archaeological monitoring by a qualified archaeologist be on site during ground disturbing activities. In the event of an unanticipated discovery, all work must be suspended within 50 feet of the find until a qualified archaeologist evaluates it. In the unlikely event that human remains are encountered during project development, all work must cease near the find immediately.

INTRODUCTION

PURPOSE OF STUDY

The purpose of this study is to determine the potential effects to cultural and paleontological resources resulting from the construction of the proposed Newport Crossing Mixed-Use Project (Project; Figure 1). The City of Newport Beach is the lead agency under the California Environmental Quality Act (CEQA) and this study provides environmental documentation as required by CEQA.

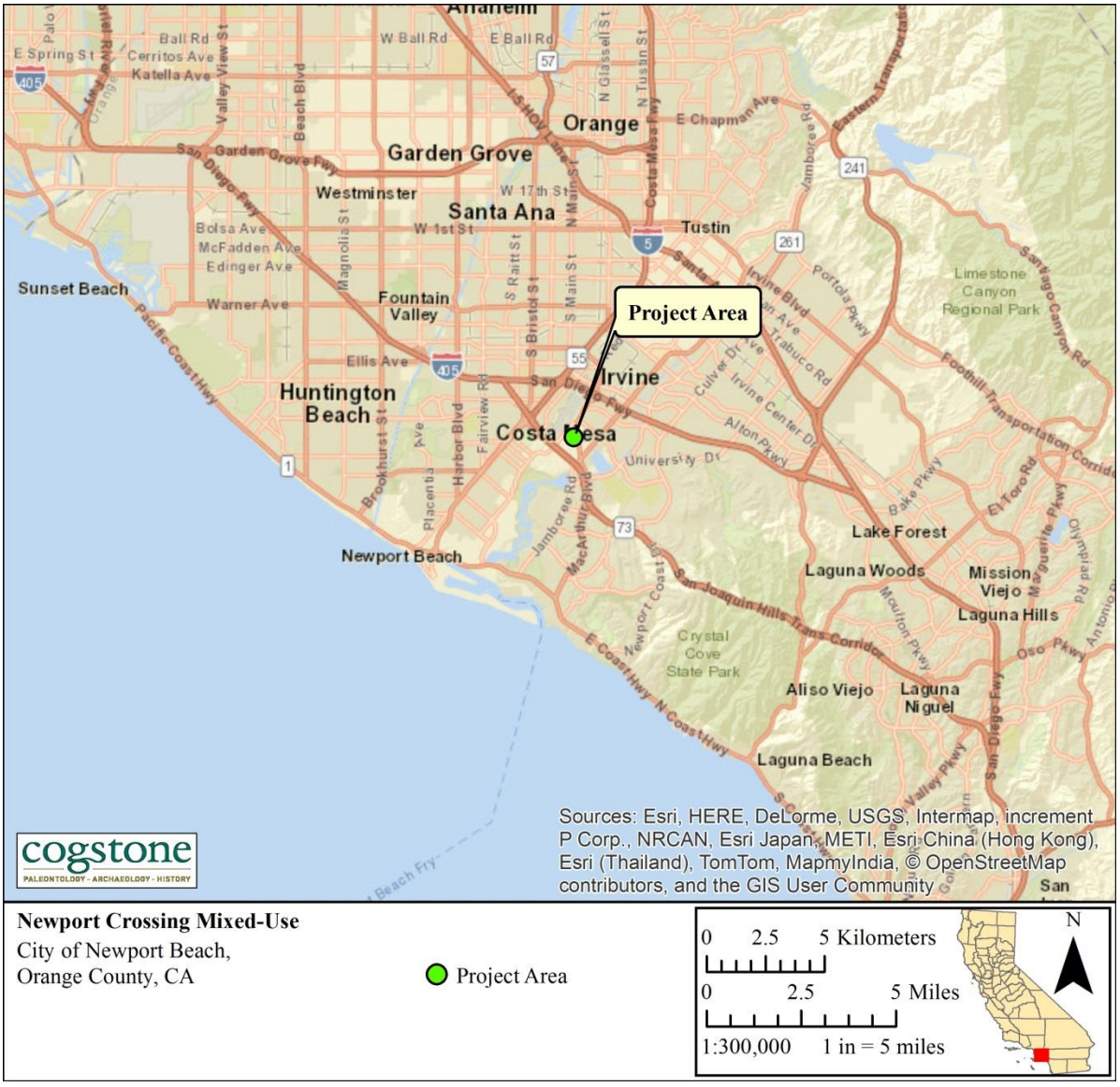

Figure 1. Project vicinity map

PROJECT DESCRIPTION

The Project consists of the construction of 350 residential apartment dwelling units; 2,000 square feet of casual dining high-turnover restaurant space with an associated outdoor dining area planned to be 1,200 square feet; and 5,500 square feet of commercial space anticipated to contain a variety of retail uses to serve both the residential uses as well as the surrounding commercial uses. This Project is located on the approximately 5.69 acre property currently occupied by the 58,277 square foot MacArthur Square shopping center.

PROJECT LOCATION

The Project Study Area (PSA) is located within the City of Newport Beach, on the western boundary of Orange County in southern California. The City is bordered by Huntington Beach to the northwest, Costa Mesa to the north, Irvine to the northeast, and unincorporated areas (Crystal Cove State Park) of Orange County to the southeast. Specifically, the PSA located within Section 7 of Township 6 south, Range 9 west of the United States Geographic Survey (USGS) Tustin 7.5-minute topographic map (Figure 2). Planned maximum depth of most of the excavation is approximately five feet for the removal of fill material. Utilities are expected to be less than eight feet deep.

The project site is within the Newport Place Planned Community and is generally bounded by Corinthian Way to the northeast, Martingale Way to the east, Scott Drive to the northwest, and Dove Street to the southwest (Figure 3).

PROJECT PERSONNEL

Cogstone Resource Management Inc. (Cogstone) conducted the cultural and paleontological resources studies. Qualifications of Cogstone personnel are provided (Appendix A). Additional qualifications of key Cogstone staff are available at www.cogstone.com/Staff

- Desireé Martinez provided QA/QC for the project. She has an M.A. in Anthropology from Harvard University, Cambridge and more than 21 years of experience in southern California archaeology.
- Molly Valasik served as the Principal Archaeologist and prepared the archaeological portions of this report. Valasik has a M.A. in Anthropology from Kent State University and nine years of experience in California archaeology.

- Kim Scott served as the Principal Paleontologist for the project and wrote the geological and paleontological portions of this report. Scott has a M.S. in Biology with paleontology emphasis from California State University, San Bernardino, a B.S. in Geology with paleontology emphasis from the University of California, Los Angeles, and over 23 years of experience in California paleontology and geology.
- Sherri Gust prepared the environmental, prehistoric, and ethnographic sections. Gust is a Registered Professional Archaeologist and has an M.S. in Anatomy (Evolutionary Morphology) from the University of Southern California, a B.S. in Anthropology from the University of California at Davis and over 36 years of experience in California.
- Megan Wilson prepared the maps and conducted the records search. Wilson has a M.A. in Anthropology from California State University, Fullerton and has over seven years of experience in southern California archaeology.

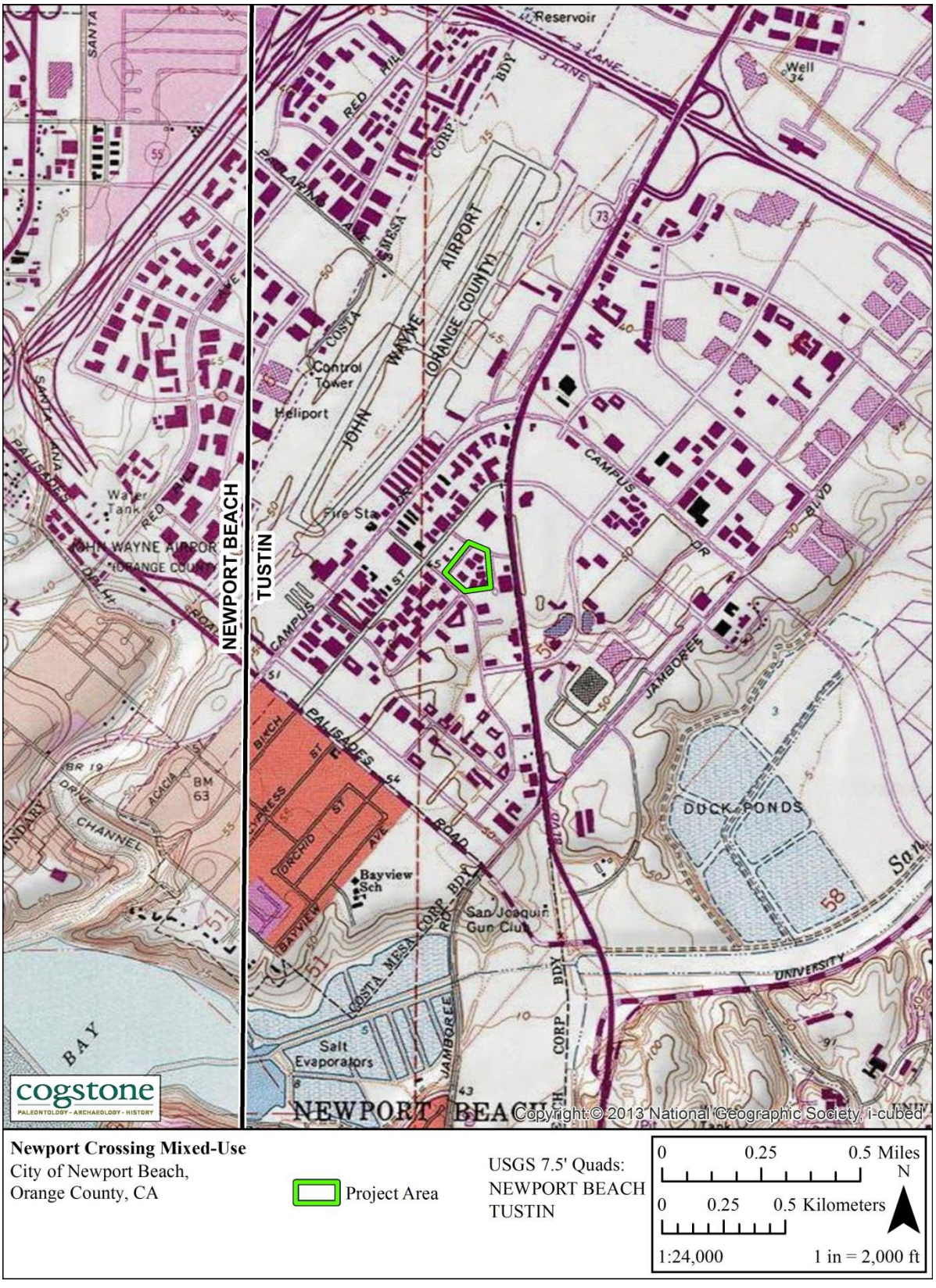

Figure 2. Project location

Figure 3. Project aerial

REGULATORY ENVIRONMENT

This Project is subject to state and local regulations regarding cultural and paleontological resources. The project must meet the requirements of the California Environmental Quality Act (CEQA) in addition to the goals and polices regarding the identification and protection of important archaeological and paleontological resources within the City of Newport Beach.

CALIFORNIA ENVIRONMENTAL QUALITY ACT OF 1970 (CEQA) (PRC § SECTION 21000 ET SEQ.)

CEQA states that: It is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required are intended to assist public agencies in systematically identifying both the significant effects of proposed project and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.

CEQA declares that it is state policy to: "take all action necessary to provide the people of this state with...historic environmental qualities." It further states that public or private projects financed or approved by the state are subject to environmental review by the state. All such projects, unless entitled to an exemption, may proceed only after this requirement has been satisfied. CEQA requires detailed studies that analyze the environmental effects of a proposed project. In the event that a project is determined to have a potential significant environmental effect, the act requires that alternative plans and mitigation measures be considered. If archaeological or paleontological resources are identified as being within the proposed project study area, the sponsoring agency must take those resources into consideration when evaluating project effects. The level of consideration may vary with the importance of the resource.

TRIBAL CULTURAL RESOURCES

In 2015 CEQA was amended and established that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Public Resources Code [PRC] § 21084.2). In order to be considered a "tribal cultural resource" must be a site, feature, place, cultural landscape, sacred place, or object, which is of cultural value to a California Native American Tribe and is either:

(1) listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or

(2) a resource that the lead agency chooses, in its discretion, to treat as a tribal cultural resource.

To help determine whether a project may have such an effect, the lead agency must consult with any California Native American Tribe that requests consultation and is traditionally and culturally affiliated with the geographic location of a proposed project. That consultation must take place prior to the determination of whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project (PRC § 21080.3.1).

In applying those criteria, a lead agency must consider the value of the resource to the tribe. For example, in considering the criterion that a resource is "associated with the lives of persons important in our past," a lead agency would ask whether the resource is associated with the lives of persons important to the relevant tribe's past. That determination must be supported with substantial evidence.

If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. PRC §20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES (PRC § 5024.1)

PRC § 5024.1, which is applicable to this project, establishes the California Register of Historical Resources. Historic resources encountered during the project may be eligible for inclusion on the CRHR since the undertaking is subject to PRC § 5024.1. The register is a listing of all properties considered to be significant historical resources in the state. The California Register includes all properties listed or determined eligible for listing on the National Register, including properties evaluated under Section 106, and State Historical Landmarks from No. 770 on. The criteria for listing are the same as those of the National Register. The California Register statute specifically provides that historical resources listed, determined eligible for listing on the California Register by the State Historical Resources Commission, or resources that meet the California Register criteria are resources which must be given consideration under CEQA (see above). Other resources, such as resources listed on local registers of historic registers or in local surveys, may be listed if they are determined by the State Historic Resources Commission to be significant in accordance with criteria and procedures to be adopted by the Commission and are nominated; their listing in the California Register, is not automatic.

Resources eligible for listing include buildings, sites, structures, objects, or historic districts that retain historic integrity and are historically significant at the local, state or national level under

one or more of the following four criteria:

1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

2) It is associated with the lives of persons important to local, California, or national history;

3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or

4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance. Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register, if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.

CALIFORNIA PUBLIC RESOURCES CODE SECTION § 5097.5

PRC § 5097.5 states that no person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof. Consequently local project proponents as well as state entities are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

CALIFORNIA ADMINISTRATIVE CODE, TITLE 14, SECTION 4307

This section states that "No person shall remove, injure, deface or destroy any object of paleontological, archeological or historical interest or value."

CITY OF NEWPORT BEACH GOALS AND POLICIES

Policy HR 2.1 requires that, in accordance with CEQA, new development protect and preserve paleontological and archaeological resources from destruction, and avoid and mitigate impacts to such resources. Through planning policies and permit conditions, ensure the preservation of significant archeological and paleontological resources and require that the impact caused by any development be mitigated in accordance with CEQA (City of Newport Beach 2006).

BACKGROUND

GEOLOGICAL SETTING

This project lies at the southern end of the broad coastal plain of Orange County named the Tustin Plain. The Tustin Plain is bounded by the Santa Ana Mountains to the east, the Puente and Coyote Hills to the north, and the San Joaquin Hills to the south. Orange County is part of the coastal section of the Peninsular Range Geomorphic Province which is characterized by elongated northwest-trending mountain ridges separated by sediment-floored valleys. Faults branching off from the San Andreas Fault to the east create the local mountains and hills. The Peninsular Ranges Geomorphic Province is located in the southwestern corner of California and is bounded by the Transverse Ranges Geomorphic Province to the north and the Colorado Desert Geomorphic Province to the east (Wagner 2002).

STRATIGRAPHY

The project is mapped entirely as late to middle Pleistocene (~11,700 to 781,000 years old), old paralic sediments overlain by alluvial fan deposits. Although not mapped, artificial fill is expected due to the previous development of the PSA. Paralic sediments consist of interfingered strandline, beach, estuarine, and colluvial deposits. These poorly sorted, reddish-brown, silts, sands, pebbles, and cobbles are present on emergent wave cut abrasion platforms that have been preserved by regional uplift (Morton and Miller 2006).

The locally derived, sandy alluvial fan deposits are extensive but thin (Morton and Miller 2006). Alluvial fans are deposited downstream of canyons and off hillsides by streams, flash floods, and debris flows. During periods of non-deposition, soils could form in the environment. Nearer to the mountains, these sediments are coarse grained, but farther from the mountains the sediments are finer and are more likely to contain fossils.

ENVIRONMENTAL SETTING

Prior to urban development, the PSA consisted of open lagoons, estuaries and seasonal freshwater wetlands surrounded by coastal plain. Freshwater sources were natural springs, runoff from the Santa Ana Mountains, seasonal flooding of the San Diego Creek and pooling of rainwater in lowland areas.

Paleoclimatic data based on pollen from coastal sites indicate that there was a dramatic increase in both annual temperature and precipitation between 8,000 and 7,000 B.P., which would have led to a rich marsh habitat locally. Subsequently, by 7,000 B.P., sea levels were 10 to 15 meters below current levels, and the shore line was at least 500 meters off shore than today (Altschul et al. 2007).

Historical land use was primarily agricultural but numerous shooting clubs were present in association with seasonal ponds. The PSA began to be urbanized in the early 1970s.

PREHISTORIC SETTING

Approaches to prehistoric frameworks have changed over the past half century from being based on material attributes to radiocarbon chronologies to association with cultural traditions. Archaeologists defined a material complex consisting of an abundance of milling stones (for grinding food items) with few projectile points or vertebrate faunal remains dating from about 7 to 3 thousand years before the present as the “Millingstone Horizon” (Wallace 1955). Later, the “Millingstone Horizon” was redefined as a cultural tradition named the Encinitas Tradition (Warren 1968) with various regional expressions including Topanga and La Jolla. Use by archaeologists varied as some adopted a generalized Encinitas Tradition without regional variations, some continued to use “Millingstone Horizon” and some used Middle Holocene (the time period) to indicate this observed pattern (Sutton and Gardner 2010:1-2).

Recently, it was recognized that generalized terminology is suppressing the identification of cultural, spatial, and temporal variation and the movement of peoples throughout space and time. These factors are critical to understanding adaptation and change (Sutton and Gardner 2010:1-2).

The Encinitas Tradition characteristics are abundant metates and manos, crudely made core and flake tools, bone tools, shell ornaments, very few projectile points with subsistence focusing on collecting (plants, shellfish, etc.) (Sutton and Gardner 2010:7). Faunal remains vary by location but include shellfish, land animals, marine mammals, and fish.

The Encinitas Tradition is currently redefined as comprising four geographical patterns (Sutton and Gardner 2010: 8-25). These are (1) Topanga in coastal Los Angeles and Orange counties; (2) La Jolla in coastal San Diego County; (3) Greven Knoll in inland San Bernardino, Riverside, Orange, and Los Angeles counties; and (4) Pauma in inland San Diego County.

About 3,500 years before present, the Encinitas Tradition was replaced in the greater Los Angeles Basin by the Del Rey Tradition (Sutton 2010). This tradition has been generally assigned to the Intermediate and Late Prehistoric periods. The changes that initiated the beginning of the Intermediate Period include new settlement patterns, economic foci, and artifact types that coincided with the arrival of a biologically distinctive population. The Intermediate and Late Prehistoric periods have not been well-defined. Many archaeologists have proposed, however, that the beginning of the Intermediate marked the arrival of Takic-speaking groups (from the Mojave Desert, southern Sierra Nevada, and San Joaquin Valley) and that the Late Prehistoric Period reflected Shoshonean groups (from the Great Basin). Related cultural and biological changes occurred on the southern Channel Islands about 300 years later.

As defined by Sutton (2010), the Del Rey Tradition replaces usage of the Intermediate and Late Prehistoric designations for both the southern California mainland and the southern Channel Islands. Within the Del Rey Tradition are two regional patterns named Angeles and Island. The Del Rey Tradition represents the arrival, divergence, and development of the Gabrielino in southern California.

PREHISTORIC CHRONOLOGY

The latest cultural revisions for the PSA define traits for time phases of the Topanga pattern of the Encinitas Tradition applicable to coastal Los Angeles and Orange counties (Sutton and Gardner 2010; Table 2). This pattern is replaced in the PSA by the Angeles pattern of the Del Rey Tradition later in time (Sutton 2010; Table 1).

Topanga Pattern groups were relatively small and highly mobile. Sites known are temporary campsites, not villages, and tend to be along the coast in wetlands, bays, coastal plains, near-coastal valleys, marine terraces and mountains. The Topanga toolkit is dominated by manos and metates with projectile points scarce (Sutton and Gardner 2010:9).

Table 1. Cultural Patterns and Phases

Phase	Dates BP	Material Culture	Other Traits
Topanga I	8,500 to 5,000	Abundant manos and metates, many core tools and scrapers, few but large points, charmstones, cogged stones, early discoidals, faunal remains rare	Shellfish and hunting important, secondary burials under metate cairns (some with long bones only), some extended inhumations, no cremations
Topanga II	5,000 to 3,500	Abundant but decreasing manos and metates, adoption of mortars and pestles, smaller points, cogged stones, late discoidals, fewer scraper planes and core tools, some stone balls and charmstones	Shellfish important, addition of acorns, reburial of long bones only, addition of flexed inhumations (some beneath metate cairns), cremations rare
Topanga III	3,500 to 1,300	Abundant but decreasing manos and metates, increasing use of mortars and pestles, wider variety of small projectile points, stone-lined ovens	Hunting and gathering important, flexed inhumations (some under rock cairns), cremations rare, possible subsistence focus on yucca/agave
Angeles IV	1,000 to 800	Cottonwood arrow points for arrows appear, *Olivella* cupped beads and *Mytilus* shell disks appear, some imported pottery appears, possible appearance of ceramic pipes	Changes in settlement pattern to fewer but larger permanent villages, flexed primary inhumations, cremations uncommon
Angeles V	800 to 450	Artifact abundance and size increases, steatite trade from islands increases, larger and more elaborate effigies	Development of mainland dialect of Gabrielino, settlement in open grasslands, exploitation of marine resources declined and use of small seeds increased, flexed primary inhumations, cremations uncommon
Angeles VI	450 to 150	Addition of locally made pottery, metal needle-drilled *Olivella* beads, addition of Euroamerican material culture (glass beads and metal tools)	Use of domesticated animals, flexed primary inhumations continue, some cremations

ETHNOGRAPHY

The PSA is within the territory of the Tongva (Gabrielino) (McCawley 1996). The Tongva geographical territory includes large portions of Los Angeles County, the northern part of Orange County, small sections of Riverside and San Bernardino Counties as well as the southern Channel Islands of Santa Barbara, San Clemente, San Nicolas, and Santa Catalina. The name "Gabrielino" is Spanish in origin and was used in reference to the Native Americans associated with the Mission San Gabriel. Today community members call themselves "Tongva", meaning "people of the earth" (Gabrielino/Tongva Tribal Council of San Gabriel n.d.). At the time of European contact, there were an estimated 5,000 Tongva living at 31 known villages (McCawley 1996).

The Tongva language is classified as part of the Uto-Aztecan language family, under the Takic branch. It is now generally accepted that the Gabrielino language is a stand-alone Takic language, distinct from the Cupan sub-group (Mithun 1999:539).

Much of the southern California archaeological literature argues that the Gabrielino moved into southern California from the Great Basin around 4,000 Before Present (B.P.), "wedging" themselves between the Hokan-speaking Chumash, located to the north, and the Yuman-speaking Kumeyaay, located to the south (see Sutton 2009 for the latest discussion). This Shoshonean Wedge, or Shoshonean "intrusion" theory, is counter to the Gabrielino community's knowledge about their history and origins. Oral tradition states that the Gabrielino have always lived in their traditional territory, with their emergence into this world occurring at Puvungna, located in Long Beach located on the Alamitos Plain (Martinez and Teeter 2015:26).

The Tongva are considered to have been one of the wealthiest tribes and to have greatly influenced tribes they traded with (Kroeber 1976:621). Houses were domed and circular structures thatched with tule or similar materials (Bean and Smith 1978:542). The best known artifacts were made of steatite and were highly prized. Many common everyday items were decorated with inlaid shell or carvings reflecting an elaborately developed artisanship (Bean and Smith 1978:542).

The main food zones utilized were marine, woodland, and grassland (Bean and Smith 1978). Plant foods were, by far, the greatest part of the traditional diet at contact. Acorns were the most important single food source. Villages were located near water sources necessary for the leaching of acorns, which was a daily occurrence. Grass seeds were the next most abundant plant food used along with chia. Seeds were parched, ground, and cooked as mush in various combinations according to taste and availability. Greens and fruits were eaten raw or cooked or sometimes dried for storage. Bulbs, roots, and tubers were dug in the spring and summer and usually eaten fresh. Mushrooms and tree fungus were prized as delicacies. Various teas were made from flowers, fruits, stems and roots for medicinal cures as well as beverages (Bean and Smith 1978:538-540).

The principal game animals were deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, antelope, quail, dove, ducks, and other birds. Most predators were avoided as food, as were tree squirrels and most reptiles. Trout and other fish were caught in the streams, while salmon were available when they ran in the larger creeks. Marine foods were extensively utilized. Sea mammals, fish, and crustaceans were hunted and gathered from both the shoreline and the open ocean, using reed and dugout canoes. Shellfish were the most common resource, including abalone, turbans, mussels, clams, scallops, bubble shells, and others (Bean and Smith 1978:538-540). The nearest recorded Tongva village is located approximately 1.5 miles west of the PSA. This village name was Tevaaxa'anga. The village's location was once within a forested and marshy area into which the Los Angeles River drained until a flood in 1825 caused it to cut a channel to the ocean (McCawley 1996:59).

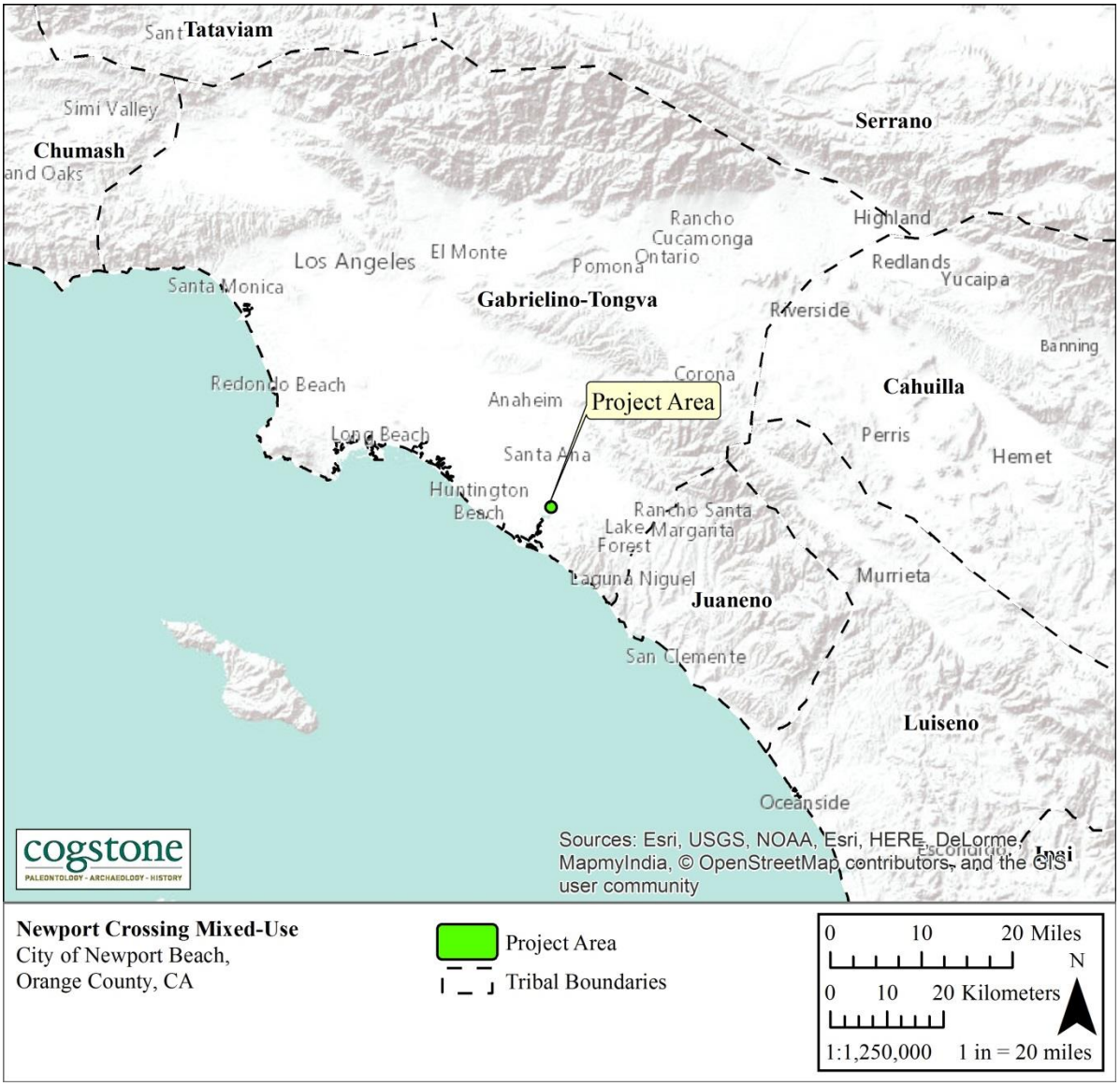

Figure 4. Native American traditional tribal territories

HISTORIC SETTING

In 1821 Mexico won its independence from Spain and worked to lessen the wealth and power held by the missions. The Secularization Act was passed in 1833, giving the vast mission lands to the Mexican governor and downgrading the missions' status to that of parish churches. The governor then redistributed the former mission lands, in the form of grants, to private owners. Ranchos in California numbered over 500 by 1846, all but approximately 30 of which resulted from land grants (Bean and Rawls 1993; Robinson 1948).

California was granted statehood in 1850 and although the United States promised to honor the land grants, the process of defining rancho boundaries and proving legal ownership became time consuming and expensive. Legal debts led to bankruptcies and the rise in prices of beef, hide and tallow. This combined with flooding and drought was detrimental to the cattle industry. Ranchos were divided up and sold inexpensively (Hampson 1993).

The PSA lies within the boundaries of the Rancho San Joaquin (Figure 5). This land grant was a combination of the Rancho Cienega de las Ranas and the Ranch La Bolsa de San Joaquín. Both land grants were issued to José Andres Sepúlveda 1837 and 1842. In 1864 Sepúlveda sold Rancho San Joaquin to Benjamin and Thomas Flint, Llewellyn Bixby and James Irvine. In 1876, James Irvine bought out his partners in Flint, Bixby and Co. and became the sole owner of the Irvine Ranch. It continued to be largely a ranching operation for many years.

MODERN HISTORY

The PSA has been unoccupied until the early 1970s. Historical USGS topographic maps from 1902 and 1935 demonstrate that the PSA was fairly isolated and there are no buildings within the immediate vicinity. Development in the area followed the completion of MacArthur Boulevard after 1948.

Aerial photographs dating from between 1938 and 1952 confirm that the PSA was vacant up until mid-century. The next aerial available, dating to 1972, shows the commercial development of the immediate PSA.

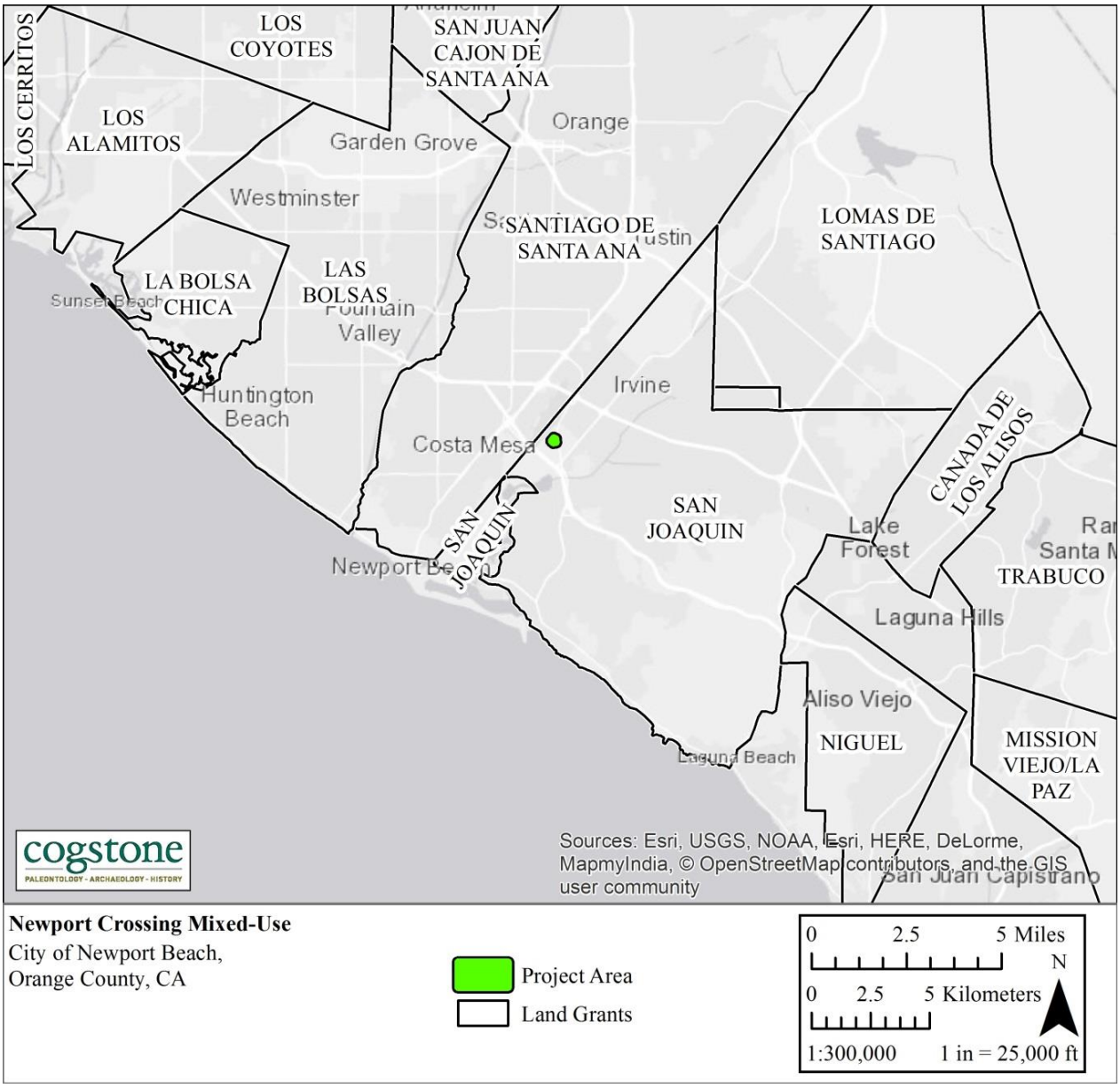

Figure 5. Land grant map

RECORDS SEARCHES

PALEONTOLOGICAL RECORDS SEARCH

A record search of the project and a one mile radius was requested from the Natural History Museum of Los Angeles County (LACM; McLeod, 2018; Appendix B). Online records from the University of California Museum of Paleontology database (UCMP 2018), the Paleobiology Database (PBDB 2018), and published and unpublished print resources were searched for fossil localities (Jefferson 1991a, 1991b, 2002; McLeod 2013, Cooper Center 2015).

Although there were no records of fossils from within the proposed boundaries of the PSA, many of the vertebrate fossils from the City of Newport Beach were recovered from late to middle Pleistocene alluvial deposits (McLeod 2013; Table 2). McLeod (2013, 2018) notes three localities near to the project as well as fifteen localities in the terraces to the east of Newport Bay. Mammoth, camel, and sea turtle are known from the nearest localities. Throughout Orange County, extinct Pleistocene animals are well known from alluvial sediments (Cooper Center 2105). Columbian mammoths, American mastodons, ground sloths, short-faced bears, American lions, sabre-toothed cats, dire wolves, horses, tapirs, ancient bison, long horned bison, camels, llamas, and dwarf pronghorns have been recovered. Neither the UCMP (2018) or the PBDB (2018) note any localities near to the project.

Typically Ice Aged fossils begin appearing at a depth of 8 to 10 feet within southern California valleys. Although the depths of the localities near to the PSA are 15-30 feet deep, most of the fossils were recovered from highway or housing excavations (Table 2). This makes even fairly shallow Pleistocene alluvial sediments sensitive for fossil resources within Orange County.

Table 2. Pleistocene fossil localities near to the project.
† indicates that the species is extinct

Common Name	Taxon	Depth	Formation	Locality	Location	Reference
camel	†Camelidae	~30 feet	Pleistocene alluvium	LACM 4219	Road cut for Newport Blvd near Santa Isabel Ave, Costa Mesa	McLeod 2018
sea turtle	Cheloniidae					
elephant	†Proboscidea	unknown	Pleistocene alluvium	LACM 3267	Near Anaheim Ave and 19th St, Costa Mesa	McLeod 2018
mammoth	†*Mammuthus* sp.	~15 feet	Pleistocene alluvium	LACM 1339	Adams Ave east of the Santa Ana River, Costa Mesa. Overlain by shell bearing silts and sands.	McLeod 2018
camel	†Camelidae					
111 taxa of mammals, sharks, rays, fish, amphibians, reptiles, and birds, including fossils belonging to 17 extinct taxa		various	Pleistocene alluvium and marine	15 localities at LACM	Older Quaternary sediments on the eastside of Newport Bay	McLeod 2013, 2018
Columbian mammoths	†*Mammuthus columbi*	various	Pleistocene alluvium	Cooper Center; more than 40*	within Orange County	Cooper Center 2015; Scott and Gust 2007; Jefferson 1991a, 1991b
American mastodons	†*Mammut americanum*					
ground sloths	†*Paramylodon harlani*, †*Megalonyx jeffersonii*, †*Nothrotheriops* sp.					
short-faced bear	†*Ursus arctodus*					
American lions	†*Panthera atrox*					
sabre-toothed cats	†*Smilodon fatalis*					
dire wolves	†*Canis dirus*					
horses	†*Equus occidentalis*					
tapirs	†*Tapirus californicus*					
ancient bison, long horned bison	†*Bison antiquus*, †*Bison latifrons*					
camels	†*Camelops hesternus*					
llamas	†*Hemiauchenia* sp.					
dwarf pronghorns	†*Capromeryx minor*					

CULTURAL RECORDS SEARCH

A search for archaeological and historical records was completed at the South Central Coastal Information Center (SCCIC) of the California Historic Resources Inventory System (CHRIS) located at California State University. Fullerton on January 3, 2018 by Megan Wilson of Cogstone Resource Management, Inc. The record search covered the PSA, as well as a one-mile radius.

The record search indicates a total of 69 cultural resources investigations have been conducted within a one-mile of the PSA, located on the Tustin and Newport Beach 7.5' USGS topographic maps. Three of these investigations included a portion of the PSA (Table 3).

Table 3. Previous Cultural Resource Studies within One Mile Radius of the Project Area

Report No. (OR-)	Author(s)	Title	Year	7.5' USGS Quad (s)	Distance from PSA
190	Desautels, Roger J.	Archaeological Field Test Report on the Bristol Street Associates Proposed Development on Bristol Street in the Newport Beach Area of the County of Orange, California.	1977	Newport Beach	0.5-1
246	Cottrell, Marie G.	Report of Archaeological Resources Assessment Conducted for the Irvine Industrial Complex-west	1978	Tustin	0.25-0.5
406	Cottrell, Marie and David Jacob	Archaeological Excavations Conducted at the Bristol Street Site, CA-ORA-687, Locus I and II	1978	Newport Beach	0.5-1
427	Mabry, Theo N.	Test-level Investigations, North Bluffs of Upper Newport Bay, Newport Beach, Ca.	1979	Tustin	0.5-1
531	Hurd, Gary S.	Test Excavation for CA-ORA-116	1980	Tustin	0.5-1
574	Stickel, Gary E. and Jerry B. Howard	Final Report of a Cultural Resource Survey of the University of California, Irvine	1976	Tustin	0.5-1
607	Whitney-Desautels, Nancy A.	Archaeological Survey Report on the Acacia Offices Project, Opi-1, Located in the Santa Ana Heights Area of the County of Orange, California	1981	Newport Beach	0.5-1
673	Padon, Beth	Archaeological Assessment, Proposed Upper Newport Bay Bicycle/equestrian Trail, Newport Beach, CA	1983	Newport Beach, Tustin	0.5-1
713	Anonymous	Orange County California Anthropological Project San Joaquin Gun Club Site ORA-192, ORA-57	1983	Newport Beach	0.5-1
774	Brock, James P.	Archaeological, Paleontological and Historical Resources Assessment Report for the U.C. Irvine North Campus Property	1985	Tustin	0.5-1
776	Breece, William H.	Limited Test-level Investigation at CA-ORA-192 and CA-ORA-348, Bayview Planned Community, County of Orange, California	1985	Tustin	0.5-1

Report No. (OR-)	Author(s)	Title	Year	7.5' USGS Quad (s)	Distance from PSA
815	Breece, William H. and Laurel A. Harrison	Archaeological Salvage Program at CA-ORA-348 and CA-ORA-192, Bayview Planned Community, County of Orange, California	1985	Tustin	0.5-1
847	Padon, Beth	Archaeological Resource Inventory City of Irvine and its Sphere of Influence	1985	Tustin	0-0.25
856	Padon, Beth	Archaeological and Paleontological Field Review: Irvine Business Complex, City of Irv	n.d.	Tustin	0.5-1
888	Mabry, Theo N.	Archaeological Survey Report for Proposed Campus Irvine/Bristol Intersection Improvements, Newport Beach, California	1981	Tustin	0.5-1
933	Bissell, Ronald M.	Cultural and Paleontological Resources Reconnaissance of the Long Range Development Plan Study Area, University of California, Irvine, Orange County, California	1988	Tustin	0.5-1
939	Bissell, Ronald M.	Archaeological Resources Reconnaissance of the Long Range Development Plan Study Area, University of California, Irvine, Orange County, California	1988	Tustin	0.5-1
1016	Leonard, Nelson N. III	Environmental Impact Evaluation: Route Alternates Between the Michelson Treatment Plant and Plants on the Santa Ana River, Orange County, California	1975	Newport Beach, Tustin	0.25-0.5
1027	Van Horn, David M.	Archaeological Survey Report: 20162 Birch Street, Santa Ana Heights, County of Orange	1990	Tustin	0.5-1
1097	Brown, Joan C.	Cultural Resources Reconnaissance of a 138 Acre Section of Upper Newport Bay Regional Park	1991	Newport Beach	0.5-1
1133	De Barros, Philip and Henry C. Koerper	Final Test Investigation Report and Request for Determination of Eligibility for 23 Sites Along the San Joaquin Hills Transportation Corridor	1990	Laguna Beach, San Juan Capistrano, Tustin	0.5-1
1189	Brown, Joan C.	Cultural Resources Reconnaissance of 11 Parcels of Land Located in Newport Beach, Orange County, California.	1992	Newport Beach, Tustin	0.5-1
1339	Demcak, Carol R. and Marie G. Cottrell	Report of Archaeological Investigations Performed in Association With the Upper Newport Bay Bike and Equestrian Trail	1985	Tustin	0.5-1
1380	Mason, Roger D.	Treatment Program for ORA-1358 in the Macarthur Segment, San Joaquin Hills Transportation Corridor Irvine, California Pursuant to 36 CFR 800.11	1994	Tustin	0.5-1
1708	Hurd, Gary S. and Macko, Michael E.	Test Program Results, Significance Evaluations, and Recommendations for Mitigation of Impacts at CA-ORA- 115a, -115b, -116, & -121b, University of California, Irvine, North Campus	1989	Tustin	0.5-1
1883	Getchell, Barbie Stevenson and John E. Atwood	Cultural Resources Survey of a 46 Acre Portion of the San Joaquin Freshwater Marsh Reserve, Irvine, Orange County, California	1998	Tustin	0.5-1

Report No. (OR-)	Author(s)	Title	Year	7.5' USGS Quad (s)	Distance from PSA
1890	Cottrell, Marie G.	Preliminary Report of Test Level Investigations Conducted at Archaeological Site CA-ORA-687, Bristol Street, Orange County, California	1978	Newport Beach	0.5-1
1920	Grenda, Donn R., Christopher J. Doolittle, and Jeffrey H. Altschul	House Pits and Middens	1998	Tustin	0.5-1
1952	Anonymous	Historic Property Survey Report, Route 73 and I-405 Improvements From Birch Street to I-405, From Bear Street to Euclid Street	1996	Newport Beach, Tustin	0.5-1
1985	Duke, Curt	Cultural Resource Assessment for Pacific Bell Mobile Services Facility Cm 482-05, County of Orange, California	1999	Tustin	0-0.25
2171	Getchell, Barbie	Archaeological Monitoring of the San Joaquin Reserve Enhancement Project in Irvine, Orange County	1999	Tustin	0.5-1
2238	Lapin, Philippe	Cultural Resource Assessment for Pacific Bell Mobile Services Facility Cm 299-01, County of Orange, Ca	2000	Tustin	0.5-1
2252	Robbins, Susan	Michelson Water Reclamation Plant Riparian Way and Duck Club Road Improvements	2000	Tustin	0.5-1
2256	Demcak, Carol R.	Cultural Resources Assessments for Orange County Sanitation Districts	1999	Anaheim, La Habra, Los Alamitos, Newport Beach, Orange, Seal Beach, Tustin, Yorba Linda	0-0.25
2301	Avina, Mike	Monitoring Report for Xo California Builds-1920 Maple Ave, El Segundo, California, and 4000 MacArthur Blvd., Newport Beach, California	2001	Tustin, Venice	0-0.25
2348	McKenna, Jeanette A.	Review of Cultural Resource Assessment/evaluation for Cingular Wireless Site Cm-299-04, Orange County, California	2001	Tustin	0.5-1
2448	Strudwick, Ivan H.	Results of Archaeological Testing at Site CA-ORA-121, Locus C, Near Upper Newport Bay Orange County, California	1999	Tustin	0.5-1
2478	Duke, Curt	Cultural Resource Assessment Cingular Wireless Facility No. Sc 062-01 Orange County, California	2001	Tustin	0.5-1
2492	Bolin, David P.	Proposed AT&T Wireless Telecommunications Equipment Installation 2525 Dupont Drive, Irvine, California 92612	2001	Tustin	0.5-1
2494	Thane, Michael D.	Proposed Sheraton Rooftop Site 4701 Von Karman Avenue Newport Beach, Orange County, California	2001	Tustin	0.25-0.5
3204	Padon, Beth	Archaeological and Paleontological Monitoring at the Campus Center Multi-family Apartments Expansion, Building C, in the City of Irvine	2006	Tustin	0.5-1

Report No. (OR-)	Author(s)	Title	Year	7.5' USGS Quad (s)	Distance from PSA
3233	Scott, Kim and Brodie, Julie Scrivner	Cultural Resources Monitoring Report for the Moffett Meadows Project City of Irvine, California	2005	Tustin	0.5-1
3261	Commendador-Dudgeon, Amy, Padon, Beth, and Stewart, J.D.	Archaeological and Paleontological Monitoring for the Plaza Irvine Development, Phase 1, City of Irvine, Orange County, California	2006	Tustin	0.5-1
3353	Schneeberger, Sandra L., Roeder, Mark, and Padon, Beth	Paleontological Resource Assessment Report of a ~3.5 Acre Site, Located at 18880 Douglas Drive, 92612 for the Carlyle Project, a Part of the Irvine Business Center (ibc) Development APN# 445-013-02	2006	Tustin	0.25-0.5
3354	Schneeberger, Sandra L., Drover, Christopher, and Schulga, Corry	Phase I Archaeological Resource Survey of a ~3.5 Acre Site, Located at 18880 Douglas Drive, City of Irvine, County of Orange, California, 92612 for the Carlyle Project, a Part of the Irvine Business Center (ibc) Development APN# 445-013-02	2006	Tustin	0.25-0.5
3499	Brown, Joan C.	Cultural Resources Monitoring for the Irvine Plaza Iii Project, City of Irvine, Orange County, California	2007	Tustin	0.5-1
3704	Brown, Joan C.	Cultural Resources Monitoring for the Irvine Plaza IV Project, City of Irvine, Orange County, California	2008	Tustin	0.5-1
3705	Getchel, Barbie and John E. Atwood	Cultural Resources Inventory of the San Joaquin Freshwater March Reserve Phase II Enhancement Plan Project Area In the City of Irvine, Orange County, California	2007	Tustin	0.5-1
3972	Kim, Steve	Proposed Federal Aviation Administration (FAA) Airport Surface Detection Equipment, Model X (ASDE-X) System to Serve John Wayne--Orange County Airport (SNA), Santa Ana, California	2007	Tustin	0.25-0.5
44	Desautels, Roger J.	Archaeological Survey Report on the Bristol Street Associates Proposed Development on Bristol Street in the Newport Beach Area of the County of Orange	1977	Newport Beach, Tustin	0.5-1
67	Desautels, Roger J.	Archaeological Survey Report on Lot 29 - Tract 224 Located in the Costa Mesa Area of Orange County	1977	Newport Beach	0.5-1
192	Desautels, Roger J.	Archaeological Survey Report on a Seven Acre Parcel of Property Located in the Live Oak Canyon Area of Orange County	1977	Newport Beach	0.5-1
273	Whitney, Nancy A., Lee Di Gregorio, and Roger J. Desautels	Archaeological Report: Surface Collection/index Sample - (Spiller Property) on Site CA-ORA-174, the Spiller Property, Located in the Santa Ana Heights Area of the County of Orange	1978	Newport Beach	0.5-1
305	Schroth, Adella	The History of Archaeological Research on Irvine Ranch Property: the Evolution of a Company Tradition	1979	Newport Beach, Tustin	Within

Report No. (OR-)	Author(s)	Title	Year	7.5' USGS Quad (s)	Distance from PSA
326	Desautels, Roger J.	Archaeological Report on the Proposed Orange County Water District Costa Mesa/ Huntington Beach Area of the County of Orange,	1978	Newport Beach	0.5-1
406	Cottrell, Marie and David Jacobs	Archaeological Excavations Conducted at the Bristol Street Site, CA-ORA-687, Locus I and II	1978	Newport Beach	0.5-1
607	Whitney-Desautels, Nancy A.	Archaeological Survey Report on the Acacia Offices Project, Opi-1, Located in the Santa Ana Heights Area of the County of Orange, California	1981	Newport Beach	0.5-1
770	Bissell, Ronald M.	Grading Observation at CA-ORA-687, the Bristol-Santa Ana Motel Site, Costa Mesa, Orange County, California	1984	Newport Beach	0.5-1
1069	Bissell, Ronald M.	Cultural Resources Reconnaissance of the Southernmost Portion of the Delhi Channel, Newport Beach, Orange County, California	1991	Newport Beach	0.5-1
1161	Mason, Roger D. and Brant A. Brechbiel	Cultural Resource Survey Report for the Santa Ana - Delhi Channel Improvements Project Facility No. F01	1991	Newport Beach	0.5-1
1279	Mason, Roger D. and Brant A. Brechbiel	Cultural Resource Monitoring Report: Archaeology for the Santa Ana - Delhi Channel Improvements Project Facility No. F01	1993	Newport Beach	0.5-1
1942	Padon, Beth	Archaeological Resource Archival Review and Monitoring for the Lake Shore Towers Project	1999	Tustin	0.5-1
2225	Strozier, Hardy	The Irvine Company Planning Process and California Archaeology- A Review and Critique	1978	Newport Beach, Tustin	Within
2233	Duke, Curt	Cultural Resource Assessment for Modifications to Cingular Wireless Facility Cm 902-01, County of Orange, California	2001	Newport Beach, Tustin	0.5-1
2534	Unknown	Annual Report to The Irvine Company from Archaeological Research, Inc.	1976	Newport Beach, Tustin	Within
2880	McLean, Deborah K.	Results of Cultural Resources Monitoring for the San Diego Creek North/fletcher Jones Motor Cars Project, City of Newport Beach, Orange County, California	1997	Tustin	0.5-1
4068	Fulton, Phil	Cultural Resource Assessment, Verizon Wireless Services, Airway Facility, City of Costa Mesa, Orange County, California	2010	Newport Beach, Tustin	0.5-1
4103	Fulton, Phil	Finding of Effect for the Route 73 Basin Sedimentation Project, Orange County, California, EA 0H4400	2009	Newport Beach, Tustin	0.25-0.5
4232	Bonner, Wayne	Cultural Resources Records Search and Site Visit Results for TowerCo Candidate CA2454 (Orange County Airport), 350 McCormick, Avenue, Costa Mesa, Orange County, California	2012	Tustin	0.5-1

The records search determined that there are no cultural resources within the Project boundaries. Outside the Project boundaries but within the one-mile radius are 12 resources: 11 prehistoric

sites and one historic site (Table 4). None of the previously-recorded resources are listed as eligible for the CRHR.

Table 4. Previously Recorded Sites within a One-mile Radius of the Project

Site Number	Site Type and Description	7.5' USGS Quad	Date Recorded	Distance from PSA
P-30-000057	Prehistoric habitation site and shell midden and	Tustin	1949	0.5-1
P-30-000057H	Historic San Joaquin Gun Club	Tustin	1993	0.5-1
P-30-000077	Prehistoric shell midden	Tustin	1949	0.5-1
P-30-000115	Prehistoric shell midden	Tustin	1963	0.5-1
P-30-000116	Prehistoric habitation site and shell midden	Tustin	1963	0.5-1
P-30-000121	Prehistoric processing site, habitation site, and shell midden	Tustin	1963	0.5-1
P-30-000192	Prehistoric shell midden	Tustin	1966	0.5-1
P-30-000174	Prehistoric shell midden	Newport Beach	1981	0.5-1
P-30-001223	Prehistoric shell midden	Newport Beach	1990	0.5-1
P-30-000347	Prehistoric habitation site and shell midden	Tustin	1979	0.5-1
P-30-000348	Prehistoric shell midden	Tustin	1972	0.5-1
P-30-000687	Prehistoric shell midden	Newport Beach	1965	0.5-1

OTHER SOURCES

In addition to the records at the SCCIC, a variety of additional sources were consulted by Wilson in February 2018 to obtain information regarding the PSA (Table 4). Sources include the National Register of Historical Places, California Register of Historic Resources, California Historical Resources Inventory, California Historical Landmarks, California Points of Historical Interest and local historical registers (Table 5).

Table 5. Additional Sources Consulted

Source	Results
National Register of Historic Places (NRHP; 1979-2002 & supplements)	Negative
Historic United States Geological Survey topographic maps	The earliest available map, Santa Ana 1896 15-minute topographic map shows the PSA located next to a marshy environment with no development in the vicinity. The Tustin 1925 1:31,680 scale map shows the development of some roads (Bristol St, formally Palisades Road and Jamboree Road) in the Project vicinity but the PSA remains undeveloped. By the Tustin 1948 7.5-minute topographic map MacArthur Boulevard appears to the east of the PSA. The Tustin 1965 7.5-minute topographic map show an increase in development with buildings present to the northwest of the PSA. The present buildings within the PSA appear by the 1981 Tustin 7.5-minute topographic map.
Historic United States Department of Agriculture aerial photos	The earliest aerial for the PSA is from 1938 and shows the PSA completely undeveloped. The 1946 aerial shows the PA undeveloped; however, MacArthur Blvd is present to the east of the PSA. The 1972 aerial shows commercial development in which the local roads are paved and the PA as well as nearby parcels are graded. By 1980 the PA and surrounding are built up and appear as they do today.
California Register of Historical Resources (CRHR; 1992-2010)	Negative
California Historical Resources Inventory (HRI; 1976-2010)	Negative
California Historical Landmarks (CHL; 1995 & supplements to 2010)	Negative
California Points of Historical Interest (CPHI; 1992 to 2010)	Negative
Local Historical Register Listings (Local; City of Newport Beach 2011)	Negative
Bureau of Land Management General Land Office Records	Positive: 1867 Jose Sepulveda; 1883 Juan Pablo Peralta, Antonio Yorba, Bernardo Yorba, and Heirs of Bernardo Yorba-Both Spanish/Mexican Grants

NATIVE AMERICAN CONSULTATION

The Native American Heritage Commission (NAHC) was contacted on January 10, 2018 to perform a search of the Sacred Lands File (SLF). The NAHC responded on January 11, 2018 stating there were no known sacred sites or heritage resources in the immediate vicinity of the PSA (Appendix C). The City of Newport Beach sent AB 52 consultation letters via email on January 3, 2018 to two tribal organizations, the Gabrieleno Band of Mission Indians – Kizh Nation and the Juaneno Band of Mission Indians Acjachemen Nation, who had previously requested to be notified by the City regarding proposed projects. The City did not receive a response from either tribal organization within the 30-day consultation period.

SURVEY

METHODS

The survey stage is an important part of the project's environmental assessment phase. All undeveloped ground surface areas within the ground disturbance portion of the PSA are examined. Existing ground disturbances (e.g., cutbanks, ditches, animal burrows, etc.) will be visually inspected. Photographs of the project including ground surface visibility and items of interest, will be taken with a digital camera.

For paleontological resources, the purpose is to confirm that field observations conform to the geological maps of the PSA. Sediments are assessed for their potential to contain fossils. Additionally, if there are known paleontological resources the survey will verify the exact location of those resources, the condition or integrity of each resource, and the proximity of the resource to the PSA.

For cultural resources, the purpose is to verify the exact location of each identified cultural or paleontological resource, the condition or integrity of the resource, and the proximity of the resource to areas of cultural resources sensitivity. The surveyor will search for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), or historic-era debris (e.g., metal, glass, ceramics).

RESULTS

An intensive archaeological and paleontological pedestrian survey was conducted by Megan Wilson of the entire 5.69 acre PSA on February 2, 2018. Ground visibility throughout the PSA was poor (less than five percent) because the entire PSA is developed and occupied by an eclectic mix of commercial buildings, paved parking lots, and interconnected brick-lined concrete walkways and courtyards (Figure 6). Areas that were not hardscaped were landscaped with grass lawns or ornamental shrubs and trees. All exposed ground consisted of imported soils to maintain landscaping and no native sediments were observed (Figure 7). No native vegetation was observed. No archaeological or paleontological resources were encountered during the survey.

Figure 6. Example of a concrete and landscaped walkway between business, view east

Figure 7. Exposed landscaping soils at the corner of Scott Dr. and Dove St. view northeast

PALEONTOLOGICAL SENSITIVITY

A multilevel ranking system was developed by professional resource managers within the Bureau of Land Management (BLM) as a practical tool to assess the sensitivity of sediments for fossils. The Potential Fossil Yield Classification (PFYC) system (BLM 2008; Appendix D) has a multi-level scale based on demonstrated yield of fossils. The PFYC system provides additional guidance regarding assessment and management for different fossil yield rankings.

Fossil resources occur in geologic units (e.g., formations or members). The probability for finding significant fossils in a project area can be broadly predicted from previous records of fossils recovered from the geologic units present in and/or adjacent to the study area. The geological setting and the number of known fossil localities help determine the paleontological sensitivity according to PFYC criteria.

Sediments that are close to their basement rock source are typically coarse; those farther from the basement rock source are finer. The chance of fossils being preserved greatly increases once the average size of the sediment particles is reduced to 5 mm in diameter or less. Moreover, fossil preservation also greatly increases after natural burial in rivers, lakes, or oceans. Remains left on the ground surface become weathered by the sun or consumed by scavengers and bacterial activity, usually within 20 years or less. So the sands, silts, and clays of rivers, lakes, and oceans are the most likely sediments to contain fossils.

Using the PFYC system, geologic units are classified according to the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts within the known extent of the geological unit. Although significant localities may occasionally occur in a geologic unit, a few widely scattered important fossils or localities do not necessarily indicate a higher PFYC value; instead, the relative abundance of localities is intended to be the major determinant for the value assignment.

Based on other recorded localities, Pleistocene fossils typically begin appearing about 8 to 10 feet deep in California valleys. Shallower sediments in the valleys usually do not contain the remains of extinct animals, although Holocene (less than 11,700 years old) remains may be present. Artificial fill is expected to be present at the surface and is assigned a very low sensitivity (PFYC 1). The late to middle Pleistocene paralic deposits overlain by alluvial fans are assigned a moderate but patchy sensitivity (PFYC 3a) throughout.

DEFINITION OF SIGNIFICANCE FOR PALEONTOLOGICAL RESOURCES

Only qualified, trained paleontologists with specific expertise in the type of fossils being evaluated can determine the scientific significance of paleontological resources. Fossils are considered to be significant if one or more of the following criteria apply:

1. The fossils provide information on the evolutionary relationships and developmental trends among organisms, living or extinct;
2. The fossils provide data useful in determining the age(s) of the rock unit or sedimentary stratum, including data important in determining the depositional history of the region and the timing of geologic events therein;
3. The fossils provide data regarding the development of biological communities or interaction between paleobotanical and paleozoological biotas;
4. The fossils demonstrate unusual or spectacular circumstances in the history of life;
5. The fossils are in short supply and/or in danger of being depleted or destroyed by the elements, vandalism, or commercial exploitation, and are not found in other geographic locations.
6. All identifiable vertebrate fossils are considered significant due to the rarity of their preservation.

As so defined, significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, uncommon, or diagnostically important. Significant fossils can include remains of large to very small aquatic and terrestrial vertebrates or remains of plants and invertebrate animals previously not represented in certain portions of the stratigraphy. Assemblages of fossils that might aid stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, and paleoclimatology are also critically important (Scott and Springer 2003; Scott et al. 2004).

CONCLUSIONS AND RECOMMENDATIONS

PALEONTOLOGICAL RESOURCES

Based on other recorded localities, Pleistocene fossils typically begin appearing about 8 to 10 feet deep in California valleys. Although the depths of the localities near to the PSA are 15-30 feet deep, most of the fossils were recovered from highway or housing excavations. Artificial fill is expected to be present at the surface and is assigned a very low sensitivity (PFYC 1). The late to middle Pleistocene paralic deposits overlain by alluvial fans are assigned a moderate but patchy sensitivity (PFYC 3a) throughout.

Planned cut depths are approximately five feet deep in fill for the majority of the project for the removal of the artificial fill. Utilities are expected to be up to eight feet deep. As fossils in our valleys usually begin appearing below the maximum depths of excavation, no paleontological monitoring is currently recommended for the project. If unanticipated fossils are unearthed during construction, work should be halted in that area until a qualified paleontologist can assess the significance of the find. Work may resume immediately a minimum of 50 feet away from the find.

CULTURAL RESOURCES

No cultural resources are known within the PSA. However, within a one-mile radius of the PSA, there are four prehistoric habitation and shell midden sites as well as six shell midden sites. Although the PSA is developed, the presence of open lagoons, estuaries, and seasonal freshwater wetlands prior to urbanization within close proximity of the PSA and the prehistory of the area, there is a possibility that the PSA may contain significant subsurface prehistoric resources. The PSA is considered to have moderate sensitivity for cultural resources and it is recommended that archaeological monitoring by a qualified archaeologist be on site during ground disturbing activities.

In the event of an unanticipated discovery, all work must be suspended within 50 feet of the find until a qualified archaeologist evaluates it. In the unlikely event that human remains are encountered during project development, all work must cease near the find immediately.

In accordance with California Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods. Work may not resume in the vicinity of the find until all requirements of the health and safety code have been met.

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Scott, E., K. Springer, and J. C. Sagebiel
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APPENDIX A: QUALIFICATIONS

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

MOLLY VALASIK
Principal Investigator for Archaeology

EDUCATION

2009 M.A., Anthropology, Kent State University, Kent, Ohio
2006 B.A., Anthropology, Ohio State University, Columbus, Ohio

EXPERIENCE

Ms. Valasik is a Registered Professional Archaeologist with nine years of professional experience. She is a skilled professional who is well-versed in the compliance procedures of CEQA and Section 106 of the NHPA and regularly prepares cultural resources assessment reports for a variety of federal, state, and local agencies throughout California. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation.*

SELECTED PROJECTS

Old Town Streetscape, Phase 2, Caltrans District 3, City of Elk Grove, Sacramento County, CA. The City proposed construction of bump outs, sidewalk widening, bus lanes, etc. within a National Register-listed historic district. Managed cultural studies including record search, Sacred Lands File search, Native American consultation, intensive-level pedestrian archaeological and architectural surveys, as well as coordination and approval by District 3 of an APE map. Author of Archaeological Survey Report and Historic Properties Survey Report. Sub to Michael Baker/PMC. Principal Investigator for Archaeology. 2016

SR-138 Palmdale Boulevard PA/ED (Sierra Highway), Caltrans District 7, City of Palmdale, Los Angeles County, CA. The project involved widening State Route 138 and Sierra Highway. Managed cultural studies including record search, Sacred Lands File search, Native American consultations, and intensive-level pedestrian archaeological survey, as well as coordinated approval by District 7 of an APE map. Co-author of the Archaeological Survey Report and Historic Properties Survey Report. Principal Investigator for Archaeology. 2016

Paradise Valley Specific Plan, County of San Bernardino, near Indio, CA. The project, encompassing 5,411 acres, consists of the construction of a planned community. Directed archaeological survey and extended Phase I activities. Lead author of assessment report. Managed subsequent supplemental survey and updated report. Principal Investigator for Archaeology. 2016

Arlington Avenue Widening, Caltrans District 8, City of Riverside Public Works, Riverside County, CA. The City proposed widening Arlington Avenue one linear mile in order to construct safety improvements. Managed cultural studies including record search, Sacred Lands File search, Native American consultations, and intensive-level pedestrian archaeological survey of the 5-acre site with negative results, as well as coordinated approval by District 8 of an APE map. Co-author of the Archaeological Survey Report and Historic Properties Survey Report. Project Manager/Co-Principal Investigator. 2015

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

DESIREÉ RENEÉ MARTINEZ
QA/QC

EDUCATION

1999 M.A., Anthropology (Archaeology), Harvard University, Cambridge
1995 B.A., Anthropology, University of Pennsylvania, Philadelphia

SUMMARY QUALIFICATIONS

Ms. Martinez is a qualified archaeologist with 21 years of experience in archaeological fieldwork, research, and curation. She has expertise in the planning, implementation, and completion of all phases of archaeological work and has participated in archaeological investigations as a crew member, tribal monitor, and principal researcher. She meets national standards in archaeology set by the Secretary of Interior's *Standards and Guidelines for Archaeology and Historic Preservation* and the standards outlined in Attachment 1 to Caltrans Section 106 Programmatic Agreement with the FHWA. Her experience also includes compliance with CEQA, NEPA, NAGPRA, SB 18 and other cultural resource laws. In addition, Ms. Martinez has vast experience in lab analysis and museum collections management. Ms. Martinez also has extensive experience consulting with Native American leaders and community members in a variety of contexts.

SELECTED PROJECTS

I-10 Grove Avenue Interchange and Grove Avenue Corridor Improvements, Caltrans District 8, Ontario, San Bernardino County, CA. Managed literature and Sacred Lands searches, Native American consultation, pedestrian survey for the 22.6 acre APE and preparation of an Archaeological Survey Report (ASR) and Paleontological Identification Report (PIR) on behalf of the City. CEQA and NHPA Section 106 compliance. Sub to Parsons. QA/QC. 2015-2017

High Desert Corridor/ SR-138 Widening Project, Caltrans District 7 On-Call (07A3145)/LA Metro, Los Angeles and San Bernardino Counties, CA. This project proposed by Caltrans and Metro involves construction of a new, approximately 63-mile long, east-west freeway/expressway and rail line between SR-14 in Los Angeles County and SR-18 in San Bernardino County. Phase II/III testing and data recovery at the three sites that will be directly impacted by the project. Analyzed lithic material. Compliance with Section 106 of the NHPA and CEQA are required. Sub to Parsons Transportation Group. QA/QC. 2015-2016

SR-138 Palmdale Boulevard Improvements (Sierra Highway), Caltrans District 7, Palmdale, Los Angeles County, CA. The project involves widening and modifying three southbound lanes on Sierra Highway to Avenue R at the railroad crossing. Conducted a cultural resources assessment to support the Project environmental documents (IS/MND) in compliance with NEPA and CEQA. Services for this Local Assistance Project, on behalf of the City of Palmdale, included records search, Sacred Lands File search, Tribal consultation, intensive-level field survey, finalization of the 56-acre APE map in concurrence with Caltrans District 7, and preparation of an ASR technical report to SER standards. Sub to Parsons. QA/QC. 2015-2016

Dune Palms Bridge, Caltrans District 8, La Quinta, Riverside County, CA. The project involves replacing a low water crossing at the Coachella Valley Storm Water Channel. Conducted supplemental archaeological survey and site documentation as part of Cogstone's larger effort involving a record search, sacred lands search, NAHC consultation, intensive field survey, and APE mapping. Sub to Parsons Brinckerhoff. QA/QC.. 2015-2016

Folsom Boulevard Streetscape Enhancement, Caltrans District 3, Rancho Cordova, Sacramento County, CA. For this local assistance project on behalf of the City of Rancho Cordova, services included preparation of HPSR/ASR. Cogstone conducted record search, requested sacred lands search, conducted NAHC consultation, and performed intensive-level pedestrian archaeological survey, as well as coordination and approval by District 3 of an APE map. Sub to Michael Baker/PMC. QA/QC. 2015-2016

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

SHERRI GUST
Author

EDUCATION

1994 M. S., Anatomy (Evolutionary Morphology), University of Southern California, Los Angeles
1979 B. S., Anthropology (Physical), University of California, Davis

SUMMARY QUALIFICATIONS

Ms. Gust is an Orange County Certified Professional Paleontologist and Archaeologist and a Registered Professional Archaeologist with more than 34 years of experience in cultural resources management. She is accepted as a principal investigator for both prehistoric and historical archaeology by the State Office of Historic Preservation's Information Centers and exceeds the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. She has managed more than 650 projects at Cogstone and has a reputation for professional work, regulatory compliance and client satisfaction. She has conducted technical studies and prepared cultural resources chapters for CEQA/EIR compliance documents for project-level and program-level Specific Plans, General Plans, Master Plans, and Zoning Amendments for mixed-use, residential, commercial and industrial developments. She has expertise in research, survey, assessment of impacts/effects, significance criteria and determinations, management plans, mitigation implementation, and bone identification and analysis.

SELECTED PROJECTS

Cultural Resources Management Plan, Bolsa Chica Conservancy, Huntington Beach, CA.
Project Manager and Co-Principal Investigator. Principal Author of plan for Native Vegetation Restoration in Harriet Wieder Regional Park. Work was required to meet Coastal Commission standards as well as requirements of the EIR mitigation measures and involved extensive Native American coordination. 2017

Historic Town Center Master Plan Update EIR, **San Juan Capistrano, CA.** Conducted a survey and assessment to determine the potential effects on cultural resources of potential changes to the Historic Town Center Master Plan area in support of a project-level EIR. Supervised archaeological and paleontological record searches, research, and survey plus Native American consultation for the 31-acre town center. Evaluated resources, including updated site records and impact assessment. Sub to the Templeton Planning Group. Principal Archaeologist. 2011

Shea Baker Ranch EIR, Lake Forest, Orange County, CA. Prepared an Archaeological and Paleontological Programmatic Assessment Report to update existing mitigation measures for a 387-acre residential and mixed-use community development project under subcontract to The Planning Center. Principal Investigator. 2011

Irvine Business Complex, Planning Area 36, Irvine, Orange County, CA. Determined the potential effects on paleontological, archaeological and historical resources of planned development of the 2,800-acre Irvine Business Complex which comprises Planning Area 36. Prepared a Paleontological and Archaeological Evaluation Report. This study was requested by the City of Irvine to meet their responsibilities as the lead agency under California Environmental Quality Act under subcontract to The Planning Center. Principal Investigator. 2008

Los Alamitos General Plan Update, City of Los Alamitos, Orange County, CA. Conducted a paleontological and cultural resources technical study to support an update of the General Plan environmental documents. Subcontractor to The Planning Center. 2011

cogstone
PALEONTOLOGY - ARCHAEOLOGY - HISTORY

KIM SCOTT
Principal Investigator for Paleontology

EDUCATION

2013 M.S., Biology with a paleontology emphasis, California State University, San Bernardino
2000 B.S., Geology with paleontology emphasis, University of California, Los Angeles

SUMMARY QUALIFICATIONS

Scott has more than 20 years of experience in California paleontology. She is a qualified geologist and field paleontologist with extensive survey, monitoring and fossil salvage experience. In addition, she has special skills in fossil preparation (cleaning and stabilization) and preparation of stratigraphic sections and other documentation for fossil localities. Scott serves as company safety officer and is the author of the company safety and paleontology manuals.

SELECTED PROJECTS

Coto de Caza EIR Subdivision, Coto de Caza, Orange County, CA. The project proposes the subdivision of an existing large estate for development of 28 new residential lots on approximately 50-57 acres of land. Proposed residential lots will be a minimum of one acre in size. Prepared a Paleontological Assessment Report. Contracted to Bill Lyon. Co-Principal Paleontologist/Report Co-author. 2015.

Little Corona, Newport Beach, Orange County, CA. The project is part of the Newport Coast Watershed Management Plan and proposes the diversion of water from Buck Gully Creek into a subsurface infiltration gallery in which the Creek water will be percolated through the sand in order to improve beach conditions. Prepared the Archaeological and Paleontological Assessment Report. Contracted to Michael Baker RBF. Co-Principal Paleontologist/Report Co-author. 2015.

Center Avenue, Huntington Beach, Orange County, CA. The project consisted of constructing an underground parking structure. Sub to Avalon Bay. Supervised archaeological and paleontological field work and prepared the Archaeological and Paleontological Monitoring report. Field and Laboratory Director/ Report Co-author. 2014.

Gene Autry Way, Caltrans District 12, Anaheim, Orange County, CA. Project consisted of extending Gene Autry Way westward from 2,400 feet east of Interstate 5 to Haster Street (6 lanes wide), widening approximately 1,575 feet of Haster Street (520 feet south of Katella Avenue to 600 feet north of Orangewood Avenue) from 4 to 6 lanes plus a center turn lane, and completion of the Gene Autry Way overpass. Prepared a Paleontological Monitoring Report. Contracted to C. C. Myers. Field and Laboratory Director/Report Co-author. 2011-2012.

State Route 57 Northbound Widening Project, Caltrans District 12/ Orange County Transportation Authority (OCTA), Fullerton, Orange County, CA. Caltrans widening to State Route 57 between Lambert and Yorba Linda Avenue. Supervised paleontological monitoring and prepared the Paleontological Monitoring report. Under contract to CC Myers. Field and Laboratory Supervisor/Report Co-author. 2011-2012.

Interstate 5 and Ortega Highway Interchange, San Juan Capistrano, Orange County, CA. The project consisted of reconfiguring the interchange. Sub to ECORP Consulting. Co-authored Paleontological Literature Review. Field and Laboratory Director/ Report Co-author. 2006.

Central Park West Project, Irvine, Orange County, CA. The project consisted of building a housing development with underground parking. Supervised archaeological and paleontological field work and co-authored the Archaeological and Paleontological Assessment and monitoring reports. Sub to Lennar Communities. Field and Laboratory Director/ Report Co-author. 2005-2010.

MEGAN PATRICIA WILSON, RPA
Archaeologist/GIS

EDUCATION

2014 M.A. Anthropology, California State University, Fullerton *cum laude*
2013 GIS Certificate, California State University, Fullerton
2006 B.A., Anthropology, University of California, Los Angeles *cum laude*

SUMMARY QUALIFICATIONS

Ms. Wilson is a Registered Professional Archaeologist (RPA) and cross-trained paleontologist. Ms. Wilson regularly conducts records searches, tribal consultations, completes DPR site records, and gathers historic building information from local municipalities, and assists in drafting archaeological assessment reports for state, federal, and private development projects. She meets the qualifications required by the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation*. Further, she is certified in Geographic Information Systems (GIS) and specializes in ESRI's ArcGIS software. Ms. Wilson is responsible for supervising GIS data collection and management, geospatial analysis, and the production of GIS maps and databases for large and small-scale projects. Ms. Wilson has seven years of experience in southern California archaeology.

SELECTED PROJECTS

Park Place Extension and Grade Separation EIR EA, Caltrans District 7, El Segundo, Los Angeles County, CA. Conducted a pedestrian survey to record and evaluate cultural resources within the archaeological and architectural APEs for a ~0.5-mile project along NBSF and UPRR rail lines and spur tracks on behalf of the City of El Segundo for HPSR/ASR/HRER and paleontological reports. Seven built-environment resources were identified, evaluated, and DPR 523 forms were prepared. Archaeologist. 2017

Whittier Boulevard / I-605 Arterial Hot Spot Improvements, Environmental Clearance and Preliminary Engineering for Three Intersection Improvements, Whittier, Los Angeles County, CA. Conducted an intensive-level cultural resources survey to support cultural and paleontological resources technical studies for improvements proposed for three intersections in a disturbed urban environment. Drafted APE maps, records search, Sacred Lands search, and NAHC consultation for intersections at Colima Road, Santa Fe Springs Road and Painter Avenue. Archaeologist. 2016

Hidden Oaks Country Club Specific Plan and TT 18869, Chino Hills, San Bernardino County, CA. Prepared report maps, conducted cultural and paleontological resources assessments and assisted the City with SB 18 compliance. Services included records search, drafting project maps, Sacred Lands search, NAHC consultation, field survey, and mitigation recommendations. Cogstone responded to the cultural section of the project EIR comment for this proposed 537-acre residential. Archaeologist. 2015-2016

On-Call Cultural Resources Services, Sanitation Districts of Los Angeles County, CA. Prepared APE maps, conducted record searches, NAHC consultation, field surveys, and prepared DPR forms to support upgrades and improvements to pipelines at Mesquite Landfill, Clearwater, and Santa Clarita facilities. Archaeologist. 2015-2016

Accelerated Charter Elementary School, Los Angeles Unified School District, Los Angeles, Los Angeles County, CA. The project involves documentation of five historic-age buildings prior to demolition, background research, mitigation monitoring plans, archaeological and paleontological monitoring and preparation of a monitoring compliance report. LAUSD is constructing a new facility on a 2.3-acre site in South Central Los Angeles consisting of classrooms, open areas and parking. Drafted project related maps, conducted background research and contributed to preparation of DPR forms. Archaeologist. 2015

Sweany Pipeline, Phase II, Laguna Beach County Water District, Orange County, CA. Completed a cultural resources assessment; conducted archaeological/paleontological records search, NAHC consultation, and drafted project maps for inclusion in a CEQA environmental document. Archaeologist. 2014

APPENDIX B: PALEONTOLOGICAL RECORDS SEARCH

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

1 February 2018

Cogstone Resource Management, Inc.
1518 West Taft Avenue
Orange, CA 92865-4157

Attn: Megan Wilson, Archaeologist & GIS Technician

re: Vertebrate Paleontology Records Check for paleontological resources for the proposed Newport Crossing Project, Cogstone Project # 4214, in the City of Newport Beach, Orange County, project area

Dear Megan:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Newport Crossing Project, Cogstone Project # 4214, in the City of Newport Beach, Orange County, project area as outlined on the portion of the Tustin USGS topographic quadrangle map that you sent to me via e-mail on 18 January 2018. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities nearby from the same sedimentary deposits that probably occur subsurface in the proposed project area.

According to the geologic mapping, the entire proposed project area has surface exposures of marine younger Quaternary Terrace deposits, although our vertebrate fossil localities in this area almost always contain terrestrial fossil vertebrates. These deposits typically do not contain significant vertebrate fossils in the uppermost layers, but they are usually underlain by older Quaternary deposits that frequently do contain significant vertebrate fossils. Our closest vertebrate fossil locality from these deposits is LACM 4219, west-southwest of the proposed project area in a roadcut for the Newport Freeway near Santa Isabel Avenue, that produced fossil sea turtle, Cheloniidae, and camel, Camelidae, bones in coarse poorly sorted friable sands about 30 feet below the grade of Newport Boulevard. Further to the southwest of

the proposed project area, near the intersection of 19th Street and Anaheim Avenue, our locality LACM 3267 produced a fossil specimen of undetermined elephant, Proboscidea. Just north of west of the proposed project area, along Adams Avenue near the top of the mesa bluffs east of the Santa Ana River, our locality LACM 1339 produced fossil specimens of mammoth, *Mammuthus*, and camel, Camelidae, bones in sand approximately 15 feet below the top of the mesa that is overlain by shell bearing silts and sands. We further have a large number of localities from the marine and terrestrial Late Pleistocene terraces deposits on the east side of Upper Newport Bay. Those localities have produced an extensive composite fauna.

Surface grading or very shallow excavations in the younger Quaternary deposits exposed in the proposed project area probably will not uncover significant vertebrate fossil remains. Deeper excavations that extend down into older Quaternary deposits, however, may well encounter significant fossil vertebrate specimens. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

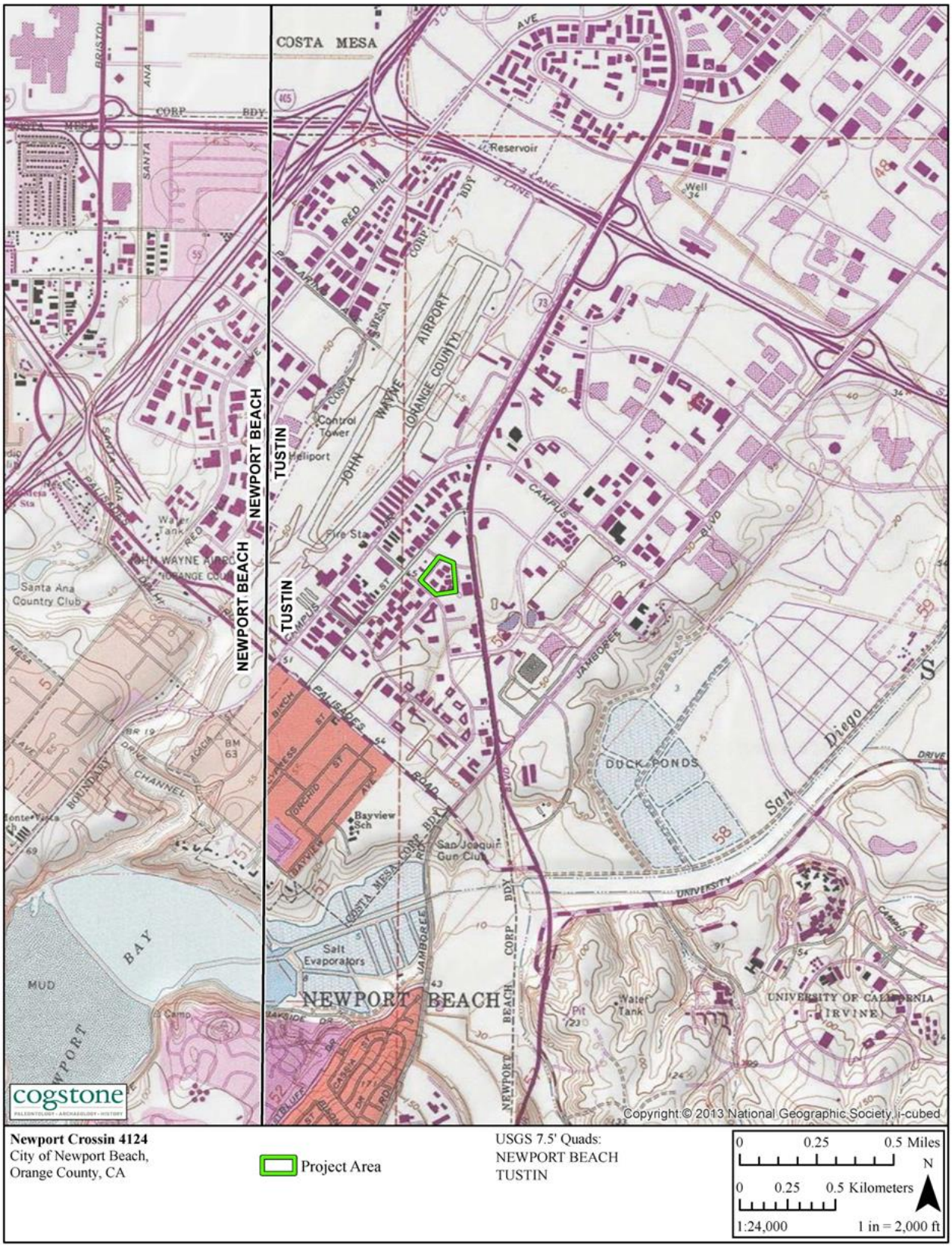
Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

enclosure: invoice

APPENDIX C: NATIVE AMERICAN CONSULTATION

COGSTONE SACRED LANDS SEARCH	
DATE	January 10, 2017
COGSTONE PROJECT NUMBER:	4124
COGSTONE PROJECT NAME:	Newport Crossing
PROJECT DESCRIPTION:	The project proposes a mixeduse residential development consisting of up to 350 residential units, 7,500 square feet of commercial retail, and 0.50-acre neighborhood park (public) to be located on a 5.69-acre property currently occupied by the 58,277 square-foot MacArthur Square shopping center.
USGS 7.5' QUAD:	Tustin
COUNTY:	Orange
Township, Range, and Section	T: 6S, R: 9W, Section 7
ACRES:	5.69
TYPE OF SEARCH:	Sacred Lands
1:24000 map attached	√
Thank you.	
Please Email or Fax to:	Megan Wilson 1518 W. Taft Ave. Orange, CA 92865 (714) 974-8300 x105 (714) 974-8303 fax mwilson@cogstone.com


COSTA MESA
NEWPORT BEACH
TUSTIN
NEWPORT BEACH
TUSTIN
Reservoir
Well
Control Tower
Heliport
Fire Sta
Water Tank
Santa Ana Country Club
Bayview Sch
San Joaquin Gun Club
Salt Evaporators
DUCK PONDS
BAY
MUD
NEWPORT BEACH
UNIVERSITY OF CALIFORNIA IRVINE
Water Tank
Pit
Copyright © 2013 National Geographic Society, i-cubed
cogstone
Newport Crossin 4124
City of Newport Beach,
Orange County, CA
Project Area
USGS 7.5' Quads:
NEWPORT BEACH
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1 in = 2,000 ft

STATE OF CALIFORNIA — Edmund G. Brown, Jr., Governo

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

January 11, 2018

Megan Wilson
Cogstone

Sent by E-mail: mwilson@cogstone.com

RE: Proposed Newport Crossing Project, City of Newport Beach; Tustin USGS Quadrangle, Orange County, California

Dear Ms. Wilson:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

Attached is a list of tribes culturally affiliated to the project area. I suggest you contact all of the listed Tribes. If they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst
(916) 373-3714

Native American Heritage Commission
Native American Contact List
Orange County
1/11/2018

Campo Band of Mission Indians
Ralph Goff, Chairperson
36190 Church Road, Suite 1 — Kumeyaay
Campo, CA, 91906
Phone: (619) 478 - 9046
Fax: (619) 478-5818
rgoff@campo-nsn.gov

Ewiiaapaayp Tribal Office
Michael Garcia, Vice Chairperson
4054 Willows Road — Kumeyaay
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126
michaelg@leaningrock.net

Ewiiaapaayp Tribal Office
Robert Pinto, Chairperson
4054 Willows Road — Kumeyaay
Alpine, CA, 91901
Phone: (619) 445 - 6315
Fax: (619) 445-9126

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chariperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
gabrielenoindians@yahoo.com

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

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

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

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

Jamul Indian Village
Erica Pinto, Chairperson
P.O. Box 612 — Kumeyaay
Jamul, CA, 91935
Phone: (619) 669 - 4785
Fax: (619) 669-4817

Juaneno Band of Mission Indians
Sonia Johnston, Chairperson
P.O. Box 25628 — Juaneno
Santa Ana, CA, 92799
sonia.johnston@sbcglobal.net

Juaneno Band of Mission Indians Acjachemen Nation - Belardes
Joyce Perry, Tribal Manager
4955 Paseo Segovia — Juaneno
Irvine, CA, 92603
Phone: (949) 293 - 8522
kaamalam@gmail.com

Juaneno Band of Mission Indians Acjachemen Nation - Belardes
Matias Belardes, Chairperson
32161 Avenida Los Amigos — Juaneno
San Juan Capisttrano, CA, 92675
Phone: (949) 293 - 8522

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 Newport Crossings Mixed Use Residential Project, Orange County.

PROJ-2017-006115 — 01/11/2018 10:36 AM — 1 of 3

Native American Heritage Commission
Native American Contact List
Orange County
1/11/2018

Juaneno Band of Mission Indians Acjachemen Nation - Romero
Teresa Romero, Chairperson
31411-A La Matanza Street — Juaneno
San Juan Capistrano, CA, 92675
Phone: (949) 488 - 3484
Fax: (949) 488-3294
tromero@juaneno.com

La Posta Band of Mission Indians
Gwendolyn Parada, Chairperson
8 Crestwood Road — Kumeyaay
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
LP13boots@aol.com

La Posta Band of Mission Indians
Javaughn Miller, Tribal Administrator
8 Crestwood Road — Kumeyaay
Boulevard, CA, 91905
Phone: (619) 478 - 2113
Fax: (619) 478-2125
jmiller@LPtribe.net

Manzanita Band of Kumeyaay Nation
Angela Elliott Santos, Chairperson
P.O. Box 1302 — Kumeyaay
Boulevard, CA, 91905
Phone: (619) 766 - 4930
Fax: (619) 766-4957

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 — Kitanemuk
Newhall, CA, 91322 — Serrano
Phone: (760) 885 - 0955 — Tataviam
tsen2u@hotmail.com

San Pasqual Band of Mission Indians
John Flores, Environmental Coordinator
P. O. Box 365 — Kumeyaay
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
johnf@sanpasqualtribe.org

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
P.O. Box 365 — Kumeyaay
Valley Center, CA, 92082
Phone: (760) 749 - 3200
Fax: (760) 749-3876
allenl@sanpasqualtribe.org

Sycuan Band of the Kumeyaay Nation
Lisa Haws, Cultural Resources Manager
1 Kwaaypaay Court — Kumeyaay
El Cajon, CA, 92019
Phone: (619) 312 - 1935
lhaws@sycuan-nsn.gov

Sycuan Band of the Kumeyaay Nation
Cody J. Martinez, Chairperson
1 Kwaaypaay Court — Kumeyaay
El Cajon, CA, 92019
Phone: (619) 445 - 2613
Fax: (619) 445-1927
ssilva@sycuan-nsn.gov

Viejas Band of Kumeyaay Indians
Julie Hagen,
1 Viejas Grade Road — Kumeyaay
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337
jhagen@viejas-nsn.gov

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 Newport Crossings Mixed Use Residential Project, Orange County.

Native American Heritage Commission
Native American Contact List
Orange County
1/11/2018

Viejas Band of Kumeyaay Indians
Robert Welch, Chairperson
1 Viejas Grade Road
Alpine, CA, 91901
Phone: (619) 445 - 3810
Fax: (619) 445-5337
jhagen@viejas-nsn.gov

Kumeyaay

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 Newport Crossings Mixed Use Residential Project, Orange County.

PROJ-2017-006115 | 01/11/2018 10:36 AM | 3 of 3

CITY OF NEWPORT BEACH
100 Civic Center Drive
Newport Beach, California 92660
949 644-3200
newportbeachca.gov/communitydevelopment

January 3, 2018

Andrew Salas, Chairman
Gabrieleno Band of Mission Indians – Kizh Nation
P.O Box 393
Covina, CA 91723
gabrielenoindians@yahoo.com

Send Via Emailing

Subject: AB52 Tribal Consultation for Newport Crossings Mixed-Use Project, Newport Beach, CA (PA2017-107)

Dear Mr. Salas,

The City of Newport Beach Planning Division is sending you this notification to consult and declare the importance of your tribe's participation in the planning process for the development of mixed-use residential project known as Newport Crossings Project.

Project Location:
The subject property is located within the City's Airport Area, at 1701 Corinthian Way, 1660 Dove Street, 4251, 4253, 4255 Martingale Way, and 4200, 4220, 4250 Scott Drive. The subject property is an approximately 5.70 acres in size.

The property is currently developed with a 58,277 square foot retail shopping center called MacArthur Square. The existing shopping center was built in 1974 and is currently being occupied with several restaurants, a dance studio, retail stores and professional and medical offices. The subject site is consisted of three contiguous parcels and bounded by Corinthian Way to the northeast, Martingale Way to the east, Scott Drive to the northwest, and Dove Street to the southwest, and an office development to the south. The area surrounding the project site is developed with a mix of retail, commercial, professional office, and industrial land uses. The John Wayne Airport is located approximately 1,000 feet from the project site. Please see the attached vicinity map showing the location of the property. The property is located within Tustin Quadrangle, Township: 6S, Range: 9W.

Project Description:

The proposed Newport Crossings project will be replacing the existing aging shopping center with a mixed-use residential complex consisting of 350 rental units, 2,000 square feet of "casual-dining" restaurant space, 5,500 square feet of commercial space, and a 0.5-acre public park. The proposed buildings would be approximately 55 feet in height for livable spaces, with limited ancillary structures to 77 feet for architectural features, elevator shafts, and mechanical equipment. A six-story parking structure (one level subterranean and five levels above ground) is proposed in the center of the site to be surrounded and screened from public views by the residential and commercial buildings on all sides. Please see the attached project plans.

The application for the proposed development consists of the following components:

- Tentative Tract Map: To allow future individual dwelling units to be sold separately as condominiums.
- Site Development Review: To ensure site development is in accordance with the applicable planned community and zoning code development standards and regulations pursuant to Section 20.52.080 (Site Development Reviews) of the Zoning Code and to allow an increase in the base height limit pursuant to Section 20.30.060.C (Height Limits and Exceptions) of the Zoning Code.
- Traffic Study: To study potential traffic impacts pursuant to the CEQA Guidelines (the City of Newport Beach Traffic Phasing Ordinance does not apply to this project).
- Affordable Housing Implementation Plan: A program specifying how the proposed project would meet the City's affordable housing requirements, pursuant to Chapter 20.32 (Density Bonus) of the Municipal Code.

Environmental Review:

The City has determined that an Environmental Impact Report (EIR) is warranted for the project pursuant to the California Environmental Quality Act (CEQA). The preparation of the environmental studies consistent with the CEQA Guidelines is underway.

Contact Information:

Rosalinh Ung
Associate Planner
100 Civic Center Drive
Newport Beach, CA 92660
949-644-3208
rung@newportbeachca.gov

Attachments:

1. Vicinity Map
2. Project Plans

CITY OF NEWPORT BEACH
100 Civic Center Drive
Newport Beach, California 92660
949 644-3200
newportbeachca.gov/communitydevelopment

January 3, 2018

Joyce Stanfield Perry
Tribal Manager
4955 Paseo Segovia
Irvine, CA 92603
kaamalam@gmail.com

Send Via Emailing

Subject: AB52 Tribal Consultation for Newport Crossings Mixed-Use Project, Newport Beach, CA (PA2017-107)

Dear Ms. Perry,

The City of Newport Beach Planning Division is sending you this notification to consult and declare the importance of your tribe's participation in the planning process for the development of mixed-use residential project known as Newport Crossings Project.

Project Location:
The subject property is located within the City's Airport Area, at 1701 Corinthian Way, 1660 Dove Street, 4251, 4253, 4255 Martingale Way, and 4200, 4220, 4250 Scott Drive. The subject property is an approximately 5.70 acres in size.

The property is currently developed with a 58,277 square foot retail shopping center called MacArthur Square. The existing shopping center was built in 1974 and is currently being occupied with several restaurants, a dance studio, retail stores and professional and medical offices. The subject site is consisted of three contiguous parcels and bounded by Corinthian Way to the northeast, Martingale Way to the east, Scott Drive to the northwest, and Dove Street to the southwest, and an office development to the south. The area surrounding the project site is developed with a mix of retail, commercial, professional office, and industrial land uses. The John Wayne Airport is located approximately 1,000 feet from the project site. Please see the attached vicinity map showing the location of the property. The property is located within Tustin Quadrangle, Township: 6S, Range: 9W.

Project Description:

The proposed Newport Crossings project will be replacing the existing aging shopping center with a mixed-use residential complex consisting of 350 rental units, 2,000 square feet of "casual-dining" restaurant space, 5,500 square feet of commercial space, and a 0.5-acre public park. The proposed buildings would be approximately 55 feet in height for livable spaces, with limited ancillary structures to 77 feet for architectural features, elevator shafts, and mechanical equipment. A six-story parking structure (one level subterranean and five levels above ground) is proposed in the center of the site to be surrounded and screened from public views by the residential and commercial buildings on all sides. Please see the attached project plans.

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Contact Information:

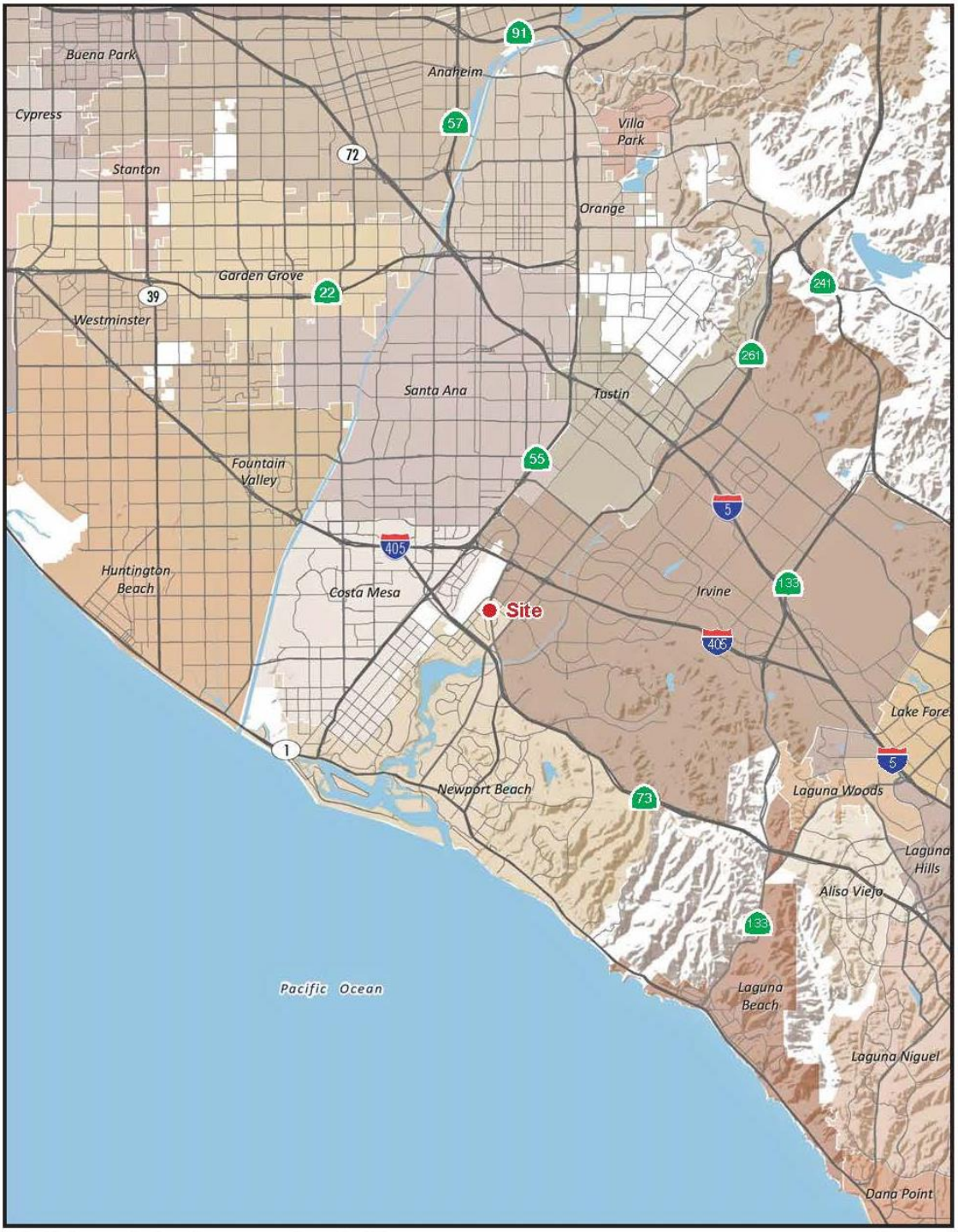
Rosalinh Ung
Associate Planner
100 Civic Center Drive
Newport Beach, CA 92660
949-644-3208
rung@newportbeachca.gov

Attachments:

1. Vicinity Map
2. Project Plans

NEWPORT CROSSINGS MIXED USE RESIDENTIAL PROJECT
CITY OF NEWPORT BEACH

Figure 1 - Regional Location



Note: Unincorporated county areas are shown in white.

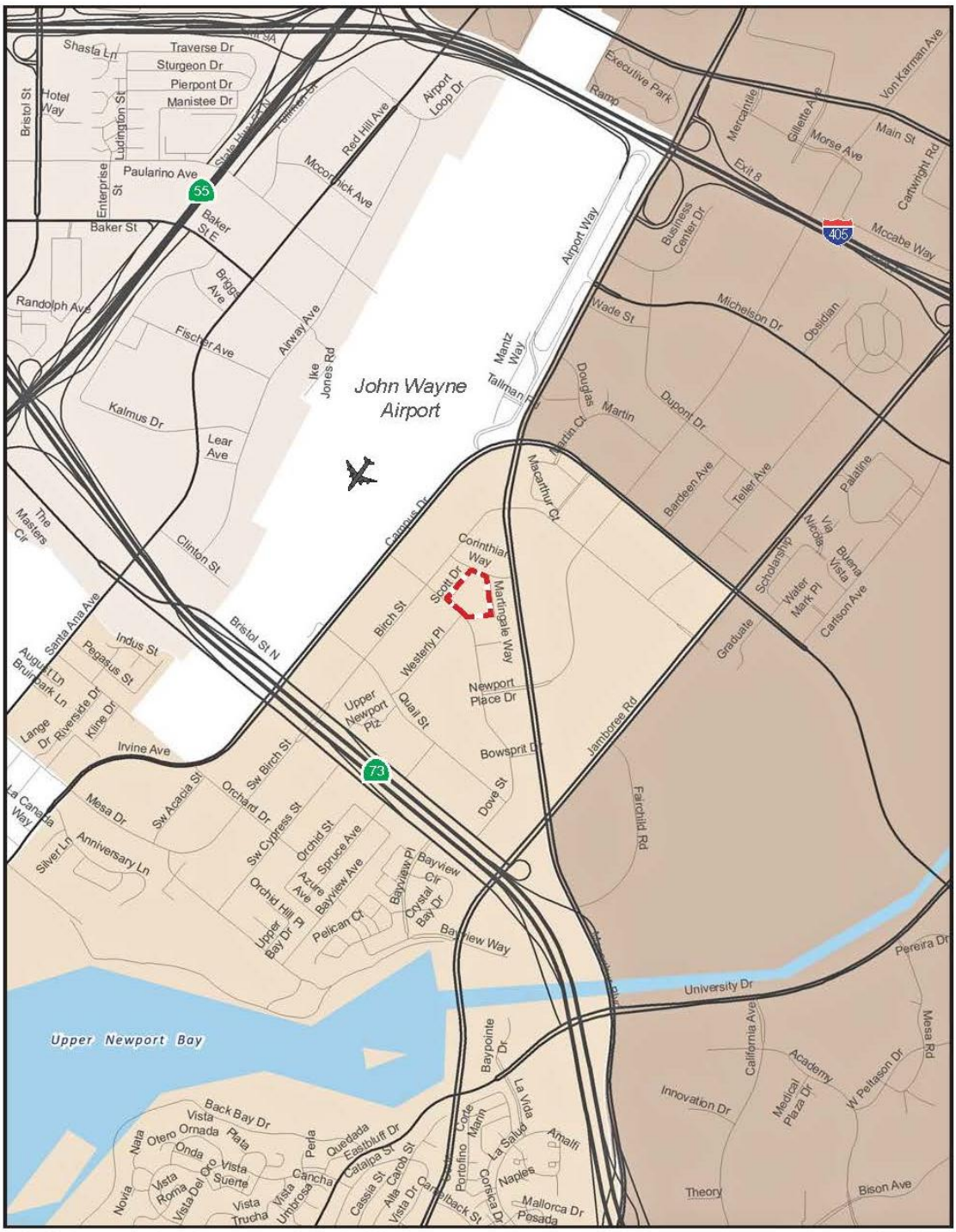
0 3
Scale (Miles)

Source: ESRI, 2017

PlaceWorks

NEWPORT CROSSINGS MIXED USE RESIDENTIAL PROJECT
CITY OF NEWPORT BEACH

Figure 2 - Local Vicinity



Note: Unincorporated county areas are shown in white.

Project Boundary

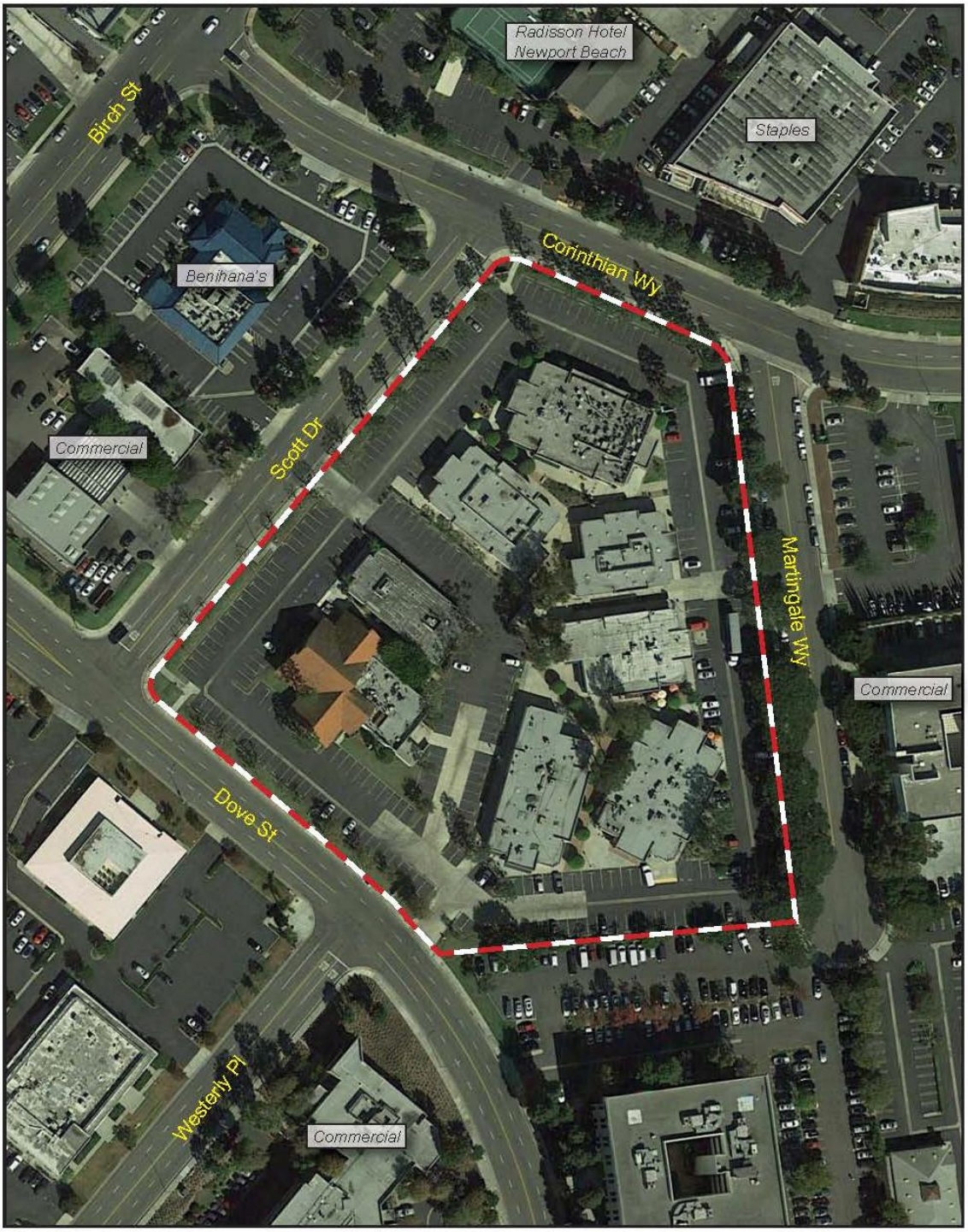
Source: ESRI, 2015

0 2,000
Scale (Feet)

PlaceWorks

NEWPORT CROSSINGS MIXED USE RESIDENTIAL PROJECT
CITY OF NEWPORT BEACH

Figure 3 - Aerial Photograph



Project Boundary

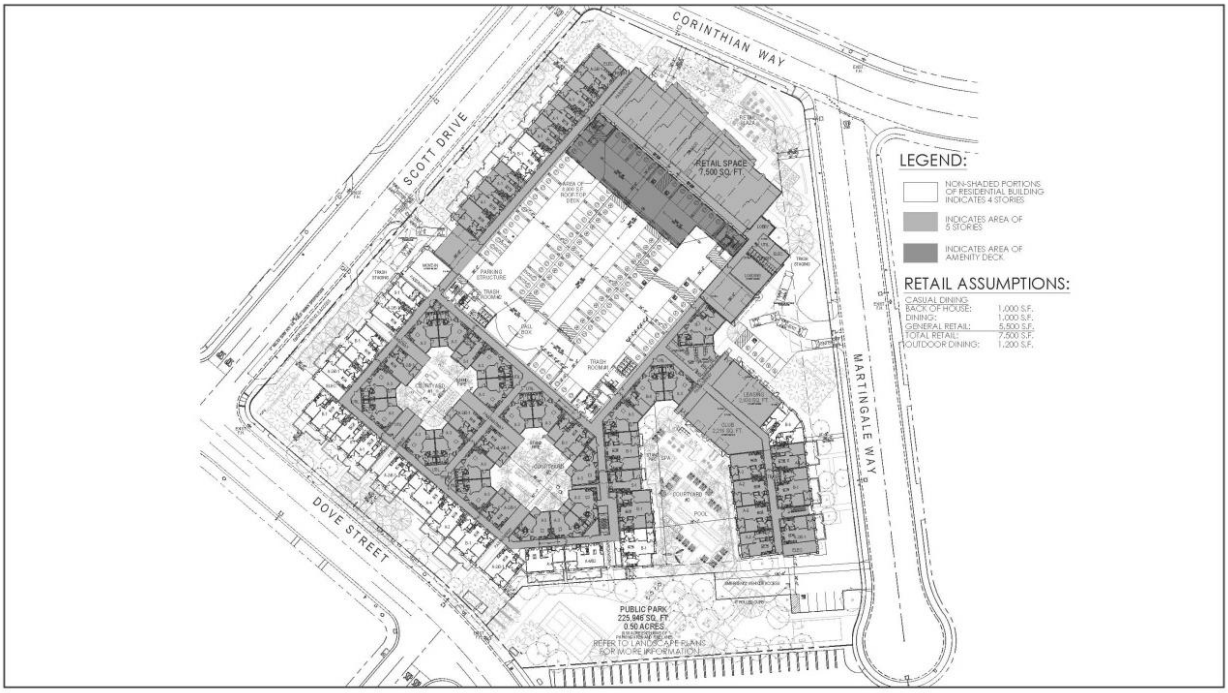
0 2,000
Scale (Feet)

Source: Google Earth Pro, 2017

PlaceWorks

NEWPORT CROSSINGS MIXED USE RESIDENTIAL PROJECT
CITY OF NEWPORT BEACH

Figure 4 - Proposed Site Plan



Source: Architects Orange, 2017

PlaceWorks

NEWPORT CROSSINGS MIXED USE RESIDENTIAL PROJECT
CITY OF NEWPORT BEACH

Figure 5 - Conceptual Landscape Plan

Source: MJS Landscape Architecture, 2017

PlaceWorks

APPENDIX D: PALEONTOLOGICAL SENSITIVITY RANKING CRITERIA

PFYC Description (BLM 2008)	PFYC Rank
Very Low. The occurrence of significant fossils is non-existent or extremely rare. Includes igneous or metamorphic and Precambrian or older rocks. Assessment or mitigation of paleontological resources is usually unnecessary.	1
Low. Sedimentary geologic units that are not likely to contain vertebrate fossils or scientifically significant nonvertebrate fossils. Includes rock units too young to produce fossils, sediments with significant physical and chemical changes (e.g., diagenetic alteration) and having few to no fossils known. Assessment or mitigation of paleontological resources is not likely to be necessary.	2
Potentially Moderate but Undemonstrated Potential. Units exhibit geologic features and preservational conditions that suggest fossils could be present, but no vertebrate fossils or only common types of plant and invertebrate fossils are known. Surface-disturbing activities may require field assessment to determine appropriate course of action.	3b
Moderate Potential. Units are known to contain vertebrate fossils or scientifically significant nonvertebrate fossils, but these occurrences are widely scattered and of low abundance. Common invertebrate or plant fossils may be found. Surface-disturbing activities may require field assessment to determine appropriate course of action.	3a
High. Geologic units containing a high occurrence of significant fossils. Fossils must be abundant per locality. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented, but may vary in occurrence and predictability. If impacts to significant fossils can be anticipated, on-the-ground surveys prior to authorizing the surface disturbing action will usually be necessary. On-site monitoring or spot-checking may be necessary during construction activities.	4
Very High. Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils. Vertebrate fossils or scientifically significant invertebrate fossils are known or can reasonably be expected to occur in the impacted area. On-the-ground surveys prior to authorizing any surface disturbing activities will usually be necessary. On-site monitoring may be necessary during construction activities.	5